

A scenic coastal landscape with a sandy beach, waves, and mountains in the background. The image is overlaid with a semi-transparent green and white design. The text is centered in the upper half of the image.

Appendix M

Water Planning Area Water Providers

Appendix M. Water Planning Area Water Providers

The description of each water district, agency, and community services district (Water Providers) contained within this appendix is a compilation of many works from prior studies and reports. Much of the information contained within this section is changing from year to year, especially at the 5 year interval of the Urban Water Management Plans as they are updating much of the numerical information presented.

This Appendix is organized by WPA and Water Provider from north to south within each Sub-Region and WPA. See **Figure M-1** for location of larger Water Providers in the IRWM Planning Region. Smaller Water Providers are included in WPA figures contained within **Section C – Region Description** of the IRWM Plan.

M.3 WATER PROVIDERS (BY WPA)

Figure M-1 on the following page shows a map of the water provider service areas within the San Luis Obispo IRWMP Region. Brief descriptions of the water providers are presented in the following section.

Water Planning Areas and Related Water Districts

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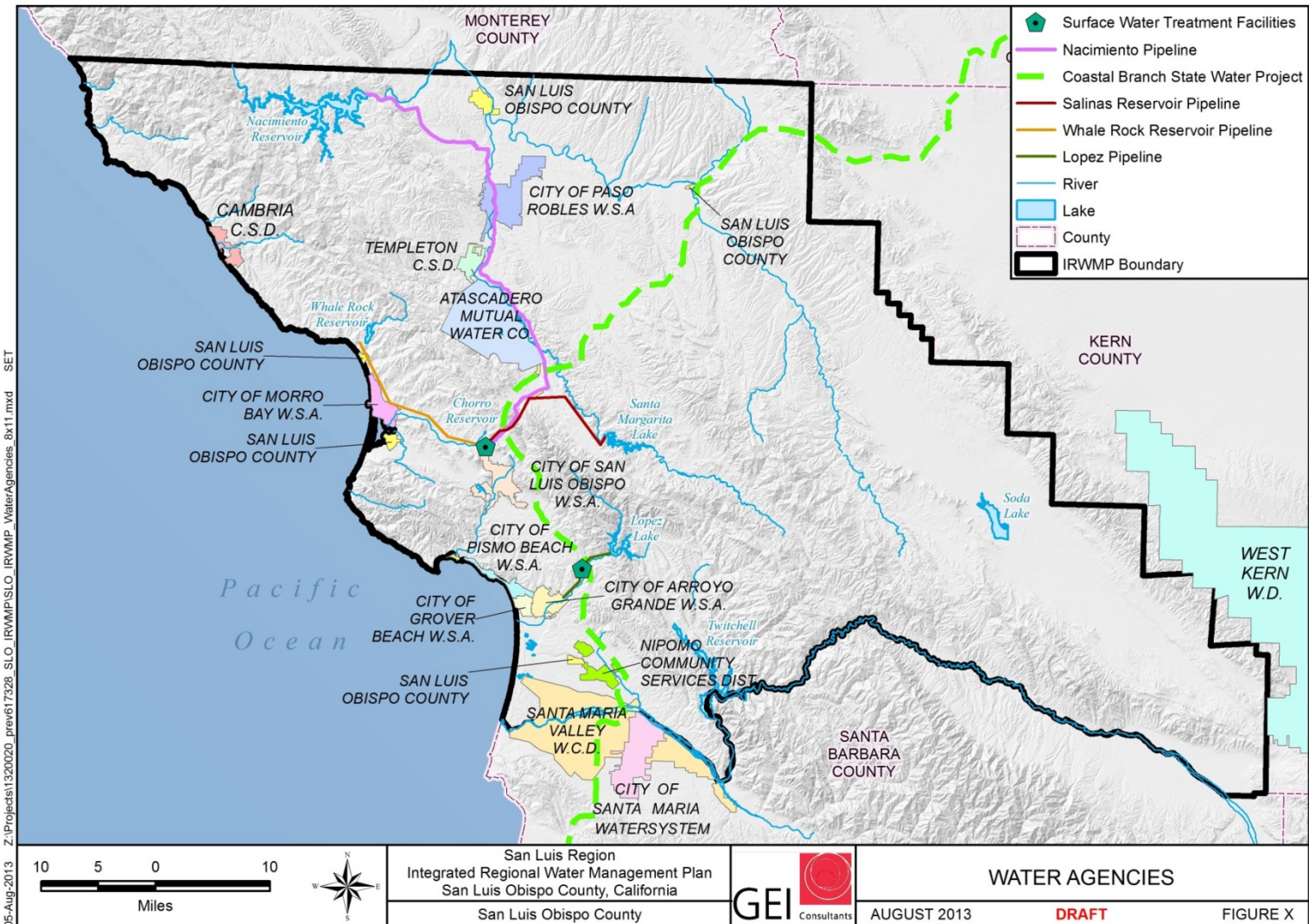


Figure M-1. Water Agencies

M.4 NORTH COAST WATER SUPPLIERS

M.4.6 WPA 1 – San Simeon

San Simeon Community Services District

The San Simeon Community Services District (San Simeon CSD) supplies its customers with domestic water service, wastewater service, and fire protection, among other services. San Simeon is located along Highway 1 north of Cambria. The San Simeon CSD serves an area of approximately 100 acres, which includes approximately 320 residential dwelling units and over twice that number of hotel/motel units. Though the permanent residential population is estimated at 247, the tourist population can outnumber locals and varies with the season.

The build-out population is projected to reach 740 residents. The build-out population is the upper range from the San Simeon Community Plan, which assumes 530 dwelling units (DU) and 1.4 persons per DU. The commercial/retail sector constitutes over 70 percent of the annual demand. Build-out water demand is based on 3,426 gpd/acre for the non-residential sector and 72 gallons per capita per day (gpcd) consumption for residents.

The San Simeon CSD depends on groundwater from the Pico Creek underflow. Though the State Board permits extraction of up to 140 AFY, groundwater studies indicate a safe yield of only 120 AFY, with 16 AFY used at Hearst Ranch. This leaves the San Simeon CSD with a safe yield of 104 AFY. The 2007 Water System Master Plan does not suggest future water supply alternatives, although historically San Simeon CSD has been water-short numerous times during dryer years. Because of the limitations and unreliability of the supply, a moratorium on development has been in place since 1991.

San Simeon CSD adopted an ordinance establishing a 3-stage conservation plan based on water supply conditions. The community has also gone through a retrofit program and the hotels and restaurants continuously have water conservation measures in place.

The San Simeon CSD plans to move forward with upgrading its wastewater treatment facility to use the treated effluent as recycled water. By July 2012, the facility will be producing Title 22 recycled water, but it will only be available to commercial trucks that connect to an on-site tank. The long-term plan is to construct a recycled water distribution system. Desalination or coordination with the Hearst Ranch on a groundwater source of supply to meet build-out needs are options under consideration.

Contamination of water supply wells due to seawater intrusion is a major water quality concern in the basin (Cleath, 1986). Lowering of groundwater levels below sea level in the basin during the summer months when creek flows are absent and pumping is active can result in the landward migration of the sea water/fresh groundwater interface. The landward flow of seawater into the estuary during winter high tides is also a contributing factor. Although seawater intrusion has increased salinity levels in groundwater pumped from local water supply wells, it has not degraded water quality to the point that the water is non-potable. The 2008 Consumer Confidence Report for two San Simeon CSD wells reported that measured concentrations of all analyzed contaminants were below their respective Maximum Contaminant Level (MCL) or Regulatory Action Level (AL) values.

M.4.7 WPA 2 – Cambria

Cambria Community Services District

The Cambria Community Services District (Cambria CSD) is an independent special district that provides water, wastewater, fire and other community services to its customers. Cambria is located along Highway 1, approximately 35 miles north of the City of San Luis Obispo.

Cambria's urban reserve line (URL) encompasses approximately 2,351 gross acres, with a net acreage of approximately 1,790 acres, not counting the land in the road rights of way and beach areas along the ocean. Cambria primarily consists of residential uses with combinations of commercial and public institutional uses along Main Street. The surrounding outlying areas are devoted to agricultural uses, primarily grazing.

Cambria's existing population is 6,284 residents and the build-out population ranges between 8,257 and 13,547 depending on assumptions. The current direction in Cambria is to plan for 7,719 (based on 4,650 dwelling units and 1.66 persons/DU). To meet current water demand, the Cambria CSD operates wells that draw from local groundwater aquifers along the San Simeon and Santa Rosa Creeks. Cambria CSD's water rights are subject to the regulatory authority of the State Board, and to a certain extent, conditions imposed under development permits issued by the California Coastal Commission (CCC). The current water rights diversion permits from the State Board allow Cambria CSD to pump a maximum of 1,118 acre-feet (AF) of water during the wet season, and 630 AF of water during the dry season, from both the San Simeon and Santa Rosa Valley Groundwater Basins. However, the current CCC Development Permit limits the total annual diversion from both creeks to no more than 1,230 AF of water. Additionally, the dry season date, duration, and beginning groundwater levels, limit the actual availability of groundwater from both basins. Currently the water supply of Cambria CSD is at a Level III severity rating (resource capacity has been met or exceeded) due to unreliability of the groundwater supply to meet existing demands.

To meet the additional water supply needs towards build-out and to increase water supply reliability, the Cambria CSD plans to construct a Seawater Desalination Plant to produce up to 602 AFY. This plant would operate during the dry season to augment supply during that period of high demand. A decentralized recycled water program is also planned, with an estimated 180 AFY made available for unrestricted irrigation use.

Historically, the Cambria CSD has used conservation as a means to extend its existing supplies. Since 1988, a plumbing retrofit program has required the installation of water efficient fixtures upon resale or remodel of a home. The program was expanded in 1990 to require water efficient fixtures for new construction and for existing buildings that require a new connection permit. Since that time, the Cambria CSD has initiated a number of other conservation measures, including rebate programs and plumbing requirements that have resulted in an estimated savings of 18.9 AFY.

In 1999, the Cambria CSD learned of an MTBE contamination plume that was spreading towards its Santa Rosa well field. As a result, its existing Santa Rosa well field was shut down and an emergency well and treatment plant were constructed further upstream. The new treatment plant provides filtering, disinfection, as well as the removal of iron and manganese. The adjustments made in well locations and the additional treatment provided for the Santa Rosa Creek well has resulted in delivery of water to customers that meet both primary and secondary drinking water standards.

M.4.8 WPA 3 – Cayucos

Cayuco Area Water Organization

The Cayucos Area Water Organization (CAWO) is made up of three member utilities and a cemetery district, the Morro Rock Mutual Water Company (Morro Rock MWC), the Paso Robles Beach Water Association (PRBWA), County Service Area 10A (CSA 10A) and Cayucos Cemetery District (CCD). CSA 10A operates a surface water treatment plant that delivers filtered and chlorinated water to the CAWO members. The three utility purveyors supply their customers with domestic water service, landscape irrigation and fire protection, among other services. The CCD uses the water for irrigation purposes.

M.4.9 WPA 4 – Morro Bay

Chorro Valley Water System

The California Men’s Colony (CMC) is a state prison located on Highway 1 west of San Luis Obispo. The CMC operates its own water supply, treatment and distribution system for inmates

and staff. CMC also wheels water to Camp San Luis Obispo (National Guard), Cuesta College, County Operations Center (includes Fleet Services, Water Quality Laboratory, Juvenile Detention Center, County Jail, Office of Emergency Services), and County Office of Education. This system is also known as the Chorro Valley Water System.

City of Morro Bay

The City of Morro Bay provides water service to over 5,500 connections, including over 10,000 residents, businesses, industrial facilities, and public facilities. The population estimate in 2005 was 10,270 according to the 2005 Urban Water Management Plan (2005 UWMP). Its coastal location attracts a large number of tourists during the summer and on weekends. The motels, hotels, restaurants, State Parks, and other facilities serving the tourist population add a significant water demand to the local population living primarily in single-family residences. The 2005 UWMP assumed a build-out population of 12,900, estimated to be achieved in 2028.

The City has multiple sources of potable water. Two groundwater basins, the Chorro and Morro Valley Groundwater Basins, were used exclusively prior to the City's connection to the State Water Project. The City also operates a desalination plant and has mutual aid agreements with the California Men's Colony and the Whale Rock Commission for emergency supply.

The groundwater basins have encountered several water quality issues, including seawater intrusion, methyl tertiary butyl ether (MTBE) contamination, and excessive nitrates, forcing the City of Morro Bay to reduce extraction from groundwater sources. In addition, the State Board permitted allocation allows withdrawals from the Chorro Basin only when creek flows exceed 1.4 cubic feet per second (cfs). Nevertheless, strategic management of these sources should allow the City of Morro Bay to reliably extract 581 AFY from the Morro Basin and 566 AFY from the wells that penetrate the Chorro Basin, for a total of 1,147 AFY, even in dry years.

The City contracts with the District for 1,313 AFY of State Water. The City also has a Drought Buffer Water Agreement with the District for 2,290 AFY that will allow the City to receive its full 1,313 AFY allocation when the SWP can deliver at least 36.5 percent of contracted allocations (see SWP discussion). The City has been noted as being potentially interested in an additional 750 AFY of State Water and 1,500 AFY of Drought Buffer, should it become available (Additional/New Allocation Requests – Planning Purposes Only, 10/22/09).

The SWP shuts down for annual maintenance activities each fall/winter during which the City has used its alternative supplies. In 2008, the SWP shutdown took place when groundwater quality issues were limiting the City's use of well water. The shortfall was made up for through an agreement with the California Men's Colony to provide the City with water during that period.

The desalination plant was constructed in 1993 as a secondary supply during a drought. It has been used intermittently since that time, but raw water quality problems have limited its use. Plans to modernize the desalination plant should restore capacity to 645 AFY. Future needs could be met by doubling the desalination plant's capacity.

Other potential future supplies include the jointly operated Morro Bay - Cayucos Sanitary District Wastewater Treatment Plant. The plant is slated for a major upgrade in 2014. Production of tertiary effluent will be provided, and thus will provide increased opportunity for future water recycling to augment water supplies.

Since the early 1990s, the City has implemented a rigorous water conservation program to promote more efficient use of existing water resources. The City is a member of the County's Partners in Water Conservation. The water conservation program has had a significant impact, reducing average per capita water demand from 154 to about 129 gpcd (141 gpcd in dry years) or 8 to 16 percent. As noted in the City's 2005 Sewer Collection System Master Plan Update, flows in 2005 were lower than in 1986, even with a 10 percent increase in population.

Elements of the conservation program include:

- Progressively tiered water rate structure
- Creation of a developer funded low-flow toilet retrofit program
- Adoption of multi-level drought response program with increasing limits on irrigation and non-essential uses of potable water
- Promotion of many of the Water Conservation BMPs to be pursued by all contractors of the State Water Project, including an ongoing rebate program for homeowner installation of water-efficient appliances.

As mentioned above, groundwater quality issues are an ongoing concern, but the City's ability to obtain water from multiple sources and to blend them as needed to meet State drinking water standards has lessened the concerns that water quality issues could hamper the City from meeting future water demands.

M.4.10 WPA 5 – Los Osos

Los Osos Community Services District

Los Osos Community Services District (Los Osos CSD) is a member of San Luis Obispo County's Partners in Water Conservation. In addition, the District employs many of the Best Management Practices (BMPs) established by the CUWCC. Some of these BMPs worth mentioning include: offering free plumbing retrofit kits, providing public information,

participating in grade school education programs, conducting water audits, and pricing water using a tiered rate structure.

S&T Mutual Water Company

S&T MWC serves 201 properties serves 201 properties of which 21 are vacant and use no water. In 2011 in order to reduce the consumption of water in its service area it installed water meters on each property. It has also adopted a tiered pricing structure in order to further reduce water consumption in its area.

Golden State Water Company – Los Osos

The Golden State Water Company (GSWC) provides water service to approximately 2,672 households in the unincorporated communities of Los Osos, Baywood Park, and Cuesta-by-the-Sea, located south of the City of Morro Bay. GSWC serves a historically rural population that has undergone little to no development since the mid- to late-1980s. GSWC currently uses groundwater for 100 percent of its supply. Groundwater is pumped from the Los Osos Groundwater Basin using four active wells. Litigation involving use of this groundwater basin, which began in 2004, resulted in an interlocutory stipulated judgment in 2008.

Because the groundwater basin is the only source of water in the area, its continued use faces two challenges requiring immediate action: water quality degradation of the Upper Aquifer, primarily by nitrate, and seawater intrusion into the Lower Aquifer, which is the principal source of supply. San Luis Obispo County is addressing degradation of water quality in the Upper Aquifer through construction and operation of the Los Osos Wastewater Project. The Los Osos Basin has been subject to a building moratorium since 1988. Upon completion of the wastewater project by the County, the moratorium may be lifted (subject to other resource issues such as water supply and habitat conservation).

Water quality will be collectively monitored as part of the requirements of the 2008 stipulation. However, wells have been monitored by individual entities, and as part of various investigations, for several decades. As a result, intrusion of seawater into aquifers supplying drinking water has been documented since the 1950s. One of GSWC's wells has already been deactivated due to seawater intrusion and water from another well is currently being treated for iron and manganese.

M.5 SOUTH COUNTY WATER SUPPLIERS

M.5.6 WPA 6 – San Luis Obispo

Cal Poly San Luis Obispo

Cal Poly receives water from the City water system. Though it does not treat its own water, available supply is governed by entitlements from surface water sources. Water demand includes extensive agricultural and landscape irrigation requirements. The supply and demand discussion below applies to the 1,321-acre campus area.

Cal Poly derives its water from groundwater sources and through surface water entitlements. For general use, the university owns entitlement to 33.7 percent of the storage capacity in Whale Rock Reservoir or approximately 13,707 acre-feet when the reservoir is full. Cal Poly's portion of the safe yield from the reservoir is calculated as 1,384 AFY, but diminishes approximately 2 AFY due to siltation. However, their allotment is based on volume and not on a flow rate, so Cal Poly is not bound by this limit. The City treats and delivers approximately 600 AFY to Cal Poly. The remainder is untreated water primarily used for agriculture and landscape irrigation, drawn directly from the Whale Rock raw water pipeline or from agricultural wells. The safe yield from groundwater is undocumented, but no decline in groundwater level has been noticed.

Future demands for domestic needs will be met by increasing the proportion of Whale Rock water treated by the City. Agricultural needs could be met in various ways, including increasing irrigation efficiency, withdrawing land from cultivation, using more groundwater, and other management practices.

Surface water from Whale Rock is considered to be of high quality. Groundwater quality has been generally good, though increases in nitrate levels have been measured in groundwater flowing through the aquifer as it passes under the Cal Poly campus.

Avila Beach Community Services District

The Avila Beach Community Services District (Avila Beach CSD) supplies its customers with domestic water service, wastewater service and fire protection, among other services. The water supply for the Avila Beach CSD is contracted through County Service Area 12 (CSA 12), and consists of both Lopez Reservoir (68 AFY) and State Water (100 AFY) allocations for a total supply of 168 AFY.

Water quality for both Lopez Lake and State Water treated sources meets both primary and secondary standards for drinking water, though regular monitoring of the treatment process is

necessary to make appropriate adjustments to account for seasonal changes in the quality of Lopez Lake water.

Avila Valley Mutual Water Company

Avila Valley Mutual Water Company (Avila Valley MWC) serves a small cluster of homes in the Avila Valley area. The service area is built out with a population of 65 residents (28 connections). The 2008 water demand was 32 AFY. Avila Valley MWC receives its water supply from surface sources. The Avila Valley MWC contracts with the District for a 20 AFY allocation of State Water and 60 AFY of Drought Buffer, which is distributed through Zone 3 facilities. 12 AFY allocation of Lopez Lake water procured from CSA 12, bringing its total supply to 32 AFY. The Avila Valley MWC also owns two wells for emergency backup purposes, but because of water quality issues, they are not used on a regular basis. Avila Valley MWC is interested in an additional 20 to 40 AFY of State Water if it becomes available.

The quality of Avila Valley MWC water is similar to others using water from Lopez Lake. Well water is of poor quality and would only be treated and used as an emergency backup in case of disruption to the surface supply.

San Miguelito Mutual Water Company

San Miguelito Mutual Water Company (San Miguelito MWC) serves the San Luis Bay Estates area in the community of Avila Beach. The 2008 population served was 1,385 (620 connections) and a build-out population of 2,100 (930 connections).

The San Miguelito MWC receives its water supply from both surface and groundwater sources. It contracts with the District for a 275 AFY allocation of State Water and 275 AFY of Drought Buffer, which is wheeled through Zone 3 facilities. Additional water is pumped from three local wells that draw water from the aquifer fed by San Luis Obispo Creek. The San Miguelito MWC's goal is to provide consumers with a 70/30 blend of surface/well water, but problems with the well system have limited its contribution to 10 to 20 percent in recent years.

With a fully functioning water supply system, the San Miguelito MWC has adequate supply to meet both existing and future water requirements. San Miguelito MWC has been noted as being interested in an additional 10 AFY of State Water if it became available.

Quality of San Miguelito MWC water is similar to others using water from Lopez Lake. Raw well water is treated for iron and manganese removal and mixed with Lopez Lake water prior to delivery.

County Service Area 12

County Service Area 12 (CSA 12) provides 61 AFY of Lopez Reservoir water to customers in the rural area east of Avila Beach and transfers up to 100 AFY of Lopez Reservoir water through its piping system to Port San Luis. Port San Luis currently uses only 35 percent (35 AFY) of that allocation. In addition, CSA 12 transfers water through its piping system to Avila Beach CSD, Avila Valley MWC, and San Miguelito MWC.

Water supplies for CSA 12 also include 7 AFY from the State Water Project allocated to the San Luis Coastal Unified School District. Entities within CSA 12 have been noted as being interested in an additional 30 AFY of State Water if it becomes available.

Port San Luis

County Service Area 12 (CSA 12) provides 61 AFY of Lopez Reservoir water to customers in the rural area east of Avila Beach and transfers up to 100 AFY of Lopez Reservoir water through its piping system to Port San Luis. Port San Luis currently uses only 35 percent (35 AFY) of that allocation.

City of San Luis Obispo

The City of San Luis Obispo is located in a coastal valley approximately 10 miles inland from the Pacific Ocean. Historically, the City of San Luis Obispo has been the sole water purveyor within its limits. This allowed the city to maintain uniformity of water service and distribution standards, and to be consistent in developing and implementing water policy. The City also serves the County Regional Airport and Cal Poly. Since Cal Poly has its own allocation of water from the Whale Rock Reservoir and has water resources that do not pass through the City's treatment plant, the University is discussed separately.

The City of San Luis Obispo has an existing (2010) population of 44,948 and a one percent residential growth cap which assists in projecting future annual water needs. The current General Plan estimates that the build-out population for the City will be approximately 57,200 people.

The City accounts for its water supplies by designating a portion of what is available for primary supply, reliability reserve and secondary supply. Primary supply is the average supply needed to meet build-out needs. Reliability reserve is a 20 percent buffer for future unforeseen or unpredictable long-term impacts to the City's available water resources such as loss of yield from an existing water supply source and impacts due to climate change. Secondary supply is the additional amount needed to supplement the primary and reliability supply to meet needs during short-term water supply shortages or peak demands.

The City of San Luis Obispo currently receives water from four sources; Salinas Reservoir (Santa Margarita Lake), Whale Rock Reservoir, local groundwater, and recycled water from the Water Reclamation Facility. The City has depended on imported supplies from Salinas Reservoir, located near the community of Santa Margarita, since 1944 and Whale Rock Reservoir, located near the community of Cayucos, since 1961. Whale Rock Reservoir provides water to the City of San Luis Obispo, California Poly, and the CMC as well as the members of CAWO in Cayucos. The safe yield from the Salinas and Whale Rock Reservoirs was 6,940 AFY in 2010, but siltation causes the yield to drop by approximately 10 AFY.

As a result of the onset of the drought in 1986, which lead to decreases in surface water supplies, the City activated its groundwater sources in 1989. The City currently uses a small amount of groundwater (~2 percent of total) for potable purposes, but does not count groundwater yield in its water supply portfolio. Even though the estimated safe yield of the basin is 2,000 AFY, nitrate and PCE contamination and drought make groundwater a less than reliable source.

The City of San Luis Obispo's Water Reclamation Facility (WRF) currently receives approximately 4.5 mgd (5,040 AFY) wastewater flows. The WRF provides tertiary treated effluent to an extensive recycled water distribution system that delivers recycled water to a number of customers in the southern area of the City, including Damon Garcia Sports Park, Laguna Golf Course, Laguna Middle School, Laguna Lake Park, and commercial centers such as Irish Hills Plaza. Currently, recycled water irrigation demand is 130 AFY, and the City anticipates customer demands to expand by 10 AFY to an anticipated maximum of 1,000 AFY. The City must also maintain stream flow to San Luis Obispo Creek, at a minimum average daily flow of 2.5 cfs (1.6 mgd, or 1,800 AFY). Effluent TDS quality of the recycled water is approximately 900 mg/L.

Future water sources include the Nacimiento Water Project, which is scheduled to go online in 2010/11, will supply up to 3,380 AFY to the City of San Luis Obispo. The City's Water Reclamation Facility will deliver up to 1,000 AFY of recycled water for irrigation and other approved uses. The tertiary recycled water is suitable for most uses other than swimming and drinking.

In June 1985, the City Council adopted the Annual Water Operational Plan policy, which established a procedure to monitor the City's water supply situation on an annual basis. An integral component of the policy was the establishment of a water demand management or conservation program aimed at instituting corrective measures ahead of any projected water supply deficit to maintain a dependable supply during critically dry periods. Water demand management has played an ever increasing role in the overall water supply development and

management strategies since 1985. In 1990, the City adopted a multi- source water policy in an attempt to solve both short term water shortages and meet the City's long-term water needs.

The goal of the City's water conservation program is to make efficient use of its water resources to protect both short- and long-term water supply reliability. This is accomplished by implementing water-efficiency programs that are consistent with accepted best management practices and comply with any State-mandated water use reductions, and mandatory water conservation measures when the City's water supplies are projected to last three years or less. The City is a member of Partners in Water Conservation and the CUWCC.

Surface water from both reservoirs is considered to be of high quality. Groundwater quality has been generally good, but PCE contamination and occasional spikes in the nitrate content of well water has caused the City to provide additional treatment for individual wells or to take certain wells out of production.

M.5.7 WPA 7 – South Coast

Northern Cities Management Area

The Northern Cities Management Area (NCMA) includes the northernmost portion of the Santa Maria Valley Groundwater Basin. The cities of Arroyo Grande, Grover Beach, and Pismo Beach, the Oceano Community Services District, the County and local landowners that signed the court-approved stipulation during the Santa Maria Groundwater Basin litigation actively and cooperatively manage surface and groundwater resources in the NCMA.

Oceano Community Services District

The Oceano CSD provides water services to the community of Oceano. The service area encompasses approximately 1,150 acres. The Oceano CSD service area is located immediately south of Grover Beach and Arroyo Grande. Oceano CSD includes residential, commercial, industrial, agricultural, and public facility land uses. Existing population (as of July 2009) within the Oceano CSD service area is estimated at 8,137 and the forecast population is estimated at 12,855.

The Oceano CSD utilizes water from three sources, including groundwater, the State Water Project and Lopez Lake water. The groundwater allocation is limited to 900 AFY by agreement with the City of Arroyo Grande, the City of Pismo Beach, and the City of Grover Beach. As party to the Santa Maria Valley Groundwater Basin litigation, extraction rights may be decreased at a future date.

Oceano CSD receives a 303 AFY allocation from Lopez Lake, subject to possible reduction if habitat requirements dictate. It also receives 750 AFY from the State Water Project, but no drought buffer. Therefore, the assumption that contractors will receive 66 percent of their State Water Project allocation reduces this supply to 495 AFY. Participation in the District's drought buffer program for State Water would improve water supply reliability for the Oceano CSD.

As discussed above for the City of Arroyo Grande, Oceano CSD entered into an interim water supply agreement, for delivery of up to 100 AFY of Oceano CSD water to Arroyo Grande. Oceano CSD will deliver up to 100 AFY of groundwater and/or State Water, at Oceano CSD's discretion. This temporary agreement ends in 2014.

In reviewing the CCR for 2008, the Oceano CSD continues to meet all Federal and State Drinking Water Standards. Selenium levels continue to be high, from two of their existing wells (Wells 4 and 5); however, drinking water standards are met through blending with other water sources.

Seawater intrusion has been measured in two coastal monitoring wells in the Oceano area. The rains of 2010-2011, and reduced groundwater production, pushed back the subterranean ocean interface, but the close proximity of that interface creates supply uncertainties.

City of Pismo Beach

The City of Pismo Beach supplies its customers with domestic water service. The dominant economic activity in Pismo Beach is tourism, and as a result, the population of Pismo Beach can more than double during summer holidays. The 2010 population was 7,676 and the forecast build-out population is 11,854.

The City receives water from three water sources: local groundwater, Lopez Reservoir and the State Water Project. 700 AFY local groundwater is extracted from the Arroyo Grande Plain, which is part of the Santa Maria Valley Groundwater Basin. Extraction rights are shared by agreement with the City of Arroyo Grande, the City of Grover Beach, and the Oceano Community Services District (Oceano CSD). As party to the Santa Maria Valley Groundwater Basin litigation, extraction rights may be increased or decreased at a future date.

Pismo Beach receives 896 AFY from the Zone 3 Lopez Project as a contractual supply. Environmental protection issues may call for increased or decreased releases to Lopez Creek, potentially reducing or increasing the allotment available for Pismo Beach and other cities. Pismo Beach also receives 1,240 AFY from the SWP via contract with the District and delivery through Zone 3 facilities. The City also has a 1,240 AFY Drought Buffer allocation.

Future water supply possibilities may include additional State Water supplies, tertiary treatment/reuse of wastewater, and extraction from local groundwater basins. Pismo Beach, in coordination with the NCMA, is also investigating the feasibility of increasing the safe yield of Lopez Reservoir. The City of Pismo Beach 2010 UWMP states that the City of Pismo Beach is “committed to employ recycled water as a beneficial resource to protect and reduce consumption of its potable water resources” and that “the City may begin regional planning efforts regarding recycled water within the next five years.” Pismo Beach has been noted as being interested in an additional 500 AFY of State Water and 1,500 AFY of Drought Buffer if it becomes available.

City of Arroyo Grande

The City of Arroyo Grande supplies its customers with domestic water service. Arroyo Grande is located in the southern portion of San Luis Obispo County along the banks of the Arroyo Grande Creek. Land use is primarily residential and agriculture with a small commercial sector. There are no agricultural or industrial water service connections. In 2010, the service population was 16,901 and the forecast build-out population is 20,000.

Arroyo Grande has agreements in place to deliver up to 3,813 AFY from three water sources: two groundwater basins and Lopez Reservoir. Arroyo Grande’s share of groundwater extracted from the Arroyo Grande Plain (which is part of the Santa Maria Valley Groundwater Basin) is 1,323 AFY (including 121 AFY of agricultural land conversion credit). Entitlement rights are shared by agreement with the City of Pismo Beach, the City of Grover Beach, and the Oceano CSD. As is the case with all parties to the Santa Maria Groundwater litigation judgment, these extraction rights may be increased or decreased by action of the courts.

Arroyo Grande extracts 160 AFY of groundwater from the Pismo Formation, which is outside of the NCMA and not subject to management agreements. Its contractual supply of Zone 3 Lopez Project water is 2,290 AFY. The habitat conservation plan and water availability analysis currently being prepared may adjust the downstream release from the dam but will not affect contracted delivery. Arroyo Grande is currently using between 75 – 80 percent of its current supply entitlement.

Future water supply possibilities include recycled water, supplemental State Water, and increased Lopez entitlement. Arroyo Grande is committed to participating in a regional effort to utilize recycled water, and will continue to participate in a dialogue between regional agencies interested in a recycled water program (including but not necessarily limited to the NCMA agencies).

Groundwater quality varies by depth and source. Water extracted from the Pismo Formation receives manganese/sulfuric acid treatment prior to delivery. The City delivers water that meets drinking water standards.

City of Grover Beach

The City of Grover Beach supplies its customers with domestic water service. Grover Beach is primarily a residential community, with a small commercial/industrial sector. Approximately 80 percent of the water consumers are residents. No agricultural consumers are served by the City water system, though landscape irrigation consumes approximately 90 AFY. In 2010, the population was 13,156. The build-out population is expected to reach 15,000.

Grover Beach receives water from Lopez Lake and also uses groundwater from four municipal wells and one irrigation pump. The Zone 3 Lopez Project provides a contractual supply of up to 800 AFY to Grover Beach.

Three shallow wells draw water from the Paso Robles formation and a fourth well draws water from the deeper Careaga formation. Extraction rights are shared by agreement with the City of Arroyo Grande, the City of Pismo Beach, and the Oceano CSD. The City of Grover Beach is currently entitled to 1,407 AFY from this source per the agreement. This includes a 209 AFY allocation from an Agricultural Land Conversion Credit. As party to the Santa Maria Valley Groundwater Basin litigation, extraction rights may be decreased for both of these allocations at a future date.

Two hundred twenty-five AFY of non-potable groundwater is pumped from irrigation wells used on the State Parks Department golf course and a large park within the City. Grover Beach had a temporary transfer agreement with Oceano CSD that allowed the City to purchase up to 100 AFY, but this agreement expired.

Potential future water supply sources under consideration include desalination, State Water and recycled wastewater.

Lopez Lake water has seasonal quality fluctuations that must be addressed by adjusting treatment methods. The ground water from the Paso Robles formation meets all state and federal standards except for nitrate concentration. Grover Beach completed construction of an ion exchange water treatment plant designed to remove nitrates from the shallow well water in 1989.

Nipomo Mesa Management Area

The Nipomo Mesa Management Area (NMMA) lies to the south of the NCMA and includes ConocoPhillips, Golden State Water Company, Nipomo Community Services District, Woodlands Mutual Water Company, Rural Water Company, and other NMMA overlying landowners that signed the court-approved stipulation during the Santa Maria Groundwater Basin litigation. The NMMA Technical Group is charged with developing the technical bases for sustainable management of the surface and groundwater supplies available in this management area.

Golden State Water Company – Nipomo

The Golden State Water Company (GSWC) provides water service to approximately 1,475 households on the south side of Nipomo. GSWC serves a rural population that is undergoing development and is expected to grow at a projected rate of 1.42 percent over the next two decades until build-out.

GSWC currently uses groundwater for 100 percent of its supply. Groundwater is pumped from the Nipomo Mesa Hydrologic Sub-area that is part of the Santa Maria Valley Groundwater Basin using five active wells. Litigation involving use of this groundwater basin, which began in 1997, has resulted in stipulations and judgments in 2005 and 2008. As party to the Santa Maria Groundwater Basin litigation, extraction rights may be affected at a future date. In addition, the stipulated judgment required GSWC to join with Nipomo CSD to develop alternative sources to import a minimum of 2,500 AFY. Once the supplemental water system is in place, GSWC will be required to purchase 8.33 percent (208.25 AFY) of that supply.

Water quality is formally monitored as part of the requirements of the NMMA stipulation. Wells are monitored regularly and reported publicly. The 2009 NMMA report has concluded that there is no evidence of seawater intrusion into the NMMA portion of the groundwater basin. Localized areas of the NMMA have reported nitrate concentrations as high as 90 percent of the MCL. Three of the GSWC wells are currently being treated for iron and manganese.

Nipomo Community Services District

The Nipomo Community Services District (Nipomo CSD) provides water service to approximately 12,000 residents. Development is expected to continue to expand in the future, more than doubling water demands at build-out.

Nipomo CSD currently uses groundwater for 100 percent of supply requirements. Groundwater is pumped from the Nipomo Mesa Hydrologic Sub-area that is part of the Santa Maria Valley Groundwater Basin, using eight active wells and one standby. Litigation involving use of this groundwater basin, which began in 1997, resulted in stipulations and judgments in 2005 and

2008. As party to the Santa Maria Groundwater Basin litigation, extraction rights may be affected at a future date. The stipulation also requires the Nipomo CSD to develop alternative sources to import a minimum of 2,500 AFY.

The Nipomo CSD has investigated multiple sources of supplemental water and, as a result, signed an agreement with the City of Santa Maria to pursue an intertie project. The January 5, 2010 Wholesale Water Supply Agreement established the basis for purchase and delivery of water from the City to the Nipomo CSD. The project EIR has been certified, and the project is going through its final design stages. If constructed, it will be capable of delivering up to 3,000 AFY and could be completed in two and a half years. Once the supplemental water system is in place, Nipomo CSD will be required to purchase 2,167 AFY of that supply. Three other water purveyors, Woodlands MWC, Golden State Water Company, and Rural Water Company will share in the project costs and will together receive one-third of the mandated minimum water delivery (833 of 2,500 AFY). The additional 500 AFY capacity has been reserved for use by the Nipomo CSD for infill but no annexations or General Plan Amendments. Additional water via the City of Santa Maria (if possible), desalination and recycled water are also being considered as a long-term alternative source for the Nipomo CSD and others in the region.

Water quality discussion is similar to that described for GSWC. Also, there is a concern that nitrate levels are increasing in wells near the Southland WWTF. Though studies have not tied this increase to current effluent disposal practices, the WWTF is investigating alternative effluent disposal methods that will enhance groundwater recharge without increasing nitrate levels.

Rural Water Company/ Cypress Ridge Sewer Company

Rural Water Company (RWC) provides water to consumers on the northwest side of the Nipomo Mesa, including Cypress Ridge, a planned development consisting of approximately 380 homes and a golf course. RWC serves a residential community that includes both densely spaced homes and numerous large lot rural residences. Non-potable water for the Cypress Ridge Golf Course is pumped by golf course wells to supplement irrigation from recycled wastewater. The golf course is irrigated partially by effluent from the Cypress Ridge Wastewater Treatment Facility (Cypress Ridge WWTF), which in turn uses some of the golf course water features as finishing ponds in the waste treatment process.

RWC currently uses groundwater for 100 percent of supply requirements. Groundwater is pumped from the larger Nipomo Mesa Hydrologic Sub-area that is part of the Santa Maria Valley Groundwater Basin, using several active wells. Litigation involving use of this groundwater basin, which began in 1997, resulted in stipulations and judgments in 2005 and 2008. As party to the Santa Maria Groundwater Basin litigation, extraction rights may be

affected at a future date. The stipulation requires RWC to join with Nipomo CSD to develop alternative sources to import a minimum of 2,500 AFY. Once the supplemental water system is in place, RWC will be required to purchase 8.33 percent (208.25 AFY) of that supply. The Cypress Ridge WWTF currently produces about 50 AFY of irrigation quality effluent, which is used on the golf course.

Water quality discussion is similar to that described for GSWC.

Woodlands Mutual Water Company

The Woodlands is a relatively new housing and commercial development located on the Nipomo Mesa in southern San Luis Obispo County. The Woodlands Mutual Water Company (Woodlands MWC) was organized to provide water to customers within the Woodlands development. The Woodlands MWC currently supplies its customers with domestic water service and wastewater reclamation.

The Woodlands has a tentative map allowing for 1,320 residential units, plus additional commercial facilities. Currently, there are 685 residential lots that have been recorded in final maps. Commercial facilities for the golf course are also constructed at this time. Other facilities that may be constructed in the future include commercial facilities at the business park, a hotel, and a possible school. The planned development also currently has an 18-hole golf course and a smaller 12-hole executive course. The on-site wastewater treatment plant provides the golf courses with recycled water for irrigation; however, the golf courses are also supplemented with groundwater. Another 18-hole golf course is planned for the future, which will be irrigated with groundwater.

Currently, the Woodlands MWC relies on groundwater as the sole source of water. The Woodlands MWC owns and operates four wells, three of which produce potable water and the fourth serves irrigation needs. Groundwater is pumped from the larger Nipomo Mesa Hydrologic Sub-area that is part of the Santa Maria Valley Groundwater Basin. Litigation involving use of this groundwater basin, which began in 1997, resulted in stipulations and judgments in 2005 and 2008. As party to the Santa Maria Groundwater Basin litigation, extraction rights may be affected at a future date. The stipulation requires Woodlands MWC to join with Nipomo CSD to develop alternative sources to import a minimum of 2,500 AFY.

Woodlands MWC has agreed to purchase a portion of the NMMA supplemental water (determined according to the percentage of completion of the project and rising to a total of 417 AFY at such time as its service area is fully developed). Woodlands MWC has also agreed to pay a portion of the operating costs, capital costs and replacement costs of the project based on the amount of water purchased by Woodlands MWC relative to the total amount purchased

from the City of Santa Maria. Woodlands MWC also has the right to exercise an option for an additional 300 AFY from the Nipomo supplemental water project at a future date.

Twenty-four AFY of recycled water was used in 2008 to partially irrigate the golf course. As more residential units are completed, increased quantities of wastewater will be available for recycling. The build-out flow of the WWTP is 774 AFY. Well water will continue to be required during periods in which the recycled water available is less than the golf course demand.

Water quality discussion is similar to that described for GSWC. The most recent Consumer Confidence Report indicated that Woodlands MWC supplied water that met both primary and secondary drinking water standards. One of the wells exceeds the standards for iron, but mixing with water from other wells produces water that meets the iron standard.

Conoco Phillips

ConocoPhillips uses water for industrial operations at its refinery on the Nipomo Mesa. Water demand has decreased in recent years due to infrastructure changes resulting in more water-efficient operations. Planned expansion will increase water demand, but demand will remain less than historical peak pumping rates.

ConocoPhillips uses groundwater for 100 percent of supply requirements. Though it is a party to the Santa Maria Groundwater stipulation, it is not required to participate in the development of supplemental water. It has rights to reasonable and beneficial use of groundwater without limitation, except in the event of a severe water shortage, as defined in the stipulation.

Water quality discussion is similar to that described for GSWC. One of the ConocoPhillips wells reported a high (1,000 mg/L) TDS value. The well is used for industrial processing.

M.5.8 WPA 8 – Huasna Valley

There are no large water suppliers within WPA 8.

M.5.9 WPA 9 – Cuyama Valley

There are no large water suppliers within WPA 9.

M.6 NORTH COUNTY WATER SUPPLIERS

M.6.6 WPA 10 – Carrizo Plain

There are no large water suppliers within WPA 10.

M.6.7 WPA 11 – Rafael/Big Spring

There are no large water suppliers within WPA 11.

M.6.8 WPA 12 – Santa Margarita

County Service Area 23

County Service Area 23 (CSA 23) provides water service to the community of Santa Margarita. CSA 23 supplies the community with water via groundwater wells located in the center and south-eastern corner of the community. The community is completely reliant on groundwater for its supply.

In 2009, the CSA served a total of 525 connections, predominantly residential. Future build-out is estimated to be 619 connections. CSA 23 receives its water supply from two wells; Well No. 3 and No. 4. Well No. 3 is a deep, fractured-rock well and Well No. 4 is a relatively shallow well that pumps from the alluvial deposits of Santa Margarita Creek. Two other wells, No. 1 and No. 2, are near No. 4, but are not built to current health standards, and can only be used in an emergency with a boil water order.

During periods of low seasonal rainfall, water level in the shallow well typically drops, triggering various voluntary conservation methods. Although the community is better than 85 percent built out according to the current general plan, there is concern that existing groundwater supplies may not be adequate to supply additional residents and that they are inadequate during periods of less than normal rainfall. There is also the concern that the reliance on essentially a single supply source (groundwater) may be placing the community in a tenuous public health and safety position.

The 2003 Master Plan recommended securing an additional 100 AFY of reliable supply. Based on community input, concerns over cost and need, CSA 23 is currently investigating several options to secure an additional source of water to be used only during a drought or other emergency. These include State Water, Lake Nacimiento water or additional groundwater wells. Any one of these sources could potentially supply water demand at build-out given the community's support.

CSA 23 has been able to deliver water that meets State Drinking Water Standards.

Santa Margarita Ranch

The existing Ranch water use is estimated at 1,621 AFY based on land use water factors. Planned expansion of orchards and vineyards will increase water use to 4,263 AFY. The proposed development's EIR states that the ARCS would increase water demand by 161 AFY. Implementation of the FDP would add an additional 1,466 AFY of demand. Based on these values, the total build-out demand is 5,890 AFY.

Existing Santa Margarita Ranch water demands are supplied entirely by groundwater. The Ranch property is currently served by approximately 27 wells, located primarily along the east side of the Ranch, west of West Pozo Road. Individual well yields typically range between 200 and 400 gpm with some wells capable of rates of up to 1,000 gpm. Supplemental water supply options for Santa Margarita Ranch are State Water and Nacimiento water.

Environmental water requirements may limit the use of groundwater to meet the needs of expanded agricultural production and eventual residential development. Trout and Rinconada Creeks, which are upper tributaries of the Salinas River, are important spawning habitat for steelhead, a federally declared endangered species. The National Marine Fisheries Service (NMFS) has previously received complaints that the creeks have allegedly been dewatered as a result of vineyard development on Ranch property.

TDS concentrations in wells in the area are relatively high. Nitrates have measured concentrations below the MCL of 45 mg/L. Total coliform, fecal coliform, and Escherichia coli data have been found to be suggestive, although not conclusive, of small impacts on both shallow and deep aquifer wells from local wastewater disposal systems.

M.6.9 WPA 13 – Atascadero

Garden Farms Community Water District

The Garden Farms Community Water District (Garden Farms CWD) provides water to consumers in and around the unincorporated community of Garden Farms, located along the old El Camino Real between Santa Margarita and Atascadero. Garden Farms is a small residential community of 240 residents with 113 water service connections. Besides two small commercial establishments, all connections are residential.

Demand has fluctuated between 48 and 93 AFY over the past four years. The service area is fully built out. Garden Farms CWD draws all of its supply from three wells (though the third well is rarely used) which tap the Atascadero Groundwater Sub-basin. Water levels have dropped several feet in the past year, likely due to the ongoing drought in the region.

Groundwater quality is typical for the sub-basin, with no contaminants exceeding the primary drinking water standards. High levels of manganese (70 ppb reported in 2007) have been detected, but do not currently exceed the secondary drinking water standard of 50 ppb.

Templeton Community Service District

The Templeton Community Services District (Templeton CSD) supplies its customers with domestic water service. Templeton is an unincorporated community located along Highway 101 between the City of Paso Robles and City of Atascadero. Templeton consists of a mix of residential, commercial, agriculture, and recreational areas. The Templeton area has a number of homes on larger lots, and thus exhibits a relatively large per capita water demand as a result.

Population projections are based on only those areas served by, and within, the Templeton CSD service area boundary. Thus, there will likely be discrepancies between these projections and those provided by the County or census data. The existing service area population was estimated at 6,417 persons. Based on the 2005 estimated population of 6,417 persons determined by the Templeton CSD's water service connections, plus 2,180 persons from the commercial mixed-use component, and an additional 900 persons from the residential component, the Templeton CSD's estimated build-out population (within its existing service area boundary) is 9,497 persons.

The Templeton CSD depends on water from eleven wells that extract water from two groundwater sources: the Paso Robles Formation and the Salinas River Underflow. Nine of the eleven wells that extract water from the Paso Robles Formation are extracting from the Atascadero Groundwater Sub-basin.

The Templeton CSD currently is permitted to extract 500 AFY from the Salinas River Underflow between October 1 and April 1. Two wells tap this aquifer, though only the Smith Well is in service. The Templeton CSD may request from CDPH an extended permit to continue to pump from the river wells through May 15 if sufficient water is available and flowing during that time.

An additional source of water for Templeton CSD comes from their re-use program with disposal of treated wastewater effluent from the Meadowbrook WWTP percolation ponds. This program allows the Templeton CSD to percolate treated effluent into the groundwater basin/Salinas River Underflow and subsequently extract the same amount of water 28 months later. According to the 2005 Water Master Plan, wastewater flow to the Meadowbrook WWTP at that time was 148,000 gpd (165 AFY) with 30 AF being used to irrigate an alfalfa field. Therefore, the Templeton CSD at that time had been withdrawing approximately an additional 135 AFY from the Salinas River allocation (above the 500 AFY permitted Salinas River underflow).

Future water supply for the Templeton CSD will likely come from the Nacimiento Water Project (NWP). The Templeton CSD is under contract to receive 250 AFY from the NWP. Templeton CSD plans to receive raw water from the NWP and percolate this water into the Salinas River Underflow, in a similar manner that they percolate effluent from the Meadowbrook WWTP percolation ponds (Selby Pond site). This 250 AFY of percolated NWP water will then be extracted from the Templeton CSD's downstream potable water well field. In addition, the Templeton CSD might divert additional wastewater flows to the Meadowbrook WWTP (which currently flow to the City of Paso Robles WWTP), which will allow them to increase percolation into and extraction from the Salinas River Underflow by as much as 343 AFY. These future water supply provisions are referenced in the 2005 Water Master Plan, and are included as recommendations for future water supply.

Based on the 2005 Water Master Plan, and review of current consumer confidence reports (CCRs), the Templeton CSD's water supply to its customers meets all water quality standards. In general, the river wells have lower total dissolved solid levels than the Atascadero Groundwater Sub-basin; however, all of the wells are below the upper limits of the drinking water standard of 1,000 mg/L. The Templeton CSD's overall aggregate TDS quality to its customers, as reported in the 2004 CCR, was 653 mg/L. This is based on how the Templeton CSD distributes and blends the various water supplies to its customers.

Atascadero Mutual Water Company

The Atascadero Mutual Water Company (Atascadero MWC) is a corporation organized under the laws of California for providing water service to property owners, known as the shareholders, within a geographical service area. Atascadero MWC supplies its customers with domestic water service and fire protection. Atascadero MWC's service boundary includes the City of Atascadero limits and some unincorporated areas (e.g. communities such as the Eagle Ranch Property, the West San Marcos Development, and the area south of Santa Rosa Road known as the Random Oaks area). In 2008, the Atascadero MWC served a population of 30,595 with 10,505 service connections. The Atascadero MWC projects a 2030 population of 37,436.

The City of Atascadero is located along Highway 101, between the City of Paso Robles and City of San Luis Obispo. The City of Atascadero consists of a mix of residential, commercial, agriculture, and recreational areas. Eagle Ranch, a large proposed development on the southwest side of the City of Atascadero, is only partially within Atascadero MWC's service area boundary. Atascadero MWC will serve the existing portion of the development within its boundary and another small portion proposed for inclusion. Adequate water supply for all of Eagle Ranch has yet to be confirmed.

According to Atascadero MWC records and demand forecasts, average annual per capita demand has fluctuated in the range of 188 to 213 over the past decade, with lower water use possibly linked to mandatory conservation measures. It is anticipated that water conservation programs will cause lower per capita demands to become the rule rather than the exception. A per capita demand of 199 gpcd is used to estimate a future peak demand of 7,600 AFY in 2019 with a population of 34,016. Thereafter, conservation measures are predicted to more than compensate for population growth, resulting in a build-out demand of 7,511 AFY in 2030 for a population of 37,436.

The Atascadero MWC's water source is the Atascadero Groundwater Sub-basin (of the Paso Robles Groundwater Basin) and Salinas River Underflow. Water is pumped from 17 active wells with two additional wells on standby status. Atascadero MWC derives approximately half of its supply from the Atascadero Groundwater Sub-basin, with the remainder coming from the Salinas River Underflow. Atascadero MWC has rights to 3,372 AFY from the Salinas River Underflow. As the Salinas River Underflow is more sensitive to rainfall, during dry years the proportionate withdrawal from the deeper Atascadero Groundwater Sub-basin increases.

The current water supply system is under stress due to the ongoing drought. During the spring of 2009, the Atascadero MWC issued a stage 2 water shortage condition alert when reserve production capacity fell to less than 10 percent of the maximum day demand. Stage 2 mandatory conservation measures include a ban on daytime landscape watering, required alternate irrigation schedules, and a prohibition of irrigation runoff.

The Atascadero MWC is a major partner of the Nacimiento Water Project, having contracted for a 2,000 AFY allotment of this future supply. The water will be used to recharge the groundwater table in the vicinity of the deep wells that pump from the Atascadero Groundwater Sub-basin. The Atascadero MWC is also exploring the expansion of its current well fields.

Atascadero MWC continues to aggressively promote water conservation, as it has since 1993. Atascadero MWC's program has reduced per capita indoor water use and the use of potable water for landscape irrigation. Atascadero MWC provides educational resources on its website, in its offices, and in periodic brochures included with water bills. In 1997, Atascadero MWC signed a memorandum of understanding (MOU) with the California Urban Water Conservation Council (CUWCC) and continues to implement and meet the goals of Best Management Practices for water conservation, including:

- Conservation Rate Structure (i.e. Tier Water Rates)
- Turf conversion rebates
- Lawn aeration rebates
- Sprinkler nozzle replacement rebates

- Irrigation controller rain sensor rebates
- Weather based irrigation controller and soil moisture sensor rebates
- Rainwater harvesting system rebates
- High efficiency clothes washing machine rebates
- High efficiency toilet rebates
- School education programs
- Free seminars on water conserving landscape design and plant selection
- Free landscape/home water surveys
- Annual Water-Conserving Landscape awards

Atascadero MWC is also a member of the Groundwater Guardian Program, Alliance for Water Efficiency, Water Education Foundation, and San Luis Obispo County Partners in Water Conservation.

Atascadero MWC's water supply to its customers meets all primary and secondary water quality standards.

M.6.10 WPA 14 – Salinas/Estrella

San Miguel Community Service District

The water supply for the San Miguel CSD is obtained solely from groundwater pumping of the Paso Robles Formation. There are three wells within the district; the two primary wells are Well No. 3 and Well No. 4. Well No. 5, a smaller well, historically exhibited high nitrate levels and was removed from service. In 2007, the District replaced Well 5 with a new well in the same location, but installed it deeper (approximately 800 feet). This new well has experienced occasional high nitrate concentrations and possibly high arsenic concentrations. This new well is temporarily out of service while the district conducts further evaluation.

The presence of gross alpha emitters approaching the MCL in the San Miguel water supply is of growing concern. The presence of gross alpha emitters is from naturally occurring decay of Uranium-238 and Thorium-232. The two main wells have shown increasing levels of gross alpha particles through the years, although the average is currently below the proposed MCL. Several of these samples indicate gross alpha levels that exceed the proposed MCL of 15 pCi/L.

Camp Roberts

Camp Roberts water supply is from groundwater pumping, with three active wells. TDS and arsenic levels in the groundwater are marginal. According to 2001 reports, the TDS concentration was about 900 mg/L. Also, the arsenic levels in 2001 were noted to be 9.6 µg/L, just below the MCL of 10 µg/L.

County Service Area 23 (Shandon)

County Service Area 23 (CSA 23) provides water service to the community of Santa Margarita. Santa Margarita has a population of approximately 1,400 and covers an area of approximately 265 acres. CSA 23 supplies the community with water via groundwater wells located in the center and south-eastern corner of the community. The community is completely reliant on groundwater for its supply.

In 2009, the CSA served a total of 525 connections, predominantly residential. Future build-out is estimated to be 619 connections. CSA 23 receives its water supply from two wells; Well No. 3 and No. 4. Well No. 3 is a deep, fractured-rock well and Well No. 4 is a relatively shallow well that pumps from the alluvial deposits of Santa Margarita Creek. Two other wells, No. 1 and No. 2, are near No. 4, but are not built to current health standards, and can only be used in an emergency with a boil water order.

During periods of low seasonal rainfall, water level in the shallow well typically drops, triggering various voluntary conservation methods. Although the community is better than 85 percent built out according to the current general plan, there is concern that existing groundwater supplies may not be adequate to supply additional residents and that they are inadequate during periods of less than normal rainfall. There is also the concern that the reliance on essentially a single supply source (groundwater) may be placing the community in a tenuous public health and safety position.

The 2003 Master Plan recommended securing an additional 100 AFY of reliable supply. Based on community input, concerns over cost and need, CSA 23 is currently investigating several options to secure an additional source of water to be used only during a drought or other emergency. These include State Water, Lake Nacimiento water or additional groundwater wells. Any one of these sources could potentially supply water demand at build-out given the community's support.

CSA 23 has been able to deliver water that meets State Drinking Water Standards.

City of Paso Robles

The City of Paso Robles has historically relied upon local water supplies from the Salinas River Underflow and from the Paso Robles Formation (which is part of the Paso Robles Groundwater Basin) for its municipal water supply. The deeper Paso Robles Formation currently contributes 2,856 AFY to City supply. The City plans to maintain this extraction rate in the future. Salinas River Underflow refers to shallow subterranean flows in direct connection with the Salinas River. This underflow is subject to appropriative water rights and permitting by the State Water Resources Control Board (State Board). An approved State Board application allows the City to

extract up to 8 cfs (3,590 gpm) with a maximum extraction of 4,600 AFY (January 1 to December 31).

The City participates in the Paso Robles Groundwater Basin Agreement (Agreement) with the District, CSA 16 – Shandon, San Miguel CSD, and approximately 20 landowners that have organized as the Paso Robles Imperiled Overlying Rights (PRIOR) group. Key elements of the Agreement are a clear acknowledgement that the Paso Robles Groundwater Basin is not in overdraft now, and that the parties will not take court action to establish any priority of groundwater rights over another party as long as the Agreement is in effect. In addition, the parties agree to participate in a meaningful way in groundwater management activities, and to develop a plan for monitoring groundwater conditions in the groundwater basin.

To assure its water supply into the future, the City of Paso Robles will purchase water from the Nacimiento Water Project, which is projected to deliver 4,000 AFY of raw water. The City is progressing with its plans for a water treatment plant. In November 2011, the City Council authorized the implementation of a plant capable of treating 2,000 AFY of NWP water. This phase should be completed by 2015/16. The City will have the option of increasing its allotment of Nacimiento water to 8,000 as demand increases.

Another supply alternative being pursued by Paso Robles is the use of recycled wastewater. The City owns its own wastewater treatment plant, which currently provides secondary treatment. Several alternatives have been studied to upgrade treatment to the tertiary level, and it is assumed that one of these alternatives will eventually be pursued. 5,000 AFY of wastewater could ultimately be treated, but only 944 AFY would be needed to meet build-out demand. This margin of safety serves as a backup source in case of limitations on any of the other sources of supply.

The City has implemented a number of mandatory water conservation measures that were in force throughout the water service area. They include mandatory recycling or recirculation of water for car washes, cooling systems, and decorative fountains and several other practices designed to curb water waste. In the summer of 2011, the City lifted many of the mandatory requirements. Paso Robles is also a member in the San Luis Obispo County Partners in Water Conservation.

The City has targeted landscape irrigation as the water use practice with the highest potential for water conservation. Educational resources are available on the City website, in City offices, and in periodic brochures included with water bills. The City also sponsors a school education program that includes water conservation as a key component.

In general, City water quality is good, but has relatively high TDS and hardness. With regard to regional groundwater quality, the Estrella subarea of the Paso Robles Groundwater Basin is characterized locally by increasing TDS, chloride and nitrate concentrations. These adverse water quality trends are unlikely to affect the City's water supply in the near future, given that groundwater currently provided by the City meets all drinking water standards and the increases in TDS, chloride and nitrate are localized. Nonetheless, salt loading to the groundwater basin is an important long-term concern. Recognizing that the City's wastewater disposal is one source of salt loading, the Paso Robles has made the reduction of salt loading one of their water resource goals. Major means to reduce salt in the city wastewater include planned use of high-quality Lake Nacimiento supply, reduced use of home water softeners, strategic use of wells with lower salt concentrations, and implementation of an industrial waste discharge ordinance.

M.6.11 WPA 15 – Cholame

There are no large water suppliers within WPA 15.

M.6.12 WPA 16 – Nacimiento

Nacimiento Water Company

The Nacimiento Water Company (NWC) serves the community of Oak Shores, which is on the banks of Nacimiento Lake. The NWC currently serves a population of 275 residents with water drawn from the lake, which is then treated prior to distribution. Plans to develop an additional 345 lots as part of Oak Shores Estates are currently on hold. The water supply allocation for Oak Shores is part of the 1,750 AFY reserved for County residents in the Lake Nacimiento area.

Heritage Ranch Community Service District

The Heritage Ranch Community Services District (Heritage Ranch CSD) was formed in 1990 to oversee water and sewer services for the Heritage Ranch community. It supplies its customers with domestic water service. Heritage Ranch is an unincorporated community located on the east side of Lake Nacimiento, approximately 15 miles northwest of the City of Paso Robles. Land use at Heritage Ranch consists mostly of residential, recreational, and open space areas with some commercial and public facility areas. A community that was originally started as a remote vacation destination with the vast majority of part-time residents has now become a bedroom community to neighboring cities with full-time residents.

As of September 2010, the Heritage Ranch CSD serves approximately 1,778 water customers. Based on a density of 2.0 persons per household, this equates to an existing population of

approximately 3,556 persons. The Adopted Specific Plan for the Heritage Ranch CSD, prepared in 1972 and revised in 1980, limited the total number of developable units to 4,000. In 2004, the maximum number of developable units was revised a second time to its current maximum value of 2,900 units. Based on the average household size of 2.0 persons per household, it is anticipated that the Heritage Ranch CSD's total build-out population will reach 5,800 persons.

The Heritage Ranch CSD only has one water supply source, the Gallery Well, which is fed via three horizontal wells located in the Nacimiento River bed just downstream of the Nacimiento Dam. Typically, the Nacimiento River is fed year-round by the release of water through the upper and/or lower outlet works in the dam at Lake Nacimiento. Monterey County Water Resources Agency monitors and controls the release of the water until the water level of the lake drops below 687 feet, at which time San Luis Obispo County may obtain control over the lake releases. The water is primarily released to sustain habitat in the river, provide water to farmers in the Salinas Valley, and halt sea water intrusion into the Salinas Valley, in addition to providing a water supply source to the Heritage Ranch CSD. If no water is released from the lake, which has rarely occurred in the past 50 years, the Heritage Ranch CSD will not have a water supply. Even though the water level of Lake Nacimiento has never dropped below the dam outlet, it has come close. The last time this occurred was in October of 1989, when the lake level dropped to within two feet above the lower outlet works.

The 1,100 AFY of allocation of Nacimiento Reservoir water designated for use in Heritage Ranch's service area is part of the 1,750 AFY reserved for County residents in the Lake Nacimiento area. It is sufficient to provide water for build-out demand, but the configuration of the delivery system leaves the Heritage Ranch CSD vulnerable to a termination in water supply in an extreme drought. Alternative sources are under consideration, including taking water directly from the lake and connecting to the Nacimiento Pipeline. A possible tie-in with Camp Roberts was explored, but is now considered as not being a feasible option due to the reluctance of Camp Roberts to consider any emergency water supply options.

Water demands over the last 3 years have decreased due to an increase in water rates and implementation of water conservation programs such as for toilet retrofits and turf conversion. While the Heritage Ranch CSD's water supply to its customers has historically met all primary water quality standards, it currently exceeds the limits for Disinfection Byproducts (DBP). The treatment plant has been ineffective in removing sufficient natural organic matter to prevent the formation of DBP. The District Board hired a water treatment process engineering consultant and received a report with recommendations on new treatment equipment to better control DBP in September 2010.

