

II. WATER SUPPLY AND WATER SYSTEMS

Level of Severity Criteria

WATER SUPPLY

Level of Severity	Water Supply Criteria	
	Coastal Zone	Inland Areas
I	Timeframe for remaining dependable water supply is 9 years	Water demand projected over 20 years equals or exceeds the estimated dependable supply. LOS I provides five years for preparation of resource capacity studies and evaluation of alternative courses of action.
II	Timeframe for remaining dependable water supply is 7 years	Water demand projected over 15-20 years (or other lead time determined by a resource capacity study) equals or exceeds the estimated dependable supply.
III	Demand equals or exceeds estimated dependable supply	Water demand projected over 15 years (or other lead time determined by a resource capacity study) equals or exceeds the estimated dependable supply, OR The time required to correct the problem is longer than the time available before the dependable supply is reached.

WATER SYSTEMS

Level of Severity	Water System Criteria (Coastal Zone and Inland Areas)
I	The water system is projected to be operating at the design capacity within seven years. Two years would then be available for preparation of a resource capacity study and evaluation of alternative courses of action.
II	A five-year or less lead time (or other lead time determined by a resource capacity study) needed to design, fund and construct system improvements necessary to avoid a LOS III problem.
III	Water demand equals available capacity: a water distribution system is functioning at design capacity or will be functioning at capacity before improvements can be made. The capacity of a water system is the design capacity of its component parts: storage, pipelines, pumping stations and treatment plants.

ADMIN DRAFT

Water Purveyors Discussed in This Resource Summary Report

Water purveyors discussed in this Resource Summary Report are summarized in Table II-1 and include those serving unincorporated communities as well as those that derive all, or a portion of, their water supplies from sources shared with purveyors serving unincorporated communities.

Table II-1 - Water Purveyors Discussed in This Resource Summary Report				
Community	Major Water Purveyors	Approx. Population Served (2018)	2016-17 Water Deliveries to Customers¹ (AFY)	2017-18 Water Deliveries to Customers¹ (AFY)
Atascadero ⁶	Atascadero MWC	31,500+	4,471.4	4,784.1
Avila Area	Avila Beach CSD	1,000	73.8	67.7
	Avila Valley MWC	104	+++	+++
	San Miguelito MWC	1,400	130.3	151.6
	CSA 12	+++	144.1	158.1
Cambria	Cambria CSD	6,200	383.4 ²	452.7
Cayucos	CSA 10A	1,350	89.8	94.4
	Morro Rock MWC	2,148	94.3	100.2
	Cayucos Beach MWC	2,583	120.3	130.5
Edna Valley	Golden State Water Co.	1,299	178.5	201.3
Garden Farms	Garden Farms CWD	400	39.5	41.5
Heritage Ranch	Heritage Ranch CSD	3,100	343.5	399.6
Los Osos	Los Osos CSD	7,086	461.1	470.0
	Golden State Water Co.	5,516	432.5	442.9
	S&T MWC	591	31.3	32.6
Nipomo	Nipomo CSD	13,479	1,619.4	1,834.4
	Woodlands MWC	1,900	687.2	840.5
	Golden State Water Co.	4,406	594.7	658.8
	Cypress Ridge System (GSW) ³	2,554	516.8	564.9
Oak Shores	Nacimiento Water Co.	+++	173.4	+++
Oceano	Oceano CSD	7,600	643.3	711.9
Paso Robles ⁶	City of Paso Robles	31,398	4,885.0	5,471.6 ⁵
Santa Margarita	CSA 23	1,400	105.3	+++
San Miguel	San Miguel CSD	2,600	244.9	292.5
San Simeon	San Simeon CSD	462	69.7	66.1
Shandon	CSA 16	1,260	99.1	119.7
Templeton	Templeton CSD	6,885	985.7	1,344.2

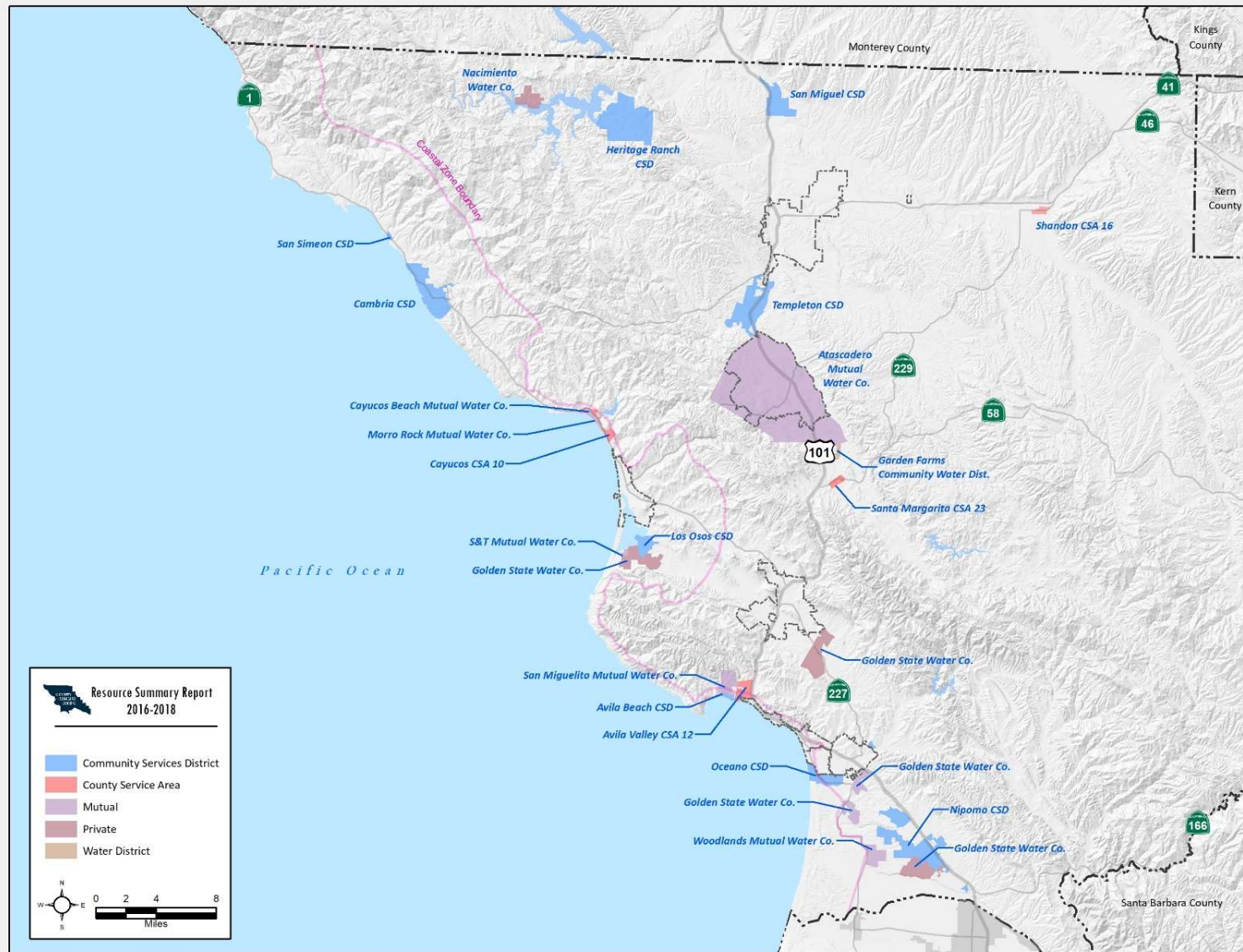
Sources: July 2016-June 2017 and July 2017- June 2018 Water Usage

Notes:

1. Data for annual deliveries for the period July 1 through June 30 provided voluntarily by purveyors.
2. Water main leak affects March, April, May, and June consumption numbers.
3. The Rural Water Company was acquired by the Golden State Water Company in October 2015. The Cypress Ridge area is also served by the Golden State Water Company.
4. +++ Indicates data were not provided.
5. Represents total water deliveries from all sources. However, for purposes of recommending a Level of Severity, only that portion of the City's water supply derived from the Paso Robles Groundwater Basin was used, as reported in the City's 2015 Urban Water Management Plan.
6. The Atascadero Mutual Water Company and the City of Paso Robles derive a portion of their water supplies from groundwater basins shared with one or more water purveyors serving the unincorporated county.

ADMIN DRAFT

Figure II-1 –Water Purveyors Discussed in This Resource Summary Report



Water Resources

Information regarding water resources serving the unincorporated county was derived from a variety of sources, including the 2012 San Luis Obispo County Master Water Report and the 2014 Integrated Regional Water Management (IRWM) Plan which are available in their entirety at the following County websites, respectively:

<http://www.slocountywater.org/site/Frequent%20Downloads/Master%20Water%20Plan/>

<http://www.slocountywater.org/site/Frequent%20Downloads/Integrated%20Regional%20Water%20Management%20Plan/IRWM%20Plan%20Update%202014/>

Where available, more recent information was used. It should be noted that water demand data for the period covered by this Resource Summary Report (RSR) is a “snapshot” and may not be representative of long-term demand.

Sustainable Groundwater Management Act (SGMA)

The Sustainable Groundwater Management Act (SGMA) took effect on January 1, 2015, and substantially changed California groundwater management by enacting requirements and providing new statutory authority related to groundwater use and the creation of new groundwater management agencies. More specifically, SGMA includes new financial and enforcement tools to carry out effective local sustainable groundwater management through the formation of one or more Groundwater Sustainability Agencies (GSAs) and the development and implementation of one or more Groundwater Sustainability Plans (GSPs). GSAs and their respective GSPs are required to ensure basins are managed sustainably within 20 years of GSP adoption. However, SGMA leaves many of the details related to the establishment of GSAs and the development of GSPs up to local agencies (if compliant with regulations).

SGMA compliance is required in all basins that are designated by the California Department of Water Resources (DWR) as either high or medium priority. DWR is responsible for prioritizing basins and assessing existing conditions (e.g. chronic lowering of groundwater levels, seawater intrusion) that might warrant faster action to mitigate impacts of unsustainable basin uses (designated to be in a critical condition of overdraft).¹

¹ DWR Bulletin 118 (2003) provides that “[a] basin is subject to critical conditions of overdraft when continuation of present water management practices would probably result in significant adverse overdraft-related environmental, social, or economic impacts.”

Six high and medium priority groundwater basins² are located partially or entirely within San Luis Obispo County including: San Luis Obispo Valley, Santa Maria Valley, Paso Robles, Atascadero, Cuyama Valley, and Los Osos Valley Basins.

SGMA's next critical deadline is for each GSA within the high and medium priority basins to develop and adopt a GSP by January 31, 2020 or 2022³ (where there is more than one GSA, the GSAs may jointly adopt a single GSP or separate coordinated GSPs). The GSAs in each of these basins are developing GSPs to meet the SGMA regulations. The GSPs will study the groundwater conditions, estimate the current and future water budget, define what sustainability looks like for each basin, and set measurable objectives and thresholds for ongoing monitoring of progress towards achieving sustainability within 20 years of GSP adoption. Given the anticipated contents of the GSPs for these six basins based on statutory and regulatory requirements, the Resource Summary Report does not attempt to re-evaluate these basins, and simply references and relies on the previous Resource Summary Report Level of Severity designation. Once GSPs are adopted and more information becomes available for review, the county may consider how best to incorporate the findings into future Resource Summary Reports. More details of SGMA efforts in individual basins are included within the appropriate water supply discussions below.

Recent Water Conservation Regulations

2015 Executive Orders B-29-15 and B-36-15

Executive Order B-29-15 mandated a 25 percent water use reduction by users of urban water supplies across California. In May 2015, the State Water Board adopted an emergency regulation requiring a cumulative 25 percent reduction in overall potable urban water use over the following 9 months. To achieve this goal, the State Water Resources Control Board established a tiered system, in which urban water suppliers who serve more than 3,000 customers or deliver more than 3,000 AF of water per year – which account for more than 90 percent of urban water use – were each assigned a conservation standard. A sliding scale was used so that communities that have already reduced their residential gallons per capita per day (R-GPCD) through past conservation had lower mandates than those that had not made such gains since the last major drought. Water suppliers serving fewer than 3,000 connections, and commercial, industrial, and institutional users with independent supplies, are required to achieve a 25 percent conservation standard or restrict outdoor irrigation to no more than two days a week. These smaller urban suppliers

² As of October 26, 2018, DWR's published, final priorities and designations for local basins are: San Luis Obispo Valley (medium), Santa Maria Valley (high), Paso Robles (high and critical conditions of overdraft), Atascadero (priority under assessment by State), Cuyama Valley (medium and critical conditions of overdraft), and Los Osos Valley (high and critical conditions of overdraft). In May 2018, DWR published a draft statewide basin re-prioritization which identifies Atascadero and Los Osos Valley as very low priority basins; however, DWR's designations may be changed upon final publication.

³ Pursuant to Water Code § 10720.7(a), high or medium priority basins subject to critical conditions of overdraft shall adopt a GSP by January 31, 2020. All other high and medium priority basins shall adopt a GSP by January 31, 2022.

serve less than 10 percent of Californians. Enforcement of the supply cuts includes potential fines of up to \$10,000 a day.

Conservation tiers for urban water suppliers were set between eight percent and 36 percent, based on residential per capita water use for the months of July - September 2014. During this time, statewide water conservation was unprecedented. In those 10 months alone, the state realized nearly a 24 percent savings in water use as compared to the same months in 2013, resulting in some 1.30 million acre-feet of water conserved throughout California, enough to supply 6.5 million people with water for an entire year.

2016 Emergency Regulations

Based on Executive Order B-36-15, on Feb. 2, 2016 the State Water Board approved an updated and extended emergency regulation that continued mandatory reductions through October 2016. The 2016 Emergency Regulation responded to calls for continuing the conservation structure that has spurred such dramatic savings while providing greater consideration of some localized factors that influence water needs around the state including climate differences, population growth, and significant investments in new local, drought-resilient water supplies such as potable wastewater reuse and desalination.

Recognizing persistent, yet less severe, drought conditions throughout California, on May 18, 2016, the State Water Board adopted an emergency water conservation regulation that was in effect from June 2016 through January 2017. The regulation required locally developed conservation standards based upon each agency's specific circumstances. It replaced the prior percentage reduction-based water conservation standard with a localized "stress test" approach. These standards require local water agencies to ensure a three-year supply assuming three more dry years like the ones the state experienced from 2012 to 2015. Water agencies that would face shortages under three additional dry years will be required to meet a conservation standard equal to the amount of shortage.

The revised regulation requires individual urban water suppliers to self-certify the level of available water supplies they have, assuming three additional dry years. Wholesale water agencies were also required to include documentation about how regional supplies would fare under three additional dry years. Both urban water suppliers and wholesale suppliers are required to report the underlying basis for their assertions, and urban water suppliers are required to continue reporting their conservation levels. The State Water Board has not independently verified the information but reserves the ability to reject certifications later found to be erroneous.

The new Emergency Regulation required small water suppliers (serving 3,000 or fewer customers) to either achieve a 25 percent conservation standard or restrict outdoor

irrigation to no more than two days per week through October 2016. These suppliers were required to submit a small water supplier report that either (a) identified total potable water production, by month, from December 2015 through August 2016, or (b) confirmed compliance with the maximum two day per week outdoor irrigation restriction. The small water supplier report was due to the State Water Board by September 15, 2016.

The purpose of the three-year “stress test” was to acknowledge both the level of water supplies available to different areas, through improved hydrology and/or significant investments in new supplies, e.g., recycled water, groundwater banking, local surface and groundwater storage, desalination, stormwater capture, or other methods. By choosing a three-year conservative planning horizon, the state could step back this year from its unprecedented specific target setting.

Water suppliers that would experience shortage conditions in 2019 under the three-dry-years assumptions must meet a state-imposed conservation standard equal to the shortage level. For example, a supplier with a 12 percent shortage will now have a 12 percent conservation standard. Water suppliers whose submittals show no shortage conditions are limited to their 2013 water use and are encouraged to conserve more.

Submitting a self-certification was optional. Water suppliers that did not submit self-certifications retained their conservation standard from March 2016. Others, even if they meet the “stress test,” are expected to have retained either a percentage or other requirement-based conservation program. The State Water Board will continue to monitor and require reporting of water use and conservation results monthly throughout the year.

Water purveyors within San Luis Obispo County who submitted self-certification data to the State as of August 2016 are summarized in Table II-2 which includes the target conservation percentage, the achieved percent cumulative water conservation, and the status of their “stress-test” self-certification. Of the purveyors who elected to submit self-certification data to the State, all exceeded the target conservation standard.

Table II-2 -- Status of Self-Certification "Stress Test" Of Water Purveyors Serving Unincorporated County Areas²			
Purveyor	March 2016 Conservation Standard (March 2016 – May 2016)	Achieved Cumulative Conservation (June 2016)	Status of Self- Certification¹
Nipomo Community Services District	28%	32%	Certified
City of Paso Robles	24%	30%	Certified
Atascadero Mutual Water ¹ Company	28%	29%	Certified

Notes:

1. Water purveyors who elected to submit self-certification data to the State Board. "Certified" means the submitted data demonstrates to the satisfaction of the State Board the availability of an adequate water supply assuming three more years of drought.
2. Includes purveyors who derive all or a portion of their water supplies from sources shared with purveyors serving the unincorporated county.

In response to Executive Order B-40-17, discussed below, the Executive Director for the State Water Resources Control Board rescinded the water supply stress test requirements and remaining mandatory conservation standards for urban water suppliers in April 2017.

Executive Order B-37-16 – Making Conservation a California Way of Life

Executive Order B-37-16 enacted in May 2016 sets forth actions to use water more wisely, eliminate water waste, strengthen local drought resilience, and improve agricultural water use efficiency and drought planning. Under EO B-37-16, State agencies were required to prepare a conservation framework report for the Governor's Office, Legislature, and the public. The final report was published in April 2017 and summarizes recommendations and actions to achieve the goal of making water conservation a California way of life.

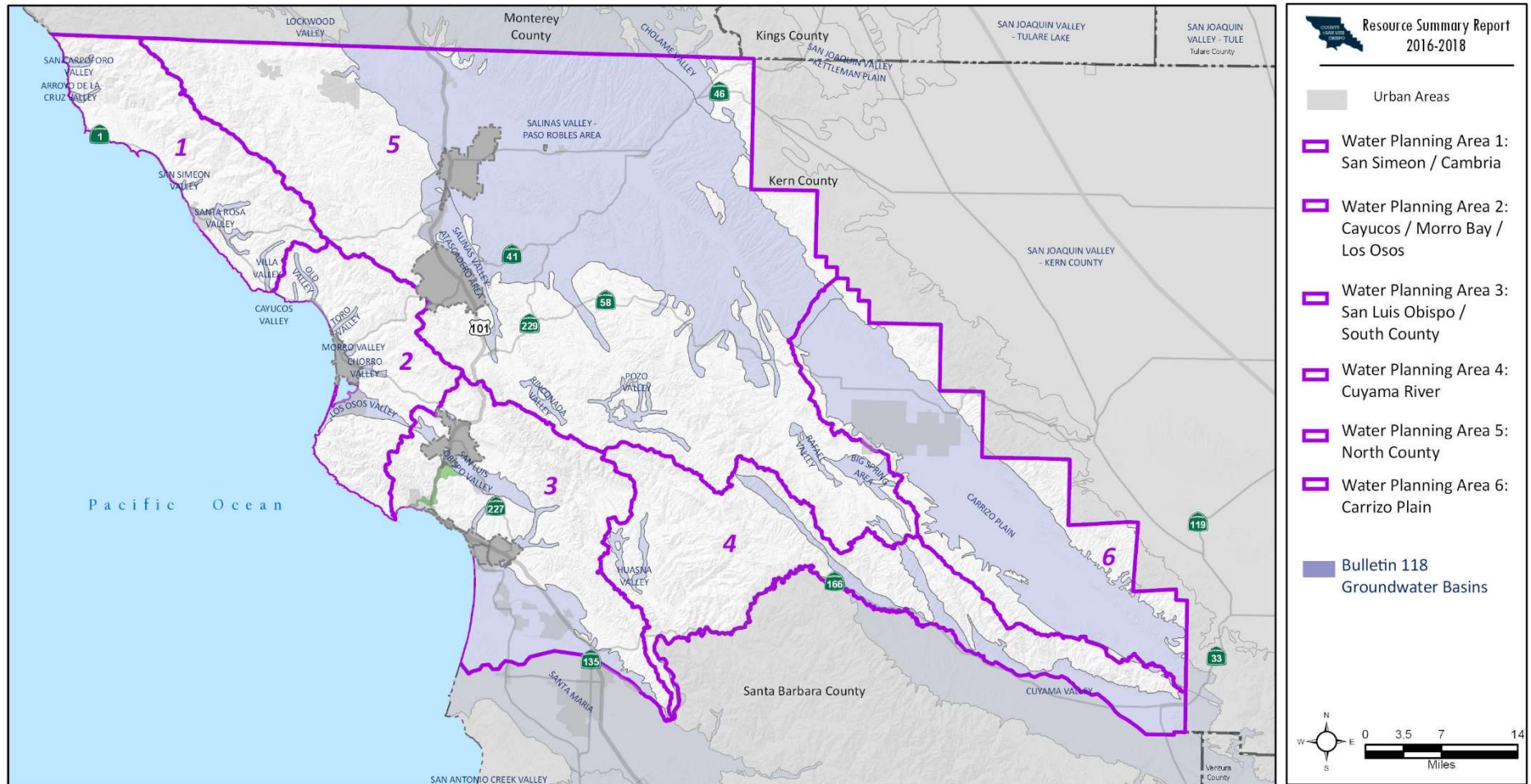
Executive Order B-40-17

In April 2017, the Governor signed Executive Order B-40-17 lifting the drought emergency in all California counties except for Fresno, Kings, Tulare and Tuolumne, where emergency drinking water projects continue to address diminished groundwater supplies. The Executive Order retains the prohibitions on wasteful practices required by Executive Order B-37-16 and advances measures to make conservation a way of life. The order also rescinds the 2016 Emergency Regulations described above as well as Executive Orders B-29-15 and B-36-15 described above.

Water Planning Area Update

The Plan is currently being updated to meet the new plan standards provided in the DWR 2016 IRWM Grant Program Guidelines, Volume 2 (DWR, 2016). The local Water Planning Areas (WPAs) for the region have been modified to better align with the regional watershed and water system boundaries including those of major-water related infrastructure, flood management infrastructure, major land-use divisions, surface and groundwater sources, municipalities and service areas for water and wastewater of agencies and water purveyors. Figure II-2 shows the draft WPAs for the upcoming IRWM Plan update, including the DWR Bulletin 118 groundwater basins.

Figure II-2 – IRWMP Water Planning Areas



Surface Water Resources Serving the Unincorporated County

State Water Project (SWP)

DWR owns and operates the State Water Project (SWP). In 1963 the San Luis Obispo County Flood Control and Water Conservation District (District) contracted with DWR for 25,000 AFY of water from the SWP. The SWP began delivering water to the Central Coast in 1997 upon completion of the Coastal Branch conveyance and treatment facilities (Figure II-3), serving Santa Barbara and San Luis Obispo Counties. The SWP is considered a supplemental source of water supply.

Table II-3 provides a summary of SWP allocations to water purveyors serving the unincorporated county. Table II-3 lists the Water Service Amount, Drought Buffer, and Total Reserved allocations for SWP Subcontractors within the unincorporated County.

Estimating the long-term delivery reliability of the SWP depends on many issues, including possible future regulatory standards in the Delta, population growth, water conservation, increased use of recycled water, and water transfers. For long-term planning, it is assumed that SWP Contractors will receive 66 percent of the maximum allocation in any given year.⁴ To secure additional delivery reliability of SWP water during times of reduced allocations, most SWP Subcontractors have entered into "Drought Buffer Water Agreements" with the District for use of an additional portion of the District's SWP allocation.

Table II-3 – State Water Project Water Service Amounts (AFY) To Water Purveyors Contracting for State Water Within The Unincorporated County			
SWP Subcontractor	Water Service Amount	Drought Buffer	Total Reserved
Oceano CSD	750	750	1,500
San Miguelito MWC	275	275	550
Avila Beach CSD	100	100	200
Avila Valley MWC	20	60	80
California Men's Colony	400	400	800
County Operations Center	425	425	850
Cuesta College	200	200	400
San Luis Coastal USD	7	7	14
CSA 16 (Shandon)	100	0	100
Total:	2,277	1,185	4,494

Source: San Luis Obispo County, 2016, DWR State Water Project Delivery Capability Report 2017

⁴ 2012 Master Water Report, 4-59.

Many factors affect annual SWP deliveries to the District, and therefore Water Service Amount deliveries to the SWP Subcontractors within the County, including pumping restrictions for the Sacramento Delta and annual hydrology. Since delivery to the Central Coast began, DWR has generally provided between 50 and 100 percent of the contracted allocations. However, due to recent drought conditions coupled with DWR pumping restrictions to provide for improved water quality, increased environmental flows and endangered species habitat protection within the Delta (driven by the 2009 Delta Reform Act), the annual allocations from DWR averaged only 43% from 2008 to 2016, with 2014 hitting an all-time project low of 5 percent. However, due to the Drought Buffer, storage of unused allocation in the San Luis Reservoir, and the District's excess allocation amounts, SWP Subcontractors were able to receive their requested delivery.

Nacimiento Water Project

The Monterey County Flood Control and Water Conservation District (now known as the Monterey County Water Resources Agency (MCWRA)) constructed the Nacimiento Dam in 1957. The dam and reservoir continue to be operated by MCWRA. The lake has a capacity of 377,900 aAF and a surface area of 5,727 acres. Water is collected from a 365 square mile watershed that is comprised of grazing lands and rugged wilderness. Long-term reliability may be adversely affected by siltation and other losses.

In 1959, the District contractually secured the rights to 17,500 AFY from Lake Nacimiento. The District has adopted a policy of reserving 1,750 AFY for lakeside users and the Heritage Ranch Community Services District (Heritage Ranch CSD). After a long series of studies, negotiations, design and construction, the Nacimiento Water Project (NWP) was completed and became operational in 2011. The NWP is designed to deliver 15,750 acre-feet of water per year (Figure II-3). The NWP delivers raw lake water from Lake Nacimiento to communities within the County. At its April 19, 2016 meeting, the Board entered into contract amendments with the NWP participants and additional contracts with two new participants to fully allocate the 15,750 AFY (i.e. allocating all of what had previously been Reserve Water (6,095 AFY)), as shown in the Table II-4.

Table II-4 - Allocation of Nacimiento Water Project	
NWP Participants	Allocations (AFY)
City of Paso Robles	6,488
Atascadero MWC	3,244
City of San Luis Obispo	5,482
Templeton CSD	406
CSA 10A (via exchange) ¹	40
Santa Margarita Ranch MWC ³	80

Bella Vista Mobil Home Park ³	10
Total Allocations:	15,750
Unallocated²:	0

Source: Amendment 3 to the Water Delivery Entitlement Contracts, 2016. Board of Supervisor's Agenda Item 275/2016 discussed at the April 19, 2016 Board of Supervisor's Meeting. The relevant agenda items can be found here: <http://agenda.slocounty.ca.gov/agenda/sanluisobispo/Proposal.html?select=5891>

Notes:

1. Discussed below under Whale Rock Reservoir.
2. Based on a project design capacity of 15,750 AFY.
3. New participant as of April 16, 2016.

Whale Rock Reservoir

Whale Rock Reservoir is located on Old Creek Road approximately one-half mile east of the community of Cayucos. DWR supervised the Reservoir's planning, design, and construction which took place between October 1958 and April 1961. The Reservoir is jointly owned by the City of San Luis Obispo, the California Men's Colony, and Cal Poly. These three agencies, with the addition of a representative from DWR, form the Whale Rock Commission, which is responsible for operational policy and administration of the Reservoir and related facilities. Day-to-day operation is provided by the City of San Luis Obispo.

The Reservoir is formed by an earthen dam and was able to store an estimated 40,662 acre-feet of water at the time of construction. Calculation of the yield available in the Reservoir is coordinated with Salinas Reservoir (operated by the County for the benefit of the City of San Luis Obispo) using a safe annual yield computer model. The model also evaluates the effect of siltation. In 2013, the Whale Rock Commission commissioned a siltation study of the Reservoir. The volumetric study was completed in 2013 and concluded that the current Reservoir capacity is 38,967 AF. Since the original capacity was 40,662 AF, the loss of capacity due to siltation was determined to be 4.2 percent per year.

Reservoir Rights Holders and Water Allocations

Table II-5 summarizes the current capacity rights for the joint right-holders (downstream water rights are accounted for separately and discussed below). Each rights-holder manages reservoir withdrawals individually from its available water storage allocation. The Whale Rock Commission tracks withdrawals and reports available volume on a monthly basis.

Table II-5 - Whale Rock Reservoir Allocations		
Rights Holder	Percent	Allocations¹ (AFY)
City of San Luis Obispo	55.05	22,383
Cal Poly	33.71	13,707
California Men's Colony	11.24	4,570
Total:	100	40,660

Source: San Luis Obispo County Master Water Report, 2012, Table 4.7

Notes:

1. Allocations if the reservoir is at full capacity.
2. On TABLE II-6: County (CSA 10A) exchanged 40 AFY for Whale Rock water from the City of San Luis Obispo; Bella Vista Mobile Home Park exchanges 10 AFY for Whale Rock water from the City of San Luis Obispo.

Downstream Water Rights

Several agreements establish policy for the operation of the Whale Rock system and actions of the member agencies. The Downstream Water Rights Agreement (the original 1958 agreement was amended in April 1996) defines water entitlements for adjacent and downstream water users, including water purveyors serving the unincorporated County. The Cayucos Area Water Organization (CAWO), one of the three parties to this agreement, consists of three public water purveyors and the cemetery, all in the Cayucos area. In addition to the agencies, water entitlements were identified for two separate downstream land owners. An exchange agreement between the County and the City of San Luis Obispo (2018) allows for the delivery of up to 50 AFY of the City's Whale Rock water allocation to CSA 10 in exchange for the County's and Bella Vista Mobile Home Park's (BVMHP's) Nacimiento Water for delivery to the City. Via an agreement approved on October 2, 2018, CSA 10 now has a total allocation of 40 AFY of Nacimiento Water.

Total Whale Rock Reservoir downstream entitlements are summarized on Table II-6.

Table II-6 - Whale Rock Reservoir Downstream Entitlements	
Water Users	Downstream Water Entitlements (AFY)
Cayucos Area Water Organization (CAWO) ¹	
• Cayucos Beach MWC	222
• Morro Rock MWC	170
• County (CSA 10A)	230 ^{3, 4}
• Cayucos-Morro Bay Cemetery District	18
Sub-Total for CAWO:	600
BVMHP	10 ³

Mainini Ranch ²	50
Ogle ²	14
Total:	664

Source: San Luis Obispo County Master Water Report, 2012, Table 4.8; Amendment 3 to the Water Delivery Entitlement Contracts, 2016. Board of Supervisor's Agenda Item 275/2016 discussed at the April 19, 2016 Board of Supervisor's Meeting. The relevant agenda items can be found here:

<http://agenda.slocounty.ca.gov/agenda/sanluisobispo/Proposal.html?select=5891>

Notes:

1. The referenced agreement establishes the amount of 600 AFY to CAWO. The allocations to the CAWO members are part of an internal agreement amongst the members.
2. The agencies generally receive their entitlements via pipeline from the reservoir, while the land owners' entitlement is released from the reservoir.
3. County (CSA 10A) exchanged 40 AFY for Whale Rock water from the City of San Luis Obispo.
4. Bella Vista Mobile Home Park exchanges 10 AFY for Whale Rock water from the City of San Luis Obispo.

Lopez Lake/Reservoir

The District completed the Lopez Dam in 1968 to provide a reliable water supply for agricultural and municipal needs as well as flood protection for coastal communities. Lopez Reservoir has a capacity of 49,388 AF. The Lake covers 950 acres and has 22 miles of oak covered shoreline.

Allocations of Lopez Lake water to the local agencies that are a part of Zone 3 of the District (formed for the purposes of constructing, financing and operating the dam, terminal, treatment and conveyance facilities) (Zone 3) and have entered into water supply contracts with the District are based on a percentage of the safe yield of the Reservoir, which is identified in the water supply contracts as 8,730 AFY. Of that amount, 4,530 AFY are for pipeline deliveries and 4,200 AFY are reserved for downstream releases. The dam, terminal reservoir, treatment and conveyance facilities are a part of Zone 3. Water purveyors serving the unincorporated County that contract for Lopez water in Zone 3 include the community of Oceano and the County on behalf of CSA 12 (including the Avila Beach area). Lopez Lake allocations to these purveyors are shown in Table II-7.

Two issues could change the amount of water available to contractors and the safe yield:

- The Arroyo Grande Creek Habitat Conservation Plan (HCP), which is currently being developed, will likely require additional downstream releases. An interim downstream release schedule was prepared to provide guidance regarding releases from the reservoir into Arroyo Grande Creek pending completion of the HCP.
- In December 2014, the Low Reservoir Response Plan was adopted to reduce deliveries during the then declared water emergency while reservoir storage

was below 20,000 AF, reducing the amount of water available to municipalities.

Changes in operation of the dam are being considered for reducing spills and optimizing future deliveries. Additionally, the City of Pismo Beach, on behalf of the Zone 3 agencies, has taken the lead on conducting a study to consider the feasibility of modifying the dam to augment capacity of the Reservoir. However, according to the City⁵, this option is no longer being considered.

Table II-7 - Lopez Lake Water Allocations to Water Purveyors Serving the Unincorporated County	
Water Users	Allocations (AFY)
Oceano CSD	303
CSA 12 (Avila Beach area)	241
Total:	544

Source: San Luis Obispo County Master Water Report, 2012, Table 4.9

⁵ Eric Eldridge, Senior Engineer, City of Pismo Beach, personal communication August 19, 2016.

Figure II-3 – Surface Water Supplies and State Water Project Conveyance



Groundwater

Groundwater basins identified in this Resource Summary Report are defined in the DWR Bulletin 118 Interim Update 2016 and are provided herein for informational purposes only. These groundwater basins are summarized in Table II-8 and shown on Figure II-4.

Table II-8 – Groundwater Basins	
Water Planning Area (WPA) (Draft IRWMP Update 2018)	DWR Bulletin 118 Interim Update 2016 Groundwater Basins
WPA 1 San Simeon / Cambria	San Carpororo Valley (3-033)
	Arroyo de la Cruz Valley (3-034)
	San Simeon Valley (3-035)
	Santa Rosa Valley (3-036)
	Villa Valley (3-037)
WPA 2 Cayucos / Morro Bay / Los Osos	Cayucos Valley (3-038)
	Old Valley (3-039)
	Toro Valley (3-040)
	Morro Valley (3-041)
	Chorro Valley (3-042)
	Los Osos Valley (3-008)
WPA 3 San Luis Obispo / South County	San Luis Obispo Valley (3-009)
	Santa Maria (3-012) Northern Cities Management Area (NCMA) Nipomo Mesa Management Area (NMMA) Santa Maria Valley Management Area (SMVMA) Other “fringe areas” subject to SGMA
WPA 4 Cuyama River	Huasna Valley (3-045)
	Cuyama Valley (3-013)
WPA 5 North County	Rinconada Valley (3-043)
	Pozo Valley (3-044)
	Salinas Valley – Atascadero Area (3-004.11)
	Salinas Valley – Paso Robles Area (3-004.06)
	Cholame Valley (3-005)
	Rafael Valley (3-046)
	Big Spring Area (3-047)
WPA 6 Carrizo Plain	Carrizo Plain (3-019)

affected by the Resource Management System. For example, the City of Atascadero wastewater treatment plant discharges approximately 1.34 mgd (1,500 AFY) back into the Atascadero Basin.

Table II-9 – Existing and Projected Recycled Water Use Serving the Unincorporated County						
Agency	Existing Effluent		Inland Discharge	Ocean/Coastal Discharge	Existing Reuse	Planned Future Reuse
	MGD	AFY	AFY	AFY	AFY	AFY
Cambria CSD	0.50	540	540	--	(1)	--
Cayucos CSD	0.25	275	--	275	--	560
Los Osos WWTP ²	1.20	1,340	1,340	--	500	--
San Simeon CSD	0.07	80	--	80	(3)	--
Heritage Ranch CSD	0.20	230	230	--	--	--
San Miguel CSD	0.10	130	130	--	--	--
Templeton CSD Meadowbrook WWTP ⁴	0.15	170	170 ⁵	--	--	750
Avila Beach CSD	0.05	50	--	50	--	--
Nipomo CSD Blacklake WWTP	0.05	50	--	--	50	80
Nipomo CSD Southland WWTF	0.60	640	640 ⁶	--	--	1,900
Rural Water Co.	0.05	50	--	--	50	50
San Miguelito MWC	0.15	170	--	170	--	--
South SLO County Sanitation District	2.60	2,910	--	2,910	--	3,920
Woodlands MWC	0.05	50	--	--	50	50
Total:	6.02	6,685	2,510	4,025	150	7,310

Source: San Luis Obispo County Regional Recycled Water Strategic Plan, 2014

Notes:

1. Cambria CSD uses nearly all of its wastewater effluent for a seawater intrusion barrier, a sustainable water facility (an indirect potable reuse facility).
2. Los Osos WWTP began operating in 2016.
3. Trucking of recycled water for irrigation started in 2014. The system is designed to provide a maximum of approximately 0.036 mgd.
4. Templeton CSD is constructing a facility to divert existing sewer flows that go to the Paso Robles WWTP (approximately 0.22 mgd) and conveying the flow for treatment at the Meadowbrook WWTP.
5. Templeton CSD retrieves the percolated water at downstream wells.

Recommended Levels of Severity

RMS Criteria for the Coastal Zone and Inland Areas

On December 16, 2014, the Board of Supervisors approved amendments to portions of the Resource Management System (RMS) in the Inland and Coastal Framework for Planning. The purpose of these amendments was to update the RMS so that it more closely reflected

current efforts to effectively deal with resource and infrastructure needs and limitations, and to add Parks and Highway 101 interchanges as monitored resources.

Amendments to the Inland Framework for Planning became effective on January 16, 2015, while amendments to the Coastal Framework for Planning were forwarded to the California Coastal Commission (CCC) for review and action.⁶ Following their review, CCC staff recommended significant modifications to the LOS Action Requirements for LOS I, II and III based on their concern that the amendments adopted by the Board “weakened” the effectiveness of the Local Coastal Plan (LCP) portion of the RMS by making the Action Requirements discretionary rather than mandatory. The subsequent resolution of certification adopted by the CCC incorporated the language recommended by CCC staff. At its meeting of June 5, 2018, the Board took no action on the modifications adopted by the CCC, effectively rejecting the CCC modifications. Rejection of the CCCs modifications had the following effects:

- The language of the RMS section of the Coastal Zone Framework for Planning, including the criteria for LOS and Action Requirements, remains unchanged.
- Amendments to the Inland Framework for Planning adopted by the Board in 2014 remain in effect for the inland areas, only.

Methodologies

Water Supply

The total amount of water used by all sectors in a water service area or groundwater basin is the water demand. Water purveyors determine the portfolio of water supplies needed to meet current and project water demand for the communities they serve. For most of the County, groundwater is the principal source of water and groundwater basins typically provide a supply of water to multiple water users across all types of sectors, such as municipal, rural residential, small community/commercial and agricultural.

Accordingly, the discussion of recommended LOS has been grouped by regions or water planning areas which generally coincide with the major groundwater basins⁷. Information regarding the current status of each basin was derived from a variety of sources, including (but not limited to) the following:

- San Luis Obispo County Master Water Report, 2012

⁶ Under the Coastal Act, a general plan amendment in the coastal zone must be forwarded to the Coastal Commission for final approval. The CCC may approve or deny the amendment or approve the amendment with modifications. Following CCC action, the amendment is sent back to the Board of Supervisors for acceptance or rejection of the modifications. The Board must either accept or reject **all** the modifications; it cannot partially accept or reject the modifications.

⁷ As discussed above, groundwater basins identified in this RSR are defined in the DWR Bulletin 118 Interim Update 2016.

- Updated Basin Plan for the Los Osos Groundwater Basin, 2015
- San Luis Obispo County Integrated Regional Water Management Plan, 2014
- 2017 Nipomo Mesa Management Area Annual Report
- 2017 Northern Cities Management Area Annual Report
- Various recently updated Urban Water Management Plans, 2015

A complete list of sources is provided in the Appendix.

Coastal Zone Areas

To determine the LOS for an area that lies entirely within the Coastal Zone, the 1996 Coastal RMS Criteria were applied. Forecasted demand from urban, rural, and agricultural users over 9 years (LOS I), 7 years (LOS II), and at present (2018) was derived from 2018 water use forms submitted to the County, from the 2012 Master Water Report and from the 2014 San Luis Obispo Integrated Regional Water Management Plan and compared with the dependable supply, including supplemental sources such as surface water supplies, imported water, recycled water, and other non-groundwater basin supplies. LOS were assigned based on whether the projected demand would exceed the estimated dependable supply over these time periods.

Inland Areas

To determine the LOS for an area that lies entirely within the Inland Area, the 2014 Inland RMS Criteria were applied. Forecasted demand from urban, rural, and agricultural users over 15 years, 15-20 years, and 20 years was derived from 2018 water use forms submitted to the County, from the 2012 Master Water Report, and from the 2014 San Luis Obispo Integrated Regional Water Management Plan and compared with the dependable supply, including supplemental sources such as surface water supplies, imported water, recycled water, and other non-groundwater basin supplies. LOS were assigned based on whether the projected demand would exceed the estimated dependable supply over these time periods.

Areas That Underlie Portions of the Coastal and Inland Areas

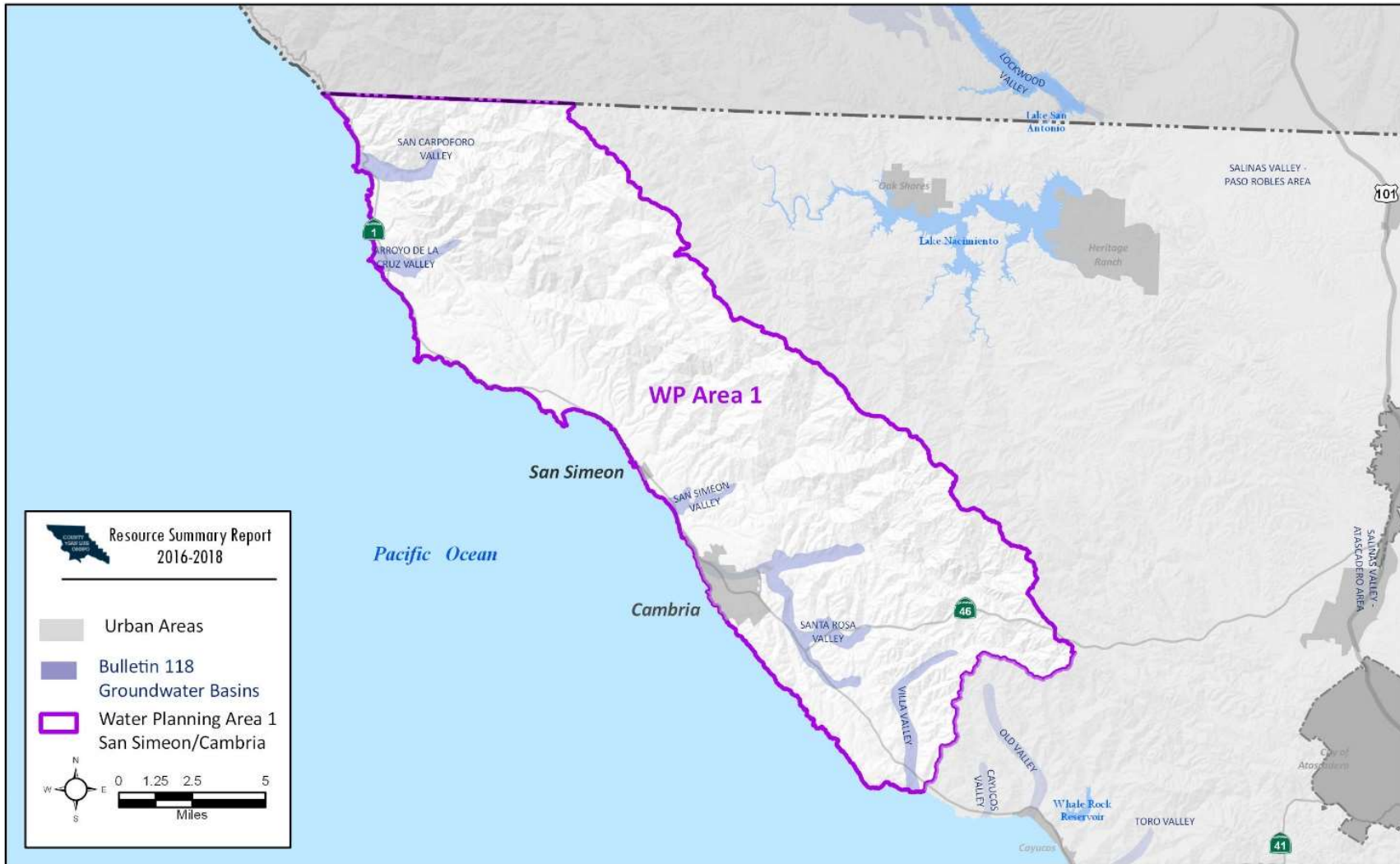
To determine the LOS for an area that extends inland from the Coastal Zone, both sets of RMS criteria were applied. In such cases, the Recommended Action Requirements are based on the higher LOS (when they differ) or the Recommended Action Requirements of the stricter LOS if they are the same.

Water Systems

To determine recommended LOS for water systems, water purveyors were asked to identify water system improvements necessary to accommodate current and projected water demand and the timeframe for the needed improvements. The timeframe for needed improvements were then compared with the LOS timeframes to assign a recommended LOS.

WPA 1 San Simeon / Cambria

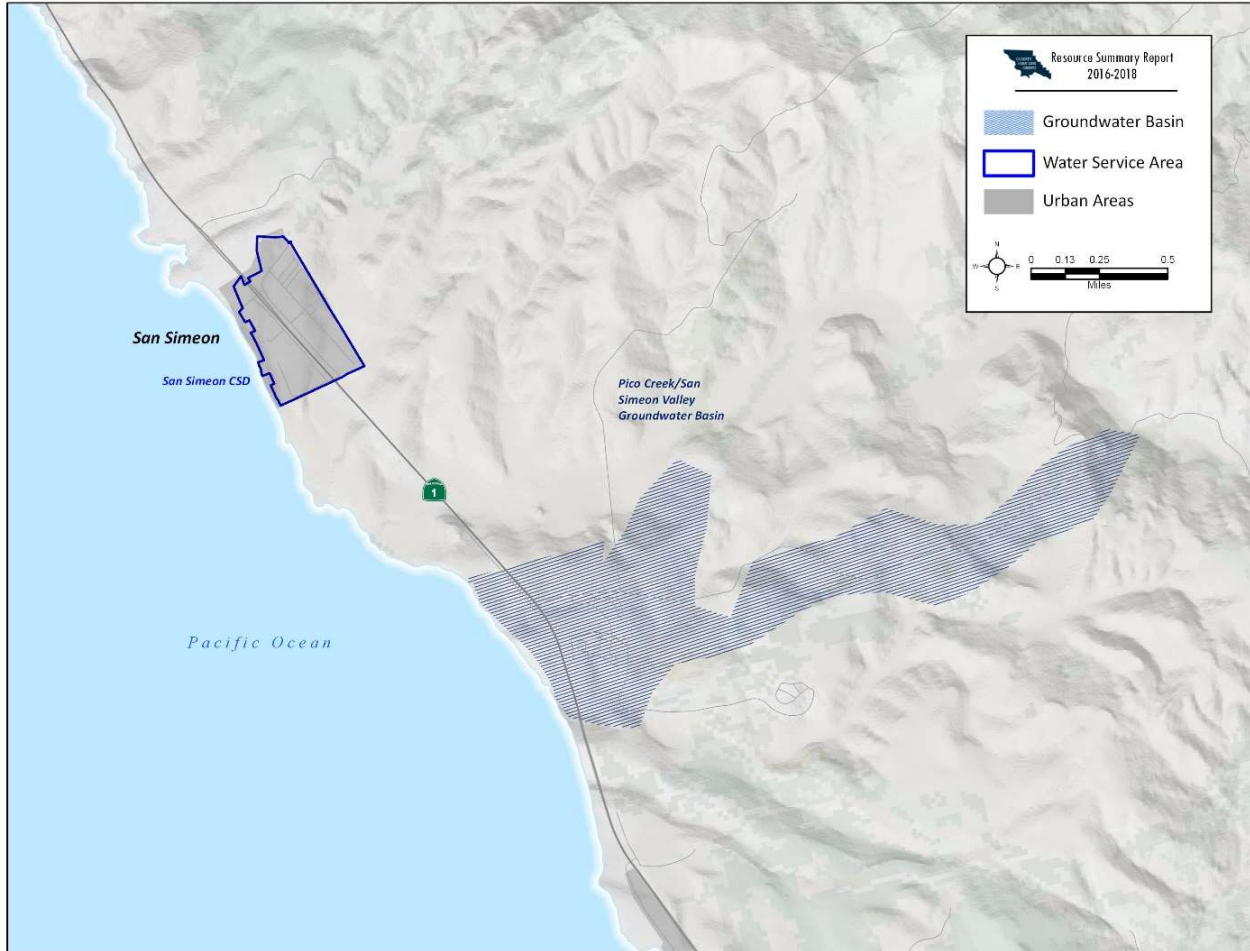
Figure II-5 – Water Planning Area 1 – San Simeon/Cambria



Water Supply

San Simeon Area

Figure II-6 – San Simeon CSD Water Service Area



San Simeon CSD provides water and wastewater services for the community of San Simeon. The primary groundwater source for San Simeon CSD is the Pico Creek Valley Groundwater Basin, which is not an identified groundwater basin according to DWR Bulletin 118 Interim Update 2016. Surrounding rural and agricultural users also rely on this groundwater resource.

Seventy percent of water used by the San Simeon CSD is for commercial use (tourist/hotels). Due to the supply limitations of the Pico Creek Valley Groundwater Basin, alternative supply enhancement and demand management strategies are necessary to meet future demands. Water conservation and recycling measures have been implemented and there is minimal opportunity to further reduce water demands.

The safe yield of Pico Creek Valley Groundwater Basin was initially estimated to be 120 AFY (Carollo, 2012; Cleath, 1986). 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. Since at least the mid-1980s, sea water intrusion has occurred within the Pico Creek Valley Groundwater Basin (Cleath, 1986). Seawater intrusion occurs routinely and increases chloride levels above secondary drinking water standards. The primary constraints on water availability in the basin include physical limitations and water quality issues.

Three water management strategies are likely the most feasible options to consider for San Simeon CSD’s future water supply:

- Recycled water (trucking of recycled water to offset potable water use for landscape irrigation began in 2014)
- Groundwater supply sources (other than Pico Creek Valley Groundwater Basin)
- Desalination

The Arroyo De La Cruz Groundwater Basin is a possible option for a future water supply. Unfortunately, published hydrogeologic information for this basin is compiled from older reports and may not be representative of current conditions. The safe basin yield should be determined as part of any investigation of this basin as a future water supply.

In 2014, groundwater availability within the Pico Creek Valley Groundwater Basin was re-evaluated, and it was concluded that the perennial yield estimate remains at 120 AFY (Cleath-Harris, 2014).

In July 2016, San Simeon CSD completed the construction of a wellhead treatment system that uses reverse osmosis technology to improve water quality from their water supply wells during drought conditions. Future water management strategies are likely to be considered as part of the update to their master water plan.

Table II-10 – San Simeon Area: Existing and Forecasted Water Supply and Demand Based on the 1996 Coastal RMS Criteria			
Demand	San Simeon CSD	Agriculture	Rural
FY 2017/2018 Demand (AFY)	66.1 ¹	70 ³	20 ³
Forecast Demand In 7 Years (AFY)	156	85	33
Forecast Demand in 9 Years (AFY)	178	89	37
Buildout Demand (30 Or More Years) (AFY)	250 ²	10-60 ³	50 ³
Supply			

Pico Creek Valley Basin (AFY)	120	0 ⁴	0 ⁴
Other GW Supplies	0	0	22 ⁷
Surface Water	0	8 ⁷	10 ⁷
Total:	120	22	50
Water Supply Versus Forecasted Demand	Water demand projected over 7 years will equal or exceed the estimated dependable supply.		

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018; San Luis Obispo County Master Water Report, 2012, Table 4.54; 2014 Integrated Regional Water Management Plan, Table D-13

Notes:

1. See Table II-1. Demand fluctuates due to changes in tourism. Data for agriculture and rural are from 2012.
2. Most recent master plan forecasts a build-out demand of 224 AFY, but San Simeon CSD's current build-out demand estimate is 250 AFY.
3. Agricultural and rural demand calculations do not account for livestock operations, and likely underestimate actual water demands.
4. Seventy (70) AFY of Pico Creek livestock and domestic usage was reported by Hearst Holdings Inc. to the State Water Resources Control Board (SWRCB) in June 2010.
5. Population within the San Simeon area is expected to decline slightly over the next 30 years.
6. Diversions from sources other than the three basins noted above total 238 AFY according to diversion reporting forms to the SWRCB from Hearst Holdings Inc. (June 2010) and the SWRCB diversion database.
7. San Luis Obispo County Master Water Report, 2012.

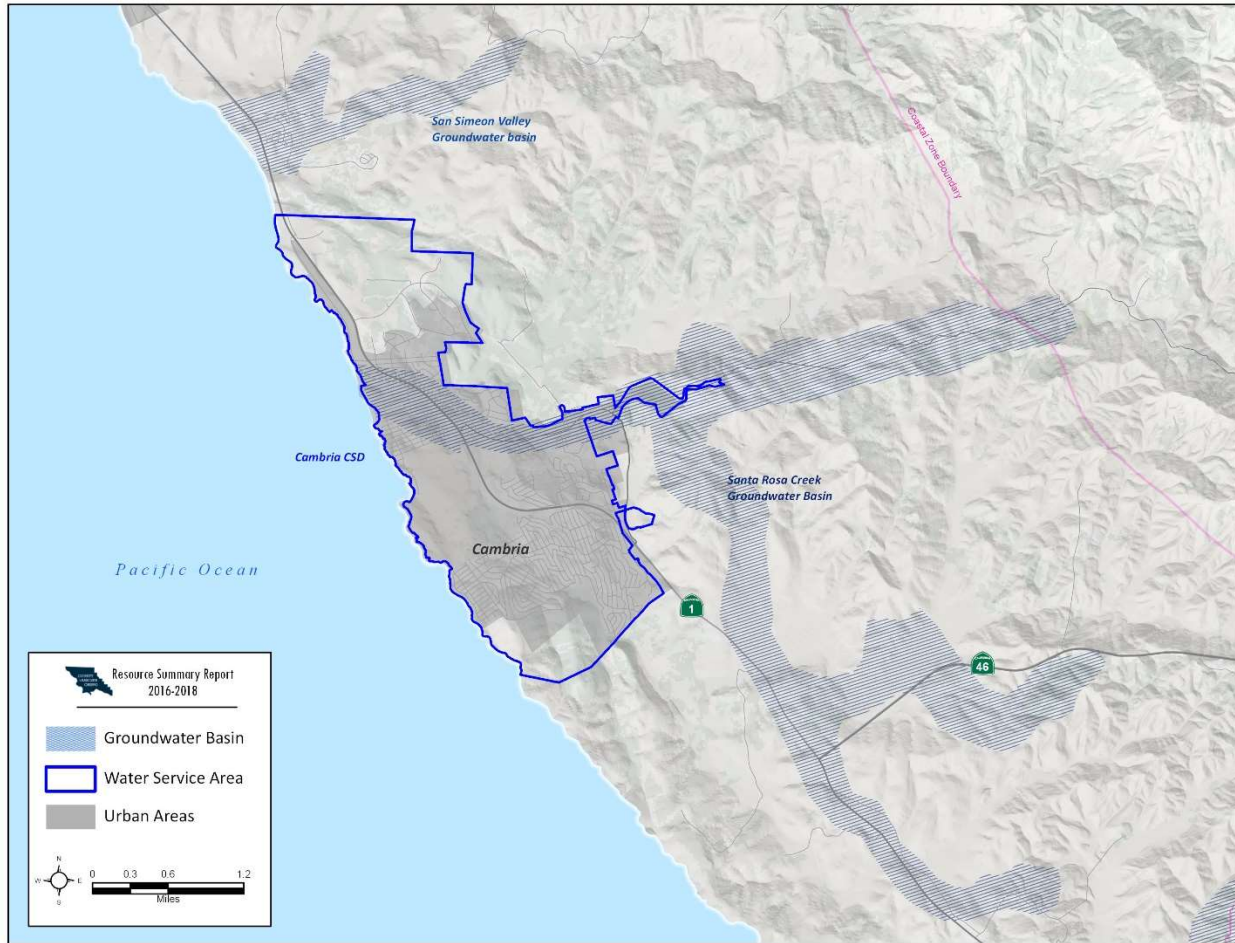
Key observations for the area include:

- The current estimated demand from urban, rural and agricultural users (156.1 AFY) exceeds the safe yield of the basin (120 AFY).
- Forecasted demand from all sources in 30 or more years is expected to be between 310 and 360 AFY which exceeds the safe yield of the basin (120 AFY).
- Evidence of seawater intrusion and lowered groundwater levels during the dry season or times of drought.
- An absence of available supplemental sources of supply.
- The reliability and availability of the supply from non-basin areas are unknown, however no issues in the area have been reported

Based on the 1996 Coastal RMS Criteria, **Recommended Level of Severity II.**

Cambria Area

Figure II-7 – Water Purveyors in the Cambria Area



Water users in the Cambria area include Cambria CSD and overlying rural and agricultural users. The primary constraints on water availability in the area include physical limitations and potential water quality issues.

The State Water Resources Control Board (SWRCB) allows Cambria CSD a maximum extraction of 1,230 AFY in the San Simeon Valley (DWR Bulletin 118 No. 3-035) groundwater basin and a maximum dry season extraction of 370 AF (Cambria CSD Water Master Plan (WMP), 2008). Although the actual dates will vary each year depending on creek flows and rainfall occurrence, the dry season generally spans from May through October. In general, groundwater levels in the basin are typically highest during the wet season, steadily decline from these levels during the dry season, and recover again to higher levels during the next wet season.

Cambria CSD is in the process of licensing aquifer diversions from San Simeon Valley from the SWRCB. The licensing process would set the maximum annual aquifer diversion from San Simeon Valley at 798.82 AF. Cambria CSD is also pursuing a permanent Coastal

Development Permit for the Sustainable Water Facility (SWF) which is discussed in more detail below in the water systems section for Cambria CSD. The SWF re-injects the water it produces back into the San Simeon Creek aquifer, which is subsequently extracted by existing Cambria CSD potable wells SS1 or SS2. Therefore, the SWF brackish water extraction would not be subtracted from the 798.82 AF limit that would be licensed by SWRCB. Cambria CSD also provides approximately 20 AF per year of agricultural riparian use water from its San Simeon potable wells to a rancher north of San Simeon Creek Road (the Warren ranch). This agriculture water use was metered from a potable water service connection downstream from the San Simeon aquifer production well meters and is being provided as part of a 2006 water rights agreement between the CSD and Warren. Therefore, the 20 AF provided by Cambria CSD as riparian agricultural water would also not count towards the licensed annual diversion limit of 798.82 AF.

Cambria CSD is in process of licensing aquifer diversions from the Santa Rosa Valley (DWR Bulletin 118 No. 3-036) groundwater basin from the SWRCB. The licensing process would set the maximum annual aquifer diversion from Santa Rosa Valley at 217.92 AF. Cambria CSD has used Santa Rosa Valley as a means of augmenting its primary supply from the San Simeon during the dry season, and as an emergency backup water supply.

In response to the severe drought of 2014, and to improve reliability, Cambria CSD undertook the following actions:

- Completed construction of the SWF to improve water supply reliability (discussed in greater detail below);
- Restored its potable Well SR-1 for non-potable use, and
- Pursued an aggressive program of water conservation.

As part of its adopted 2016 Urban Water Management Plan Update, the Cambria CSD commissioned Maddaus Water Management to develop a more aggressive conservation program, which reduced future water demand. This recommended conservation program (Program B) includes measures such as point of use recycled water (e.g., graywater treatment systems to allow toilet flushing via a dual plumbing); and not allowing the use of potable water on any future home's landscaping. This resulted in approximately 691 acre-feet per year demand at buildout for existing and future connections (a combined total of 4,650 existing and future residences). Table II-11 shows the demand modeling results under recommended conservation Program B, which is further described in the Cambria CSD's 2016 adopted Urban Water Management Plan Update.

Table II-11 – Cambria Area Existing and Forecasted Water Supply and Demand Based on the 1996 Coastal RMS Criteria			
Demand	Cambria CSD	Agriculture	Rural
FY 2017/2018 Demand (AFY) ¹	452.7	521	100
Forecast Demand in 7 Years (AFY)	586 ²	777	145
Forecast Demand in 9 Years (AFY)	617 ²	850	158
Buildout Demand (30 Or More Years) (AFY)	691 ²	1158	205
Supply			
San Simeon Valley Basin (AFY)	519-799 ³	11	2
Santa Rosa Valley Basin (AFY)	170-218 ⁴	301	55
Other GW Supply	0-195 ⁵	691	127
Surface Supply	0	0	0
Recycled Water	100	0	0
Total Supply:	689-1,017	1,003	184
Water Supply Versus Forecasted Demand	Water demand projected over 9 or more years will not equal or exceed the estimated dependable supply. ⁶		

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018; San Luis Obispo County Master Water Report, 2012, Table 4.55, Cambria CSD 2016; 2014 Integrated Regional Water Management Plan, Tables D-15 and D-16.

Notes:

1. See Table II-1.
2. From Maddaus Water Management Decision Support System (DSS) Modeling, (August 2016) for recommended conservation program B of the 2016 Urban Water Management Plan Update (UWMP). Note that Table 4-2 of the CCSD UWMP used only existing plumbing code updates, and therefore shows higher demand values than conservation Program B.
3. The 519 AF minimum assumes the Sustainable Water Facility is not operating and there is a 15% reduction in supply per Table 7-1a of the 2016 Cambria CSD Urban Water Management Plan. The 799 AF (798.82 rounded) upper range assumes the CCSD licenses its existing diversion permit with the SWRCB at this value. SWRCB allows Cambria CSD 518 AFY maximum extraction and 260 AF dry season extraction. The table uses a conservative assumption for dry-weather extractions.
4. Alternatives identified in a 2004 Assessment of Long-Term WS Alts included seawater desalination an exchange of buying Nacimiento reservoir water for the use of water stored in the Whale Rock Reservoir direct transmission of Nacimiento reservoir. As of 2018, an emergency project to desalinate brackish water has been developed which can temporarily produce up to 250 AFY during the dry season. A permanent CDP is currently under review for the SWF and is expected to be considered by the Planning Commission in the fall of 2018.
5. Although the existing annual supply and demand indicates a surplus, the dry season extraction limits create a seasonal supply deficit.
6. It is uncertain whether an agricultural or rural supply deficit exists.

Key observations for the area include:

- Groundwater extractions projected over the next nine years from all sources will likely equal the reliable supplies associated with the San Simeon Valley and Santa Rosa Valley Groundwater basins. Because of limitations associated with dry weather extractions, the San Simeon Valley and Santa Rosa Valley Groundwater Basins are considered an unreliable source of water within the timeframes prescribed by the 1996 RMS Criteria.
- Although the SWF is expected to help improve long-term reliability of the community's water supply, the combination of seawater intrusion along with lowering groundwater levels during the dry season or times of drought remain a concern.
- An absence of available supplemental sources of supply.
- The reliability and availability of the supply from non-basin areas is unknown.

Based on the 1996 Coastal RMS Criteria, **Recommended Level of Severity III.**

Water Systems

San Simeon CSD

In 2014, San Simeon CSD received approval from the Department of Public Health to use treated effluent as recycled water for landscape irrigation, decorative fountains, firefighting and for certain construction activities. The facility is authorized to produce 36,000 gallons of Title 22 recycled water per day but is currently only available to commercial trucks that connect to an on-site tank. The long-term plan is to construct a recycled water distribution system.

No significant water system limitations were identified. **No recommended Level of Severity.**

Cambria CSD

In an effort to enhance Cambria's major water and wastewater infrastructure and other key projects that protect the safety and quality of life for Cambrians, Cambria CSD has prioritized a number of Capital Improvement Projects (CIP) as well as the non-CIP Buildout Reduction Program (BRP). In 2014, the Cambria CSD completed several significant projects to improve water supply reliability. These included an Emergency Water Supply Project that utilizes brackish water from the lower San Simeon Creek aquifer, rehabilitation of its SR-3 well and associated wellhead treatment plant, and the completion of a non-potable water fill station using well SR-1.

Emergency Water Supply Project (SWF)

In January 2014, the Cambria CSD Board of Directors (Board) declared a Stage 3 Water Shortage Emergency Condition, the most severe of three levels. In light of the urgency of the situation, Cambria CSD decided to construct an emergency water supply system that could be completed as quickly as possible. The chosen approach involved the construction and operation of the SWF at the CCSD's existing San Simeon well field and treated wastewater effluent land disposal system property. The SWF is based on a reuse/recycling process through which treated effluent and lost aquifer underflow are recovered and treated through advanced treatment processes to produce "advanced treated water" which is then injected directly into the groundwater basin to augment the community's potable water supply. Potable water is then consumed and converted to wastewater where it is treated by the wastewater treatment plant, pumped to the percolation ponds (after secondary treatment), and infiltrated back into the groundwater to restart the cycle.

The project's advanced treatment provides several stages of treatment to remove solids, salt, organic chemicals and other contaminants so that it is safe to drink. To meet Title 22 indirect reuse criteria, the highly treated water is injected into the Cambria CSD's San Simeon well field where it must travel at least 60 days before being pumped by the existing well field pumps. The brackish water being treated is a combination of creek underflow, percolated wastewater treatment plant effluent, and a mix of freshwater and seawater that is within a deeper saltwater wedge. The extracted brackish water will have salt concentrations much lower than that of pure seawater. The project's intake well and treatment plant is located about one-half mile inland from the ocean.

An emergency Coastal Development Permit (CDP) was issued by the County for the SWF in May of 2014 and construction began soon thereafter. The SWF began operation in January 2015 and can produce approximately 300 gallons per minute of potable water. This is about 1.32 acre-feet per day or nearly 40 acre-feet per month. The plant is expected to run mainly during the dry months, supplying about 240 acre-feet of water in a six-month dry season, which is about one-third of the community's normal water consumption for a full year.

Condition No. 1 of the emergency CDP limits the SWF to the production of 250 AFY of water to serve existing authorized water connections, only (not new development). Condition No. 2 allows the SWF to operate only so long as a Stage 3 Condition exists or the SWF has been authorized to continue to serve existing development through approval of a regular Coastal Development Permit. Condition No. 6 required Cambria CSD to apply for a regular CDP within 30 days of the issuance of the emergency permit and Cambria CSD applied for a Regular CDP in June 2014. The application is currently under review by the County and is expected to be considered by the Planning Commission in the fall of 2018.

The CCSD is also pursuing options for the disposal of brine generated by the SWF. Wastes generated by the SWF (brine) has been stored in an impoundment regulated in accordance with Waste Discharge Requirements (WDR) Order No. R3-2014-0047 issued by the Regional Water Quality Control Board (RWQCB). However, because of violations of the discharge

order, the RWQCB issued a Cease and Desist Order in 2017 which prohibits the CCSD from discharging wastewater to the surface impoundment until corrective actions are taken to protect the groundwater. Under the cease-and-desist order, the CCSD was given 30 days to submit a plan to remove all brine wastes from its pond. The district submitted a plan, but, according to the RWQCB, the plan did not assure the water board that the brine in the impoundment would be removed quickly enough.

The CCSD is proposing to decommission the impoundment as part of the permanent Coastal Development Permit for the ongoing operation of the SWF. Under this plan, the RO concentrate would be pumped out of the evaporation pond and the residual slurry would be hauled away for disposal at an appropriate Class II waste disposal facility. The evaporation pond liner would be cleaned using high pressure hoses to sluice the RO concentrate to the pond's lowest spot. The rinse water would similarly be hauled away for offsite disposal.

In addition to the current emergency project, Cambria CSD and Army Corps of Engineers are completing a longer term supply project through a Water Resources Development Act authorization. An Environmental Impact Statement is currently being completed by the Corps, which will identify a preferred long term water supply alternative. The plant, if implemented, is expected to produce up to 602 AFY, and is planned to operate during the summer season to augment supply during the summer and high demand periods (from summer tourism). A recycled water system is also planned, with an estimated 65 AFY made available for unrestricted outdoor irrigation use.

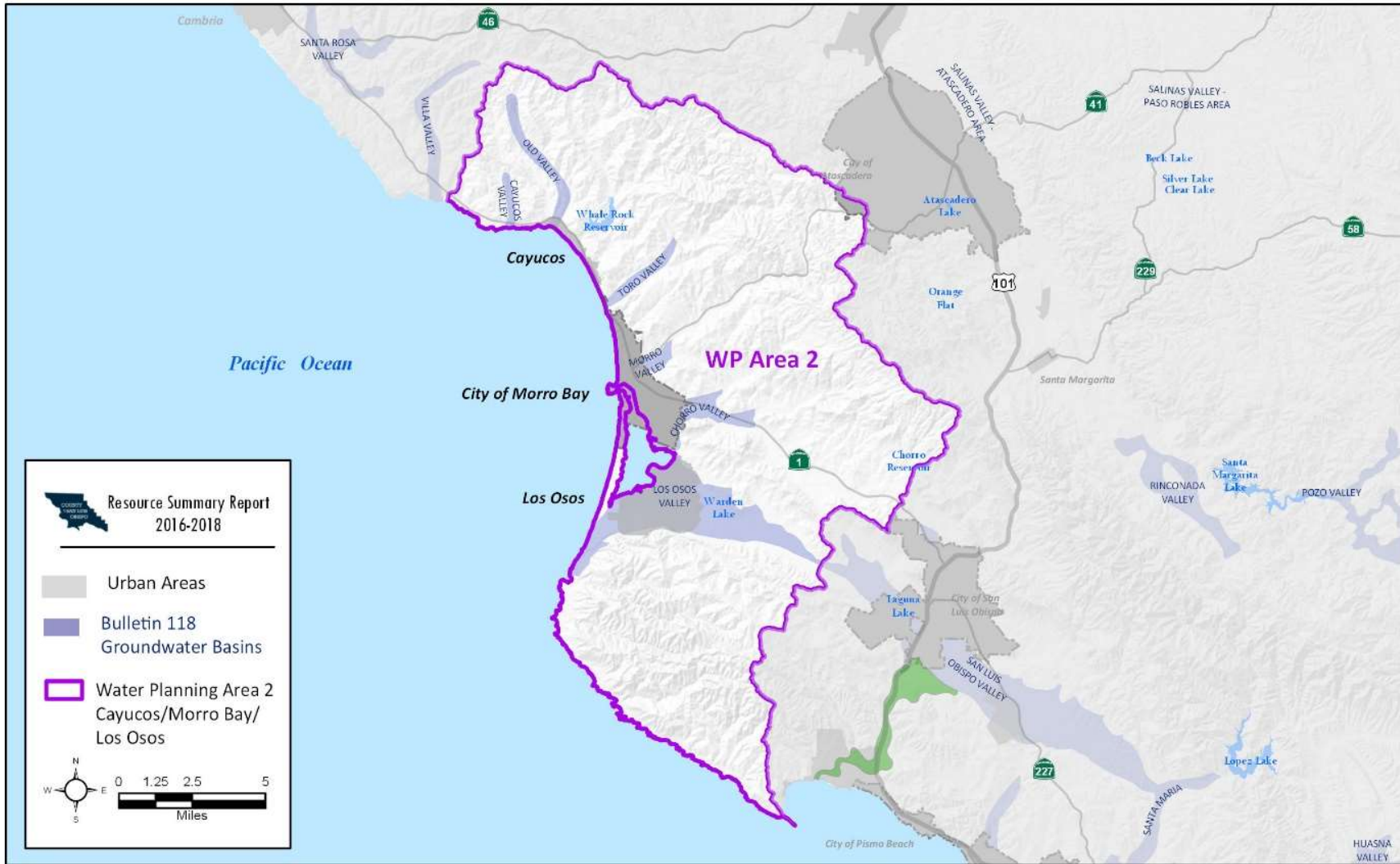
Well SR-3 Rehabilitation. Cambria CSD replaced its well pump for SR-3 well along the Santa Rosa Creek aquifer while also separating its discharge piping from its lower SR-1 well system. This allowed for only the SR-3 well discharge to enter into, and be treated by, the existing Filtronics iron and manganese removal filter. As part of this effort, Cambria CSD's mothballed Filtronics plant was also rehabilitated and made operational. The sole use of SR-3 also placed the potable well water extraction point for the lower Santa Rosa aquifer water more upgradient from an MTBE plume that was discovered in 2000. The operation of SR-3 well, coupled with monitoring for MTBE (which was also found to be non-detectible), allowed access to approximately 114 acre-feet of deeper groundwater that was not otherwise available to Cambria CSD's only other operational Santa Rosa aquifer well (SR-4 Well, which is located much further up gradient along the aquifer).

Conversion of SR-1 Well for Non-potable Use. The Cambria CSD replaced its SR-1 well pump while also separating its discharge from the potable supply system. The SR-1 discharge was rerouted to non-potable polyethylene storage tanks installed at the Cambria CSD's Rodeo Grounds Road facility. Separate fill stations were installed for non-potable water use. The new non-potable fill stations replaced ones that had been previously in use at the CSD's San Simeon Creek Road property.

No significant water system limitations were identified. **No recommended Level of Severity.**

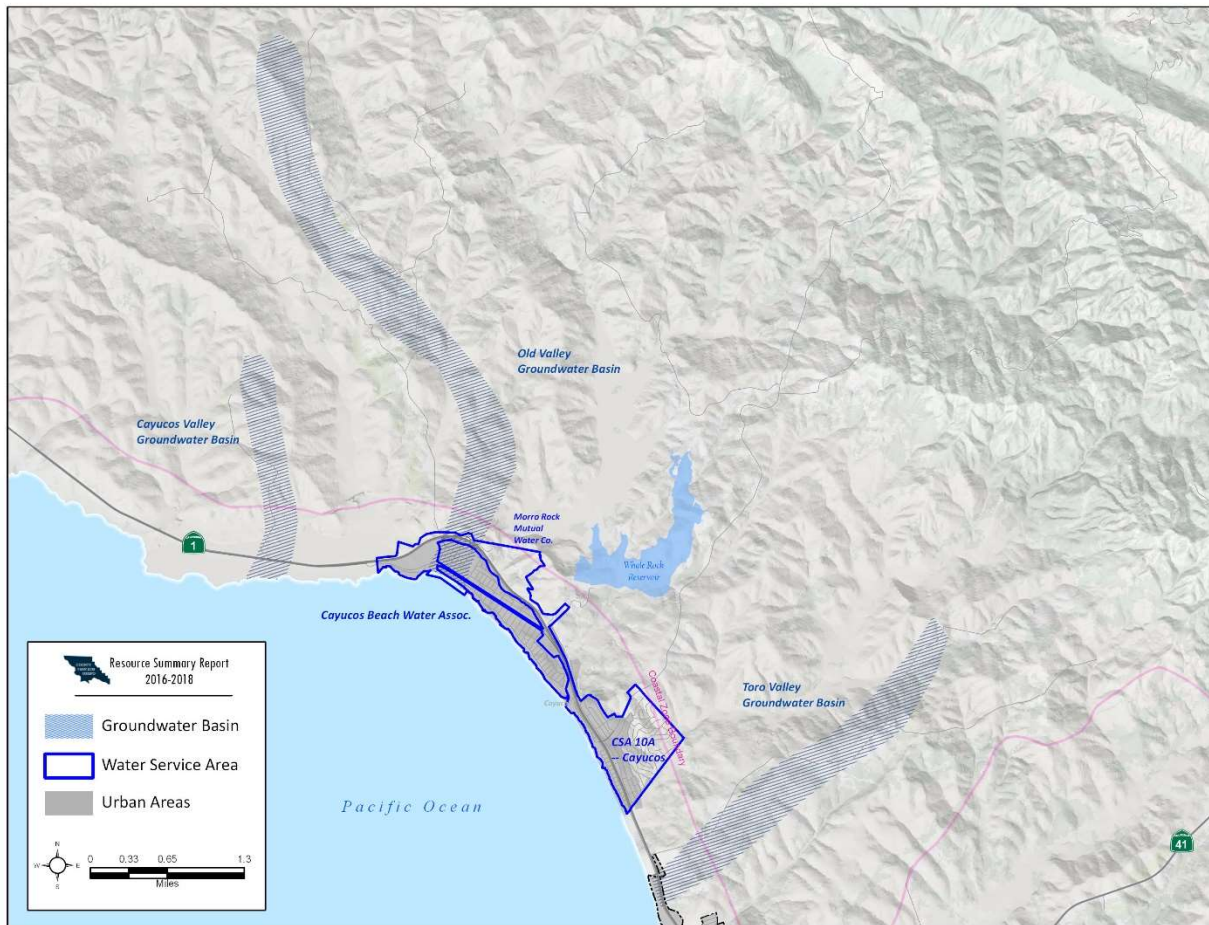
WPA 2 Cayucos / Morro Bay / Los Osos

Figure II-8 – Water Planning Area 2 – Cayucos/Morro Bay / Los Osos



Cayucos Area

Figure II-9 –Water Purveyors in the Cayucos Area



Water supply for the Cayucos area primarily comes from the Whale Rock Reservoir, groundwater basins, surface water diversions, and exchanges from the Nacimiento Water Project.

The Cayucos Valley Groundwater Basin (DWR Bulletin 118 No. 3-038) includes both physical limitations and water quality issues. Water level and well capacity declines during drought will limit the availability of the resource, while in the lower valley area; sea water intrusion will be the primary constraint. The Morro Rock Mutual Water Company and Cayucos Beach Mutual Water Company service areas overlie a portion of the basin; however, these purveyors do not pump from the Cayucos Valley basin. As shown in Table II-12 the basin also supplies agricultural and rural users.

Water users downstream of Whale Rock reservoir include members of the Cayucos Area Water Organization (CAWO), which include Morro Rock Mutual Water Company, the Cayucos Beach Mutual Water Company, the County, the Cayucos Cemetery District, and two

landowners. The combined groundwater and Whale Rock Reservoir surface water allocation for CAWO in Old Valley Groundwater Basin (DWR Bulletin 118 No. 3-039) is 664 AFY, distributed as follows:

- Morro Rock Mutual Water Co.: 170 AFY
- Caucos Beach Mutual Water Company: 222 AFY
- County (CSA 10A): 190 AFY (plus 40 AFY of City of San Luis Obispo's Whale Rock water allocation via exchange for Nacimiento water)
- Cayucos Cemetery District: 18 AFY
- Downstream land owners: 64 AFY
- BVMHP: 10 AFY (of City of San Luis Obispo's Whale Rock water allocation via exchange for Nacimiento water)

Constraints on water availability in this basin include physical limitations, water rights, and environmental considerations. Shallow alluvial deposits upstream of the reservoir are susceptible to drought impacts, having limited groundwater in storage. For the area below the reservoir, dam underflow may provide a source of recharge. Water rights permits limit the amount of groundwater available to the members of CAWO and downstream landowners in Old Valley to 664 AFY. Whale Rock Reservoir allocations to CAWO members are sufficient to provide existing demands and meet forecast buildout demands.

Table II-12 – Cayucos Area: Existing and Forecasted Water Supply and Demand Based on the 2014 Inland RMS Criteria						
Demand	Morro Rock MWC	Cayucos Beach Water Assoc.	CSA 10A	Cayucos Cemetery District	Agriculture	Rural
FY 2017/2018 Demand (AFY) ¹	100.2	130.5 ¹	94.4 ¹	Not provided	562	91
Forecast Demand in 15 Years (AFY)	168	212	226	17	603	124
Forecast Demand in 20 Years (AFY)	168	212	226	18	617	135
Buildout Demand (30 Or More Years) (AFY)	164-173	207-218	220-232	17-18	430-800	130-140
Supply						
Whale Rock Reservoir	170	222	190	18	0	0
Nacimiento Water Project	0	0	50 ²	0	0	0
SWRCB Water Diversions	3 ³	0	0	0	0	0
Cayucos Valley Basin	0	0	0	0	49 ⁴	11 ⁴
Old Valley Basin	0	0	0	0	12	3
Other GW Sources	0	0	0	0	555	122
Total Supply:	173	222	248	18	617	135
Water Supply Versus Forecasted Demand	Water demand projected over a period exceeding the LOS timeframe of 20 years will not equal or exceed the estimated dependable supply. Whale Rock Reservoir allocations are sufficient to provide for forecasted demand.					

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.56; 2014 Integrated Regional Water Management Plan, Tables D-17 and D-18.

Notes:

1. See Table II-1. Current demand data for agriculture and rural are from 2012. All data are as reported separately by purveyors in 2016. Not apportioned.
2. County (CSA 10A) exchanged 40 AFY for Whale Rock water from the City of San Luis Obispo; Bella Vista Mobile Home Park exchanges 10 AFY for Whale Rock water from the City of San Luis Obispo.
3. Only 3 AFY is diverted for a school and park irrigation, but up to 56 AFY is the permitted diversion from Little Cayucos Creek underflow. 56 AFY is part of the 600 AFY safe yield for the Cayucos Valley Basin. Due to water quality, the remaining 53 AFY could be used for domestic supply following treatment.
4. Estimated safe yield is 600 AFY and the majority of pumping is for agricultural or rural users, but a small public water system does serve a mobile home park.

<p align="center">Table II-13 – Cayucos Area: Existing and Forecasted Water Supply and Demand Based on the 1996 Coastal RMS Criteria</p>						
Demand	Morro Rock MWC	Cayucos Beach Water Assoc.	CSA 10A	Cayucos Cemetery District	Agriculture	Rural
FY 2017/2018 Demand (AFY) ¹	100.2	130.5 ¹	94.4 ¹	Not provided	562	91
Forecast Demand in 7 Years (AFY)	128	165	202	17	584	109
Forecast Demand in 9 Years (AFY)	138	178	234	18	690	114
Buildout Demand (30 Or More Years) (AFY)	164-173	207-218	220-232	17-18	430-800	130-140
Supply						
Whale Rock Reservoir	170	222	190	18	0	0
Nacimiento Water Project	0	0	58 ²	0	0	0
SWRCB Water Diversions	3 ³	0	0	0	0	0
Cayucos Valley Basin	0	0	0	0	49 ⁴	11 ⁴
Old Valley Basin	0	0	0	0	12	3
Other GW Sources	0	0	0	0	555	122
Total Supply:	173	222	248	18	617	135
Water Supply Versus Forecast Demand	Water demand projected over a period exceeding the LOS timeframe of 9 years will not equal or exceed the estimated dependable supply. Whale Rock Reservoir allocations are sufficient to provide for forecast demand.					

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.56; 2014 Integrated Regional Water Management Plan, Tables D-17 and D-18.

Notes:

1. See Table II-1. Current demand data for agriculture and rural are from 2012. All data are as reported separately by purveyors in 2016. Not apportioned.
2. County (CSA 10A) exchanged 40 AFY for Whale Rock water from the City of San Luis Obispo; Bella Vista Mobile Home Park exchanges 10 AFY for Whale Rock water from the City of San Luis Obispo.
3. Only 3 AFY is diverted for a school and park irrigation, but up to 56 AFY is the permitted diversion from Little Cayucos Creek underflow. 56 AFY is part of the 600 AFY safe yield for the Cayucos Valley Basin. Due to water quality, the remaining 53 AFY could be used for domestic supply following treatment.
4. Estimated safe yield is 600 AFY and the majority of pumping is for agricultural or rural users, but a small public water system does serve a mobile home park.

Staff of the Department of Planning and Building estimates that General Plan buildout for Cayucos is likely to be reached by the year 2044 (in 26 years) which is beyond the timeframe

of either the Coastal RMS or Inland RMS LOS criteria. Since the forecast buildout demands will push the CAWO members to their supply limit, an alternative supply should be developed as a reliability reserve over the next ten years. The most viable option for a reliability reserve supply is the NWP, since the 2018 agreement with the County, on behalf of CSA 10A, allows up to 50 AFY to be exchanged. In 2016, the County procured an additional 40 AFY from this source.

The Cayucos Sanitary District (CSD) is pursuing the construction of a wastewater treatment plant separately from the City of Morro Bay (discussed in greater detail in Chapter III, Wastewater). The wastewater recycling and recovery facility (WRRF) will be designed to treat wastewater that meets safe drinking water standards. Accordingly, the project includes a pipeline to be used to convey treated water that meets safe drinking water standards from the WRRF to the CSA 10A water treatment plant where it would augment the existing water supply by about 370 – 560 AFY at such time as the water purveyors deem the supplemental water to be beneficial and implement the necessary improvements to receive and process the supplemental water from the WRRF.

The combination of full 90 AFY NWP exchange, future production of potable water from the CSD wastewater project, and emergency conservation measures would provide the CAWO members with a reliable supply for the next twenty or more years.

Key observations for the area include:

- Forecasted demand for the basin from all sources is expected to remain below the projected supplies.
- The combination of full 90 AFY NWP exchange, future production of potable water from the CSD wastewater project, and emergency conservation measures will provide the CAWO members with a reliable supply for the next twenty or more years.

Based on either the 2014 Inland or the 1996 Coastal RMS Criteria, **no recommended Level of Severity.**

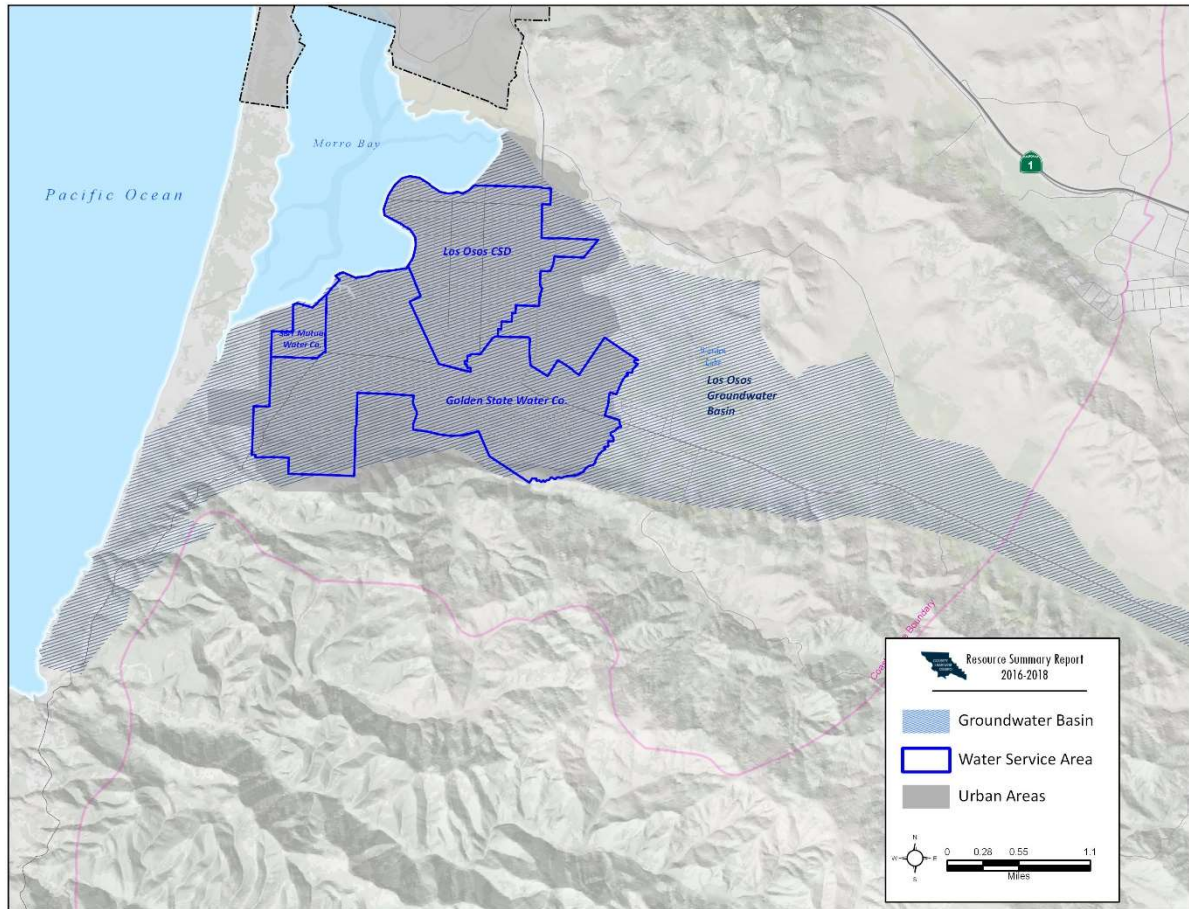
Water Systems

County Service Area (CSA) 10A

CSA 10A continues to make improvements to the overall water system to replace deteriorated and substandard waterlines and storage facilities. No significant water system limitations were reported by the other water purveyors. **No recommended Level of Severity.**

Los Osos Area

Figure II-10 –Water Purveyors Serving the Los Osos Area



Water supply for the Los Osos area primarily comes from the Los Osos Valley Groundwater Basin (DWR Bulletin 118 No. 3-008). The three water purveyors – Golden State Water Company, S&T Mutual Water Company, and the Los Osos Community Services District -- and overlying private well owners extract groundwater from the basin. In 2012, the safe yield of the basin was estimated to be 2,450 AFY. According to the LOCSO, extractions in 2014 were estimated at about 2,610 AFY, or about 107% of the safe yield.

According to the 2012 Master Water Report, the primary constraint on water availability in the Los Osos Valley groundwater basin is deteriorating water quality due to sea water intrusion and nitrate contamination. The County completed the community sewer/recycled water system (i.e. the Los Osos Water Recycling Facility (LOWRF)), which became operational in 2016. This facility not only allows the community to move off of individual septic systems, reducing the nitrate loading on the basin, but it also provides tertiary-treated effluent to both offset basin uses and recharge the basin. Existing septic systems are being de-commissioned as properties are connected to the community wastewater system, which is discussed in greater detail in Chapter III -- Wastewater.

The three local water purveyors, along with the County, prepared an updated Basin Management Plan as a part of the settlement of groundwater rights litigation, which was approved by the San Luis Obispo Superior Court in October 2015. The Basin Management Plan considers different scenarios for future water demand. The *Existing Population Scenario* assumes there is no future urban development beyond that which existed in 2010, the year of the most recent federal census. Policies of the County General Plan, the California Coastal Commission and the RWQCB will not allow additional development in Los Osos until the basin is being managed on a sustainable basis. Thus, the occurrence of any additional development is conditioned on implementation of the Basin Management Plan.

The *Buildout Development Scenario* assumes that future development in Los Osos follows the population projections of the Draft Estero Area Plan (EAP) in 2005 as updated by the Los Osos Community Plan (LOCP) and Los Osos Habitat Conservation Plan (LOHCP) which are currently (2018) in draft form. The Basin Management Plan is based on a buildout population of 19,850. However, the draft LOCP recommends land uses, policies and standards that would accommodate a buildout population of about 18,747. Achieving the vision embodied in the LOCP depends on the implementation of two interrelated programs:

- The sustainable management of limited groundwater resources as outlined in the Basin Management Plan; and
- The Habitat Conservation Plan.

More specifically, without an expansion of the perennial⁸ yield (discussed below), no new development can occur. And without a mechanism to mitigate for the 'take' associated with new development, new development can only occur through a fairly onerous and time-consuming project-by-project permitting process in accordance with the federal and state Endangered Species Acts. The relationship between land use and the Basin Management Plan is described in the LOCP in the chapter on Environmental Resources, Planning Area Standards B. and D., and Appendix E.

The Existing Population and Buildout Development Scenarios represent low and high marks for future urban water demand. The actual future demand will likely fall somewhere between these two scenarios and within the perennial yield of the Basin as it changes with implementation of the programs recommended by the BMP which include the following:

Groundwater Monitoring Program. The Basin Management Plan includes implementation of a comprehensive groundwater monitoring program with flexibility to adapt over time and that can consolidate data collection in the basin. The collected data will be used to inform Basin management decisions. The most recent monitoring program 2017 Annual Report was published in June 2018 (Cleath Harris, 2018).

⁸ The Basin Management Plan uses the term "sustainable yield" which is not defined. For purposes of this Resource Summary Report "perennial yield", as defined by DWR, will be used.

Urban Water Use Efficiency Program. According to the Basin Management Plan, improving urban water use efficiency is the highest priority program for balancing water supply and demand in the Basin and preventing further seawater intrusion. More efficient urban water use will allow purveyors and well users to decrease the amount of groundwater extracted from the Basin, thus ensuring that a sufficient amount of water remains to stabilize the freshwater-seawater interface.

Water Reinvestment Program. In order to maximize the use of Basin resources, it is imperative that water used by urban consumers be reinvested in the hydrologic cycle in an appropriate manner. Accordingly, the Basin Management Plan promotes the increased use of recycled water for urban and agricultural water users. One of the key components of this program is implementation of the LOWRF, which has been completed. To prevent the LOWRF from harming the Basin through additional seawater intrusion, conditions on the project require the LOWRF to reinvest all treated wastewater back into the Basin.

Basin Infrastructure Improvements. The BMP recommends various infrastructure improvements to better manage the extraction, distribution, treatment and recycling of groundwater resources. The Basin Infrastructure Program is divided into four parts, designated Programs A through D:

Program A -- Program A consists of actions that have already been taken by the purveyors or for which the purveyors have funding. Those actions are designed to allow the purveyors to increase groundwater production from the Upper Aquifer to the greatest extent practicable without construction of large-scale nitrate removal facilities.

Program B -- Program B improvements would allow the purveyors to maximize production from the Upper Aquifer. To allow increased use of groundwater from the Upper Aquifer, the purveyors would need to remove nitrate from water produced by new Upper Aquifer wells, including two for LOCSD, one for GSWC and, potentially, one or two for S&T. The Basin Management Plan provides that the necessary quantity of groundwater would be treated most economically and effectively through construction of a single, community nitrate facility rather than two or more separate facilities. Accordingly, Program B includes the construction of a shared nitrate removal facility. The technology for such a facility has not been finally determined, but for purposes of this Basin Management Plan it is assumed to be an ion exchange system. It is possible that an improved technology will emerge before design and construction of the nitrate removal facility, and the purveyors will consider all appropriate technologies at that time.

Program C -- Program C includes a set of infrastructure improvements that would allow the purveyors to shift some groundwater production within the Lower Aquifer from the Western Area to the Central Area.

Program D -- Program D includes three additional wells that would allow the purveyors to shift some groundwater production into the Eastern Area. Since groundwater production from the Central and Eastern Areas induces less seawater intrusion than the same amount of production from the Western Area, this landward shift increases the perennial yield of the Basin.

Supplemental Water Program. The Basin Management Plan explores different options for developing sources of water other than water derived from the Basin. These sources include rainwater harvesting, stormwater capture, greywater reuse, and groundwater desalination.

Imported Water Program. The BMP sets forth several alternatives for the development of an Imported Water Program for the Basin. The purposes of identifying and analyzing potential imported water supplies are to ensure that the Basin Management Plan does not neglect any potential solution for the Basin and to provide a comparison for other Basin Management Plan programs. Nonetheless, the Basin Management Plan does not recommend implementation of the Imported Water Program, based on a water management principle that water supplies and demands in the Basin should be balanced to avoid the need for imported water supplies in the Basin Management Plan plan area.

Wellhead Protection Program. The Wellhead Protection Program is designed to protect water quality in the Basin by managing activities within a delineated source area or protection zone around drinking water wells. This program consists primarily of the purveyors conducting Drinking Water Source Assessment and Protection surveys for each of their wells, as well as construction and operation of the LOWWP.

While the Basin Management Plan identifies a number of potential programs, not all are necessary or desirable for implementation in Los Osos. The BMP analyzes the impacts of implementing various combinations of programs through use of a groundwater model. Based on that analysis, the Basin Management Plan recommends the following programs (and associated costs) for immediate implementation:

Monitoring	\$650,000
Urban Water Use Efficiency	\$5,500,000
Urban Water Reinvestment	\$18,290,000
Infrastructure Program A	\$2,835,000
Infrastructure Program C	\$6,540,000
<u>Wellhead protection</u>	<u>\$0</u>
Total:	\$33,815,000

- Infrastructure Program A (described above) has been funded and is being fully implemented.
- Infrastructure Program C includes a set of infrastructure projects that would allow the purveyors to shift lower aquifer production from the Western Area to the Central Area of the Basin.

Implementation of these programs can support a population of 16,220 which is about 2,500 less than the population holding capacity of the draft LOCP (18,747). As a consequence, the Community Plan recommends implementation of at least one additional infrastructure Program from the BMP to make up the shortfall. These programs are summarized as follows:

- Program B -- Shift to the upper aquifer and install nitrate removal (estimated at \$17,250,000).
- Either Basin Infrastructure Program D or the Agricultural Water Reinvestment Program.

Collectively, implementation of these water management programs is expected to increase the perennial yield to 3,000 AFY. As presented in the LOBP, the estimated perennial yield of the Basin will increase beginning with urban water reinvestment Program U and basin infrastructure Programs A and C, both of which are complete or currently in progress.

In March 2017, Cleath-Harris Geologists delivered a Technical Memorandum to the Basin Management Committee (the body created to administer implementation of the BMP and related Stipulated Judgment) and Morro Bay National Estuary Program on the Basin Yield Metric response to reduced long-term precipitation in the Basin (Cleath-Harris Geologists, 2017). The purpose of the study was to understand how reduced precipitation would affect estimated Basin perennial yield, and what the corresponding level of groundwater production would be at 80 percent of the Basin Yield Metric, which is the target for safe operation of the Basin, as recommended in the BMP.

With respect to SGMA, DWR designated the Los Osos Basin as a high priority basin subject to critical conditions of overdraft; however, SGMA does not apply to the portion of the Los Osos Basin that is at issue in the litigation (“adjudicated area” discussed above; areas covered in the Basin Management Plan), provided that certain requirements are met (Water Code Section 10720.8⁹). Although the adjudicated area covers a majority of the Los Osos Basin; there are multiple “fringe areas” located outside of the adjudicated area (i.e., areas located outside of the adjudicated area but within the DWR Bulletin 118 Basin boundary). On May 4, 2017, the County formed a GSA over the multiple fringe areas located in the Los Osos

⁹ Pursuant to Water Code 10720.8, SGMA does not apply to the adjudicated areas of the Los Osos Basin (that portion of the Los Osos Basin at issue in *Los Osos Community Services District v. Southern California Water Company* [Golden State Water Company] et al. (San Luis Obispo Superior Court Case No. CV 040126)), provided that certain requirements are met.

Basin. The County Board of Supervisors, acting as the GSA, is responsible for compliance with actions and deadlines associated with SGMA within the fringe areas.

In June 2017, the County, acting as the GSA, initiated a hydrogeologic basin characterization study of the fringe areas, to support a Basin Boundary Modification Request to DWR. In September 2018, the County submitted a Basin Boundary Modification Request to DWR, which included: (1) a jurisdictional basin subdivision to create two proposed subbasins (i.e., Los Osos Area subbasin and Warden Creek subbasin), and (2) a scientific basin exclusion to remove two non-basin areas from Bulletin 118 basin boundary. The proposed Los Osos Area subbasin underlies the adjudicated area and is covered under the court approved Basin Management Plan. The proposed Warden Creek subbasin, if approved by DWR, would be subject to DWR's next basin re-prioritization assessment in 2019¹⁰. Pending DWR's final basin re-prioritization, the proposed Warden Creek subbasin may or may no longer be subject to SGMA requirements.

¹⁰ Consistent with Water Code Section 10722.4(c), DWR will reassess statewide basin prioritization in early 2019 once basin boundary modifications have been finalized for the basin.

Table II-14 – Los Osos Area: Existing and Forecasted Water Supply and Demand Based on the 2014 Inland RMS Criteria					
Demand	Los Osos CSD	S&T Mutual Water Co.	Golden State Water Co.	Agriculture⁴	Rural
FY 2017/2018 Demand (AFY)	470.0 ¹	32.6	443 ¹	2,161	20
Forecast Demand in 15 Years (AFY)	911	64	1,369.9	3,258	20
Forecast Demand in 20 Years (SFY)	1,234	70	1,369.9	3,258	20
Buildout Demand (30 Or More Years) (AFY)	1,557 ²	75 ²	524 ²	3,258	20
Supply					
Los Osos Groundwater Basin	(3)	(3)	(3)	(3)	(3)
Other GW Resources	0	0	0	1,988	0
Total Supply:	(3)	(3)	(3)	(3)	(3)
Water Supply Versus Forecasted Demand	Due to seawater intrusion and nitrate contamination, the groundwater basin remains an unreliable source; as a result, and given the lack of supplemental supplies, water demand projected over 15 years will equal or exceed the estimated dependable supply. ⁴				

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.58; San Luis Obispo Integrated Regional Water Management Plan, Tables D-20 and D-21.

Notes:

1. See Table II-1. Current year data for agriculture and rural are from 2012.
2. Assumes the programs recommended by the BMP are implemented and buildout demand from urban uses is 2,100 AFY divided among the three water purveyors in the same proportions as 2015 demand.
3. According to the Final Los Osos Basin Plan Groundwater Monitoring Program 2017 Annual Modeling Report, the 2017 perennial yield is estimated to be 2,760 AF. The maximum perennial yield is assumed to be 3,500 AFY and assumes the programs recommended by the certified BMP are implemented. All pumping is for urban, agricultural or rural users. As presented in the BMP, the estimated perennial yield of the Basin will increase beginning with urban water reinvestment Program U and basin infrastructure Programs A and C, both of which are currently in progress.
4. The BMP assumes agricultural demand within the areas covered by the BMP to be 750 AFY. For purposes of this RSR, agricultural demand is assumed to include the entire area within Water Planning Area 5 as shown on Figure D-9 on page D-25 which includes lands outside the Updated Basin Plan area.

Table II-15 – Los Osos Area: Existing and Forecasted Water Supply and Demand Based on the 1996 Coastal RMS Criteria					
Demand	Los Osos CSD	S&T Mutual Water Co.	Golden State Water Co.	Agriculture⁴	Rural
FY 2017/2018 Demand (AFY)	470.0 ¹	32.6	443 ¹	2,161	20
Forecast Demand in 7 Years (AFY)	660	40	655	2,604	20
Forecast Demand in 9 Years (SFY)	721	42	833	2,731	20
Buildout Demand (30 Or More Years) (AFY)	1,557 ²	75 ²	524 ²	3,258	20
Supply					
Los Osos Groundwater Basin	(3)	(3)	(3)	(3)	(3)
Other GW Resources	0	0	0	1,988	0
Total Supply:	(3)	(3)	(3)	(3)	(3)
Water Supply Versus Forecasted Demand	Due to seawater intrusion and nitrate contamination, the groundwater basin remains an unreliable source to meet existing demand; as a result, and given the lack of supplemental supplies, water demand projected over 7 or 9 years will equal or exceed the estimated dependable supply. ⁴				

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.58; San Luis Obispo Integrated Regional Water Management Plan, Tables D-20 and D-21.

Notes:

1. See Table II-1. Current year data for agriculture and rural are from 2012.
2. Assumes the programs recommended by the certified Basin Management Plan are implemented and buildout demand from urban uses is 2,100 AFY divided among the three water purveyors in the same proportions as 2015 demand.
3. According to the Final Los Osos Basin Plan Groundwater Monitoring Program 2017 Annual Modeling Report, the 2017 perennial yield is estimated to be 2,760 AF. The maximum perennial yield is assumed to be 3,500 AFY and assumes the programs recommended by the certified Basin Management Plan are implemented. All pumping is for urban, agricultural or rural users. As presented in the LOBP, the estimated perennial yield of the basin will increase beginning with urban water reinvestment Program U and basin infrastructure Programs A and C, both of which are currently in progress.
4. The 2015 Updated Basin Plan for the Los Osos Groundwater Basin assumes agricultural demand within the Plan area to be 750 AFY. For purposes of this RSR, agricultural demand is assumed to include the entire area within Water Planning Area 5 as shown on Figure D-9 on page D-25 which includes lands outside the Updated Basin Plan area.

Key observations for the area include:

- Current estimated demand from urban, rural and agricultural users (3126.6 AFY) exceeds the estimated safe yield of the basin (2760 AFY)
- Through implementation of the programs recommended by the Basin Management Plan and the draft LOCP and LOHCP, in coordination with the LOWRF, conditions in the Basin are expected to improve and to become sustainable.
- The Basin remains an unreliable source of water supply to meet existing demand due to seawater intrusion and nitrate contamination.
- An absence of available supplemental sources of supply.

Based on either the 1996 Coastal RMS Criteria or the 2014 RMS Criteria for Inland Areas, **Recommended Level of Severity III.**

Water Systems

Los Osos CSD

Los Osos CSD continues to make improvements to the overall water system to replace deteriorated and substandard waterlines and storage facilities. In conjunction with the LOWWP, the following water system improvements have been completed:

- South Bay Nitrate Removal
- Palisades Well Modifications
- Blending Project
- Water Meters – installation of meters on all S&T connections
- Water Systems Interconnection between LOCSD and GSWC
- Upper Aquifer Well – (LOCSD adopted mitigated negative declaration in May 2015 and is pursuing a coastal development permit)
- Rosina Nitrate Removal (Ion Exchange plant addition to GSWC’s Skyline Well – designed and funded)
- Expansion Well 2 (Lower Aquifer D well at GSWC Los Olivos Plant – designed and soon out to bid for construction)

No significant water system deficiencies were identified. **No recommended Level of Severity.**

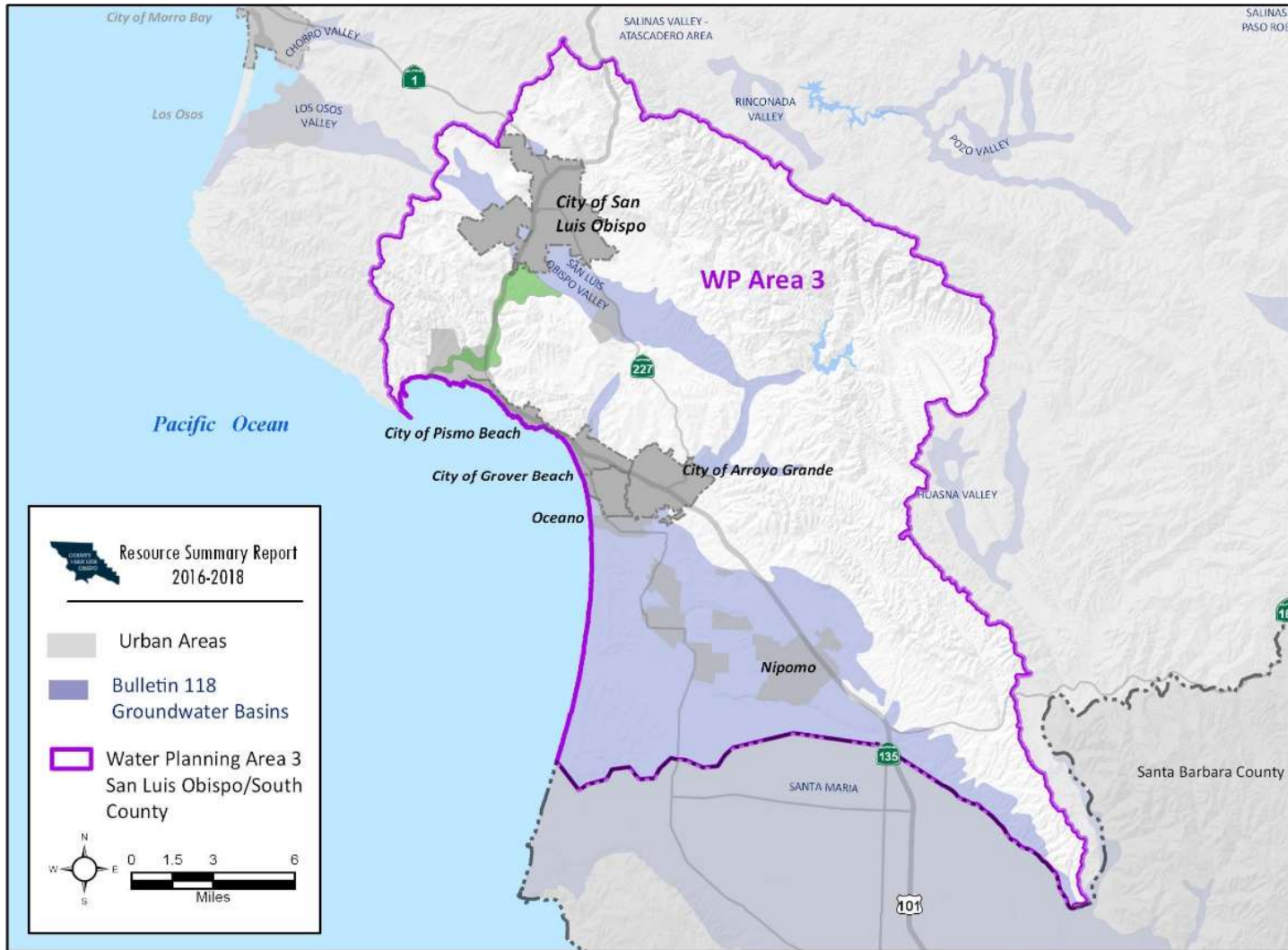
Golden State Water Company – Los Osos

Golden State Water Co. invested more than \$2 million in local infrastructure improvements in 2014. These improvements include water supply enhancements, distribution and ongoing improvements designed to replace old meters, mains and safety equipment.

No significant water system deficiencies were identified. **No recommended Level of Severity.**

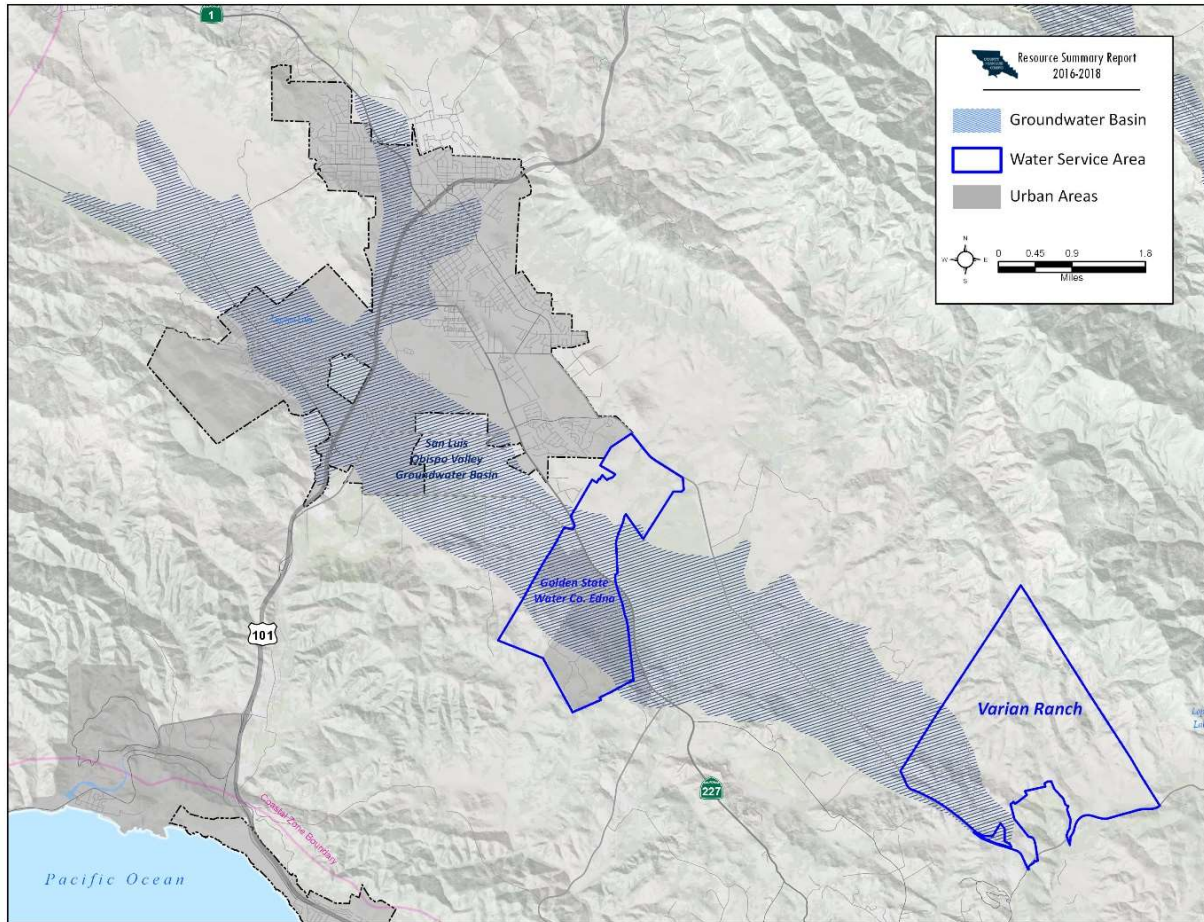
WPA 3 San Luis Obispo / South County

Figure II-11 – Water Planning Area 3 – San Luis Obispo/South County



San Luis Obispo Area

Figure II-12 – San Luis Obispo Area Water Purveyors



DWR designated the San Luis Obispo Valley Groundwater Basin (referred to as SLO Basin) as a medium priority basin; therefore, this area is required to comply with SGMA. In May 2017, both the City of San Luis Obispo and County formed GSAs, resulting in full coverage of the SLO Basin. Although GSAs were formed by the two local public agencies, SGMA provides that other entities are eligible to participate in GSAs. Representatives of eligible entities within the SLO Basin, including the Golden State Water Company, Edna Ranch Mutual Water Company, Varian Ranch Mutual Water Company, and Edna Valley Growers Mutual Water Company, were engaged in developing the governance structure for the SLO Basin and in engaging local stakeholders since 2015. In January 2018, the County GSA, City GSA, and the other entities eligible to participate in a GSA listed above entered into a Memorandum of Agreement that established the Groundwater Sustainability Commission (an advisory body to the GSAs) and the terms under which the City GSA and County GSA will jointly develop a single GSP, in coordination with the Groundwater Sustainability Commission.

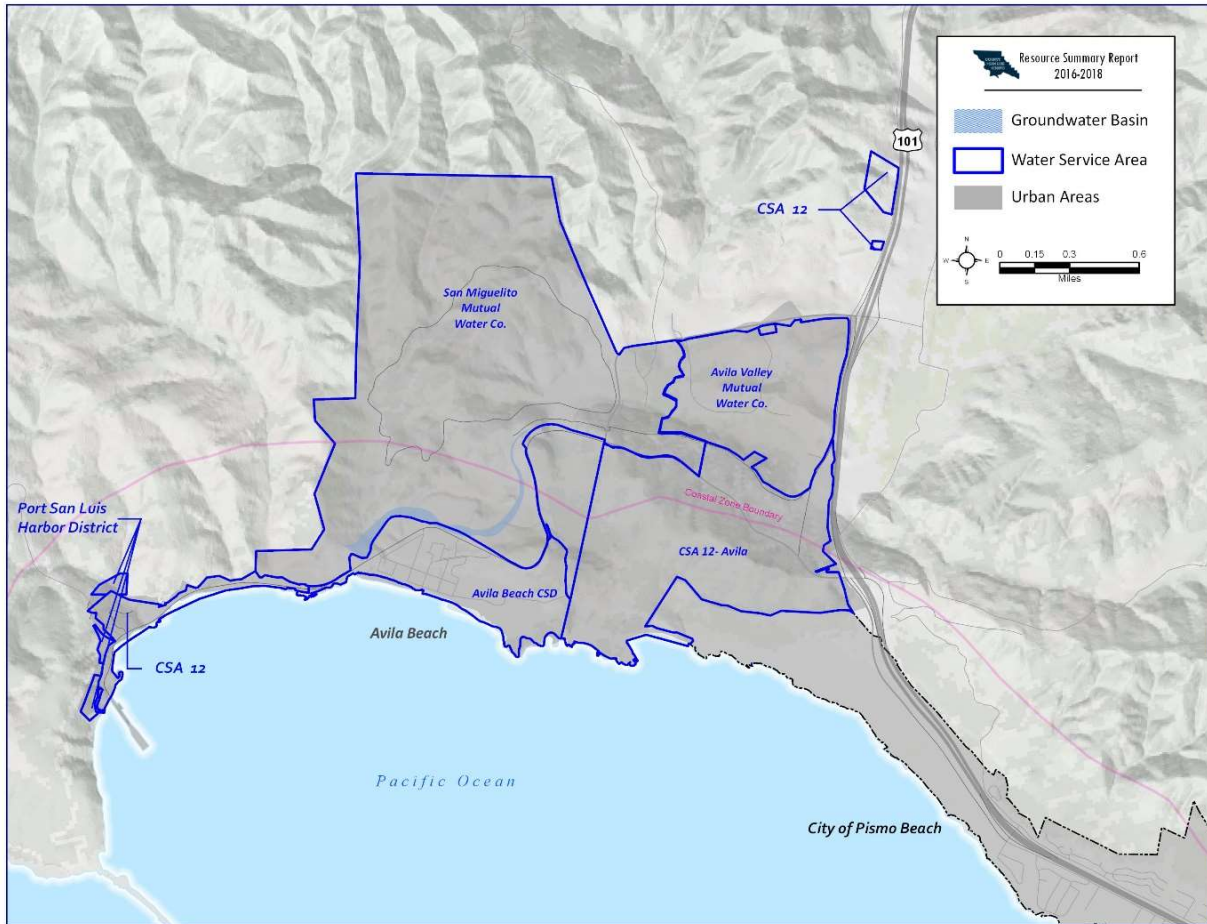
The County (acting as the contracting agent on behalf of the County and City GSAs) is in the process of soliciting a GSP Consultant. Once hired, the GSP Consultant will develop a stakeholder outreach and engagement plan in consultation with the GSAs and Commission, as part of the GSP development process. The GSP will study the groundwater conditions, estimate the current and future water budget, define what sustainability looks like for each basin, and set measurable objectives and thresholds for ongoing monitoring of progress towards achieving sustainability within 20 years of GSP adoption. SGMA requires that the GSA Board finalize and adopt the GSP no later than January 31, 2022

Given the anticipated contents of the GSP based on statutory and regulatory requirements, the 2016-2018 Resource Summary Report recommends maintaining the recommendation of the 2014-2016 Resource Summary Report:

San Luis Obispo Valley Groundwater Basin - **No recommended Level of Severity.**

Avila Beach and Avila Valley Area

Figure II-13 – Water Purveyors in the Avila Beach and Avila Valley Areas



Urban development and overlying private well users in the Avila Beach and Avila Valley area rely on multiple sources of water including surface water and groundwater supplies (although DWR Bulletin 118 does not delineate any basin(s) in this valley).

Water purveyors serving the area include the Avila Beach CSD, Avila Valley MWC, San Miguelito MWC, CSA 12 and Port San Luis. Avila Beach CSD, Avila Valley MWC, San Miguelito MWC, and CSA 12 receive imported water from the SWP. Avila Beach CSD, Avila Valley MWC, and CSA 12 receive surface water from Lopez Lake (Zone 3).

The SWP is considered a supplemental source of water since hydrologic variability, maintenance schedules, and repair requirements can cause reduced deliveries or complete shutdown of the delivery system. As discussed in more detail under Surface Water Supplies, since delivery to the Central Coast began, the SWP has provided between 50 and 100 percent of the contracted allocations, but recently, the drought coupled with pumping restrictions in consideration of endangered species habitat lowered that amount to 35 percent in 2008 and 40 percent in 2009. The Low Reservoir Response Plan is no longer in effect. However, the

parties are working on an update to the Plan that was implemented during the recent drought emergency and that would be effective during future drought emergencies.

Table II-16 – Avila Beach and Avila Valley Area: Existing and Forecasted Water Supply and Demand Based on the 2014 Inland RMS Criteria				
	Avila Beach CSD	Avila Valley MWC	San Miguelito MWC	CSA 12⁶
Demand				
FY 2017/2018 Demand (AFY)	67.7	+++	151.6	158.1 ¹
Forecast Demand in 15 Years (AFY)	166	31	383	66
Forecast Demand in 20 Years (AFY)	166	31	383	66
Buildout Demand (30 Or More Years) (AFY)	162-170 ²	30-32 ²	373-393 ²	65-68 ²
Supply				
State Water Project ³	66 ⁴	20	275	7 ⁵
Lopez Lake Reservoir	68	12	0	61
Other GW Supplies	0	20	118	0
Total Supply:	134	52	393	68
Water Supply Versus Forecasted Demand	It cannot be determined with any degree of certainty whether water demand projected over 20 years will not equal or exceed the estimated dependable supply. This is due primarily to a lack of information regarding the safe yield of the sub-basin.			

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.59 and Table 4.38; San Luis Obispo Integrated Regional Water Management Plan, Table D-23 and D-24. San Luis Obispo Valley Basin Characterization and Monitoring Well Installation January 18, 2018

Notes:

1. 2011 data.
2. The low end of the forecast demand range assumes 5% additional conservation (beyond what has already been accomplished) at buildout for all urban users.
3. SWP average allocation assumes 66 percent of contract water service amount.
4. Avila Beach CSD has a 100 AFY allocation from the SWP, but no drought buffer. Therefore, the 66 percent assumption for SWP delivery is 66 AFY.
5. Seven (7) AFY of SWP water allocated to the San Luis Coastal Unified School District.

6. CSA 12 serves the Port San Luis Harbor District which is included in the total deliveries. Individual water users within CSA 12 boundary could request an exemption to install a private well and pump water from the Avila Valley Sub-basin. It is unknown the number of users with private wells, but it is likely minimal.
7. +++ Indicates no data were received

Table II-17 – Avila Beach Area: Existing and Forecasted Water Supply and Demand Based on the 1996 RMS Coastal Criteria				
	Avila Beach CSD	Avila Valley MWC	San Miguelito MWC	CSA 12¹²
Demand				
FY 2017/2018 Demand (AFY)	67.7 ¹	+++	151.6 ¹	158.1 ²
Forecast Demand in 7 Years (AFY)	111	29	251	67
Forecast Demand in 9 Years (AFY)	122	30	287	67
Buildout Demand (30 Or More Years) (AFY)	162-170 ³	30-32 ³	373-393 ³	65-68 ³
Supply				
State Water Project ⁴	66 ⁵	20	275	7 ⁶
Lopez Lake Reservoir	68	12	0	61
Other GW Supplies	0	20	118	0
Total Supply:	134	52	393	68
Water Supply Versus Forecast Demand	It cannot be determined with any degree of certainty whether water demand projected over 9 years will not equal or exceed the estimated dependable supply. This is due primarily to a lack of information regarding the safe yield of the sub-basin.			

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.59 and Table 4.38; San Luis Obispo Integrated Regional Water Management Plan, Table D-23 and D-24.

Notes:

1. See Table II-1. Current year data for agriculture and rural are from 2012.
2. 2011 data.
3. The low end of the forecast demand range assumes 5% additional conservation (beyond what has already been accomplished) at buildout for all urban users.
4. State Water Project average allocation assumes 66 percent of contract water service amount.
5. Avila Beach CSD has a 100 AFY allocation from the State Water Project, but no drought buffer. Therefore, the 66 percent assumption for State Water Project delivery is 66 AFY.
6. Seven (7) AFY of SWP water allocated to the San Luis Coastal Unified School District.
7. +++ Indicates no data were received

In 2016 the Board initiated completion of an update of the Avila Community Plan. That process is expected to be completed in 5 or more years and will likely recommend policies and programs that could affect water demand.

Key observations for the area include:

- A conservative forecast of future demand for urban users suggests that the available supply will be equaled or exceeded at General Plan buildout which is expected to be reached by 2047. This timeframe is beyond the timeframe of both the Inland and Coastal RMS LOS criteria.
- Because of uncertainty regarding the safe yield of the basin, it is unknown whether water demand projected over 20 or more years will equal the estimated dependable supply.
- The reliability and availability of the supply from non-basin areas is unknown, however no issues in the area have been reported.
- It cannot be determined with any degree of certainty whether water demand projected over 20 years will not equal or exceed the estimated dependable supply. This is due primarily to a lack of information regarding the safe yield of the subbasin.

Based on either the 2014 Inland or 1996 Coastal Zone RMS criteria, **No recommended Level of Severity.**

Water Systems

No significant water system limitations were reported for Avila Beach CSD or CSA 12. **No recommended Level of Severity.**

South County Area

Figure II-14 – Management Areas of the Santa Maria Groundwater Basin

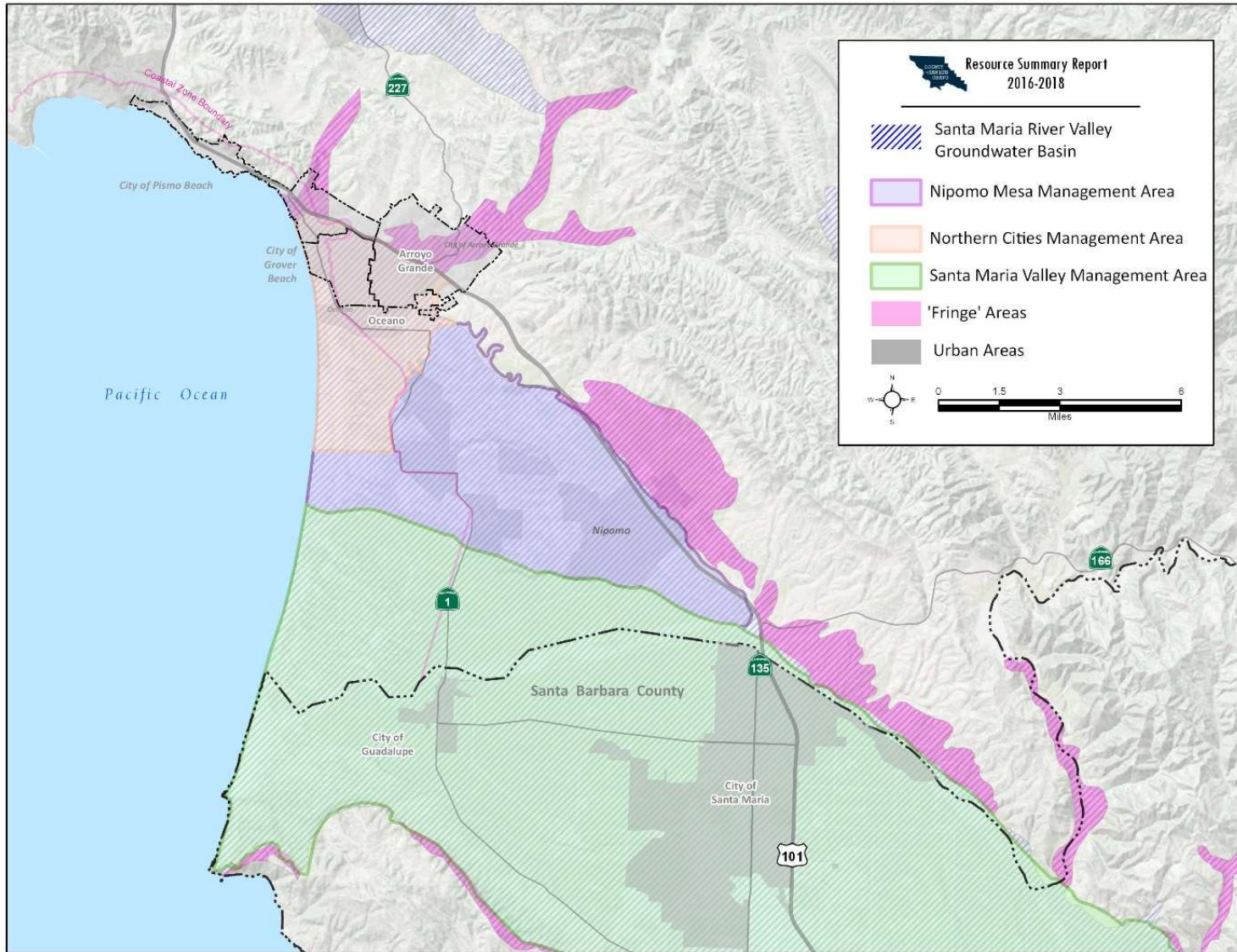
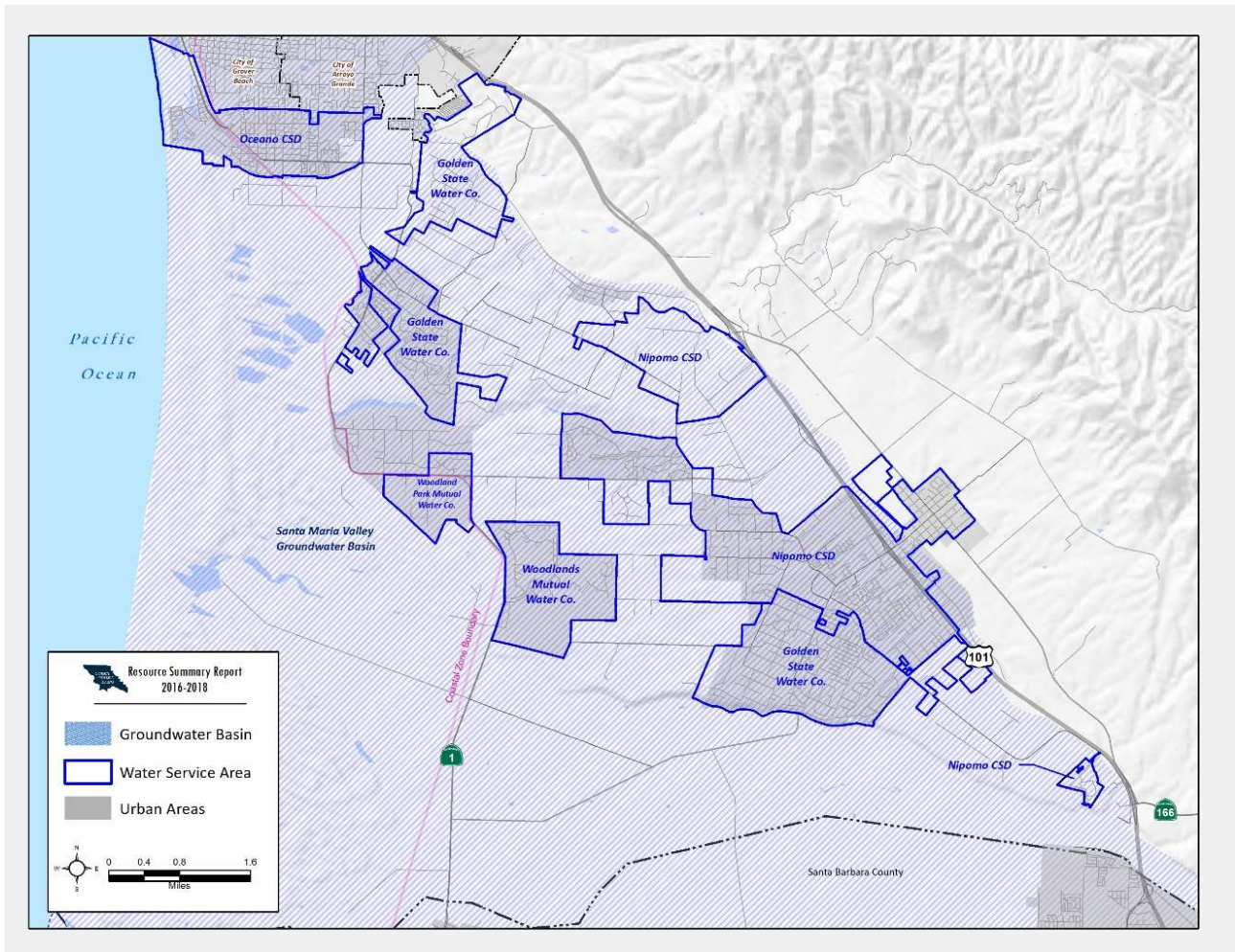


Figure II-15 -- Water Purveyors in the South County Area



Water supply for the South County area comes from multiple sources including the Santa Maria Groundwater Basin (DWR Bulletin 118 No. 3-012), Lopez Reservoir, Twitchell Reservoir, State Water Project, and other sources.

The Santa Maria Groundwater Basin (SMGB) underlies the coastal portion of northern Santa Barbara and southern San Luis Obispo Counties. In addition to the basin boundary defined by DWR in the Bulletin 118 Interim Update 2016, the Superior Court of California also defines an adjudicated area boundary, which covers a majority of SMGB.

The SMGB was the subject of litigation from 1997 to 2008, collectively called the Santa Maria Groundwater Litigation (*Santa Maria Valley Water Conservation District vs. City of Santa Maria, et al.*, Case No. 770214), and the Court has retained jurisdiction. By Stipulation and the Court's Judgment After Trial (herein "Judgment") dated January 25, 2008, three separate management areas were established: the Northern Cities Management Area (NCMA), the Nipomo Mesa Management Area (NMMA), and the Santa Maria Valley Management Area (SMVMA). Of the three management areas, the NCMA and NMMA are located entirely within San Luis Obispo County, while only a portion of the SMVMA is located in San Luis Obispo

County (Figure II-14). The Stipulation contains specific provisions with regard to development of groundwater monitoring programs and plans and programs to respond to water shortage conditions.

DWR designated the SMGB as a high priority basin; however, SGMA does not apply to the portion of the Santa Maria Basin that is at issue in the litigation (“adjudicated area”) (Water Code Section 10720.8¹¹). Although the adjudicated area covers a majority of the Santa Maria Basin; there are multiple “fringe areas” located outside of the adjudicated area (i.e., areas located outside of the adjudicated area but within the State’s Bulletin 118 Basin boundary). In particular, five non-contiguous “fringe areas” have been identified in San Luis Obispo County: Pismo Creek Valley, Arroyo Grande Creek Valley, Nipomo Valley, Southern Bluffs, and Ziegler Canyon fringe areas.

On May 16, 2017, the County Board formed the Santa Maria Basin Fringe Areas – County of San Luis Obispo GSA (County GSA) covering the five “fringe areas” within San Luis Obispo County, excluding the portions of the fringe areas covered by the City of Arroyo Grande. The three (3) GSAs (County GSA, City of Arroyo Grande and Santa Barbara County Water Agency) collectively cover all of the Santa Maria Groundwater Basin fringe areas.

In June 2017, the County GSA initiated a hydrogeologic basin characterization study of the fringe areas, to support a Basin Boundary Modification Request to DWR. In September 2018, the County submitted a Basin Boundary Modification Request to DWR. The proposed basin boundary modifications, if approved by DWR, would be subject to DWR’s next basin re-prioritization assessment in 2019¹². Pending DWR’s final basin re-prioritization, the proposed subbasin and/or fringe areas may or may no longer be mandated to meet SGMA requirements; however, the County GSA received grant funding that it intends to use to develop a GSP over the fringe area(s), regardless of DWR’s re-prioritization. The GSP will study the groundwater conditions, estimate the current and future water budget, define what sustainability looks like for the fringe area(s), and set measurable objectives and thresholds for ongoing monitoring of progress towards achieving sustainability within 20 years of GSP adoption. SGMA requires that the GSAs finalize and adopt the GSP no later than January 31, 2022.

Northern Cities Management Area

The Northern Cities Management Area (NCMA) is part of the Santa Maria Groundwater Basin adjudicated area. The Oceano CSD is the only water purveyor within the NCMA serving the unincorporated County. An agreement executed in 1983 to cooperatively manage the northwestern portion of the basin was superseded in 2002 by the 2002 Groundwater Management Agreement (the “Gentlemen’s Agreement”) among the Northern Cities which

¹¹ Pursuant to Water Code 10720.8(a)(18), SGMA does not apply to the adjudicated areas of the Santa Maria Basin (that portion of the Santa Maria Basin at issue in Santa Maria Valley Water Conservation District v. City of Santa Maria, et al.), provided that certain requirements are met.

¹² Consistent with Water Code Section 10722.4(c), DWR will reassess statewide basin prioritization in early 2019 once basin boundary modifications have been finalized for the basin.

includes the cities of Arroyo Grande, Pismo Beach and Grover Beach, along with the Oceano CSD, allocates an assumed “safe yield” of 9,500 AFY. The “safe yield” as used in the agreement includes subdivisions for agricultural irrigation (5,300 AFY), subsurface flow to the ocean (200 AFY) and urban uses (4,000 AFY). It also provides that urban groundwater allocations can be increased when land within the incorporated boundaries is converted from agricultural uses to urban uses, referred to as an agricultural conversion credit, or “ag credit.”

However, the use of a reported “safe yield” of 9,500 AFY for the NCMA may not be appropriate for a variety of reasons. For example, the following summary is based on a reference document (Todd Engineers, 2007) cited in the 2015 NCMA annual report:

“While often equated with total recharge (i.e., inflow), safe yield, which is not a fixed number, but varies with changing hydrologic conditions and with management practices, is better defined as the portion of total inflow that can be effectively captured by wells and pumped from a basin without causing negative effects, such as chronic groundwater level declines and seawater intrusion”.

An analysis of the 1983 agreement indicates that derivation of the reported 9,500 AFY “safe yield” value from the 1979 DWR report is problematic for several reasons. As a result, there is uncertainty regarding the assumption that the 4,000 AFY allocated to the Northern Cities as part of the 1983 agreement can be counted in perpetuity as guaranteed supplies.

The 2013 Annual Monitoring Report for the Northern Cities Management Area (NCMA) summarizes the groundwater allocations for the Northern Cities as follows:

Table II-18 -- Allocation of Water Among Parties to the 2002 Northern Cities Management Agreement			
Urban Area	Groundwater Allotment (AFY)	Ag Credit (AFY)	Total (AFY)
Arroyo Grande	1,202	121	1,323
Grover Beach	1,198	209	1,407
Pismo Beach	700	0	700
Oceano CSD	900	0	900
Total:	4,000	330	4,330

Source: San Luis Obispo County Master Water Report, 2012, page 4-30; NCMA 2013 Annual Monitoring Report

The Arroyo Grande Plain Hydrologic Sub-area (part of the Santa Maria Groundwater Basin) provides from 30 to 100 percent of the water supply for the urban users. The range reflects the fact that each NCMA agency also obtains a portion of their water supplies from surface sources such as the SWP and Lopez Lake. The only water purveyor serving the unincorporated areas of the Northern Cities Management Area is the Oceano CSD. However, the urban groundwater extraction allocations are shared by agreement among Pismo Beach,

the City of Arroyo Grande, the City of Grover Beach, and the Oceano CSD. As party to the SMGB litigation, extraction allocations may be increased or decreased at a future date. Groundwater availability in the NCMA is primarily constrained by water quality issues and water rights. The major purveyors have agreed to share the water resources through a cooperative agreement that also sets aside water for agricultural use and for basin outflow, although the amount allocated for basin outflow has been deemed unreasonably low (Todd, 2007).

Following the detection of evidence of seawater intrusion in 2009, the NCMA water purveyors worked cooperatively with each other and the County to reduce groundwater pumping. The improvement of water quality after 2009, however, also coincided with a subsequent average rainfall year (2010) and well head improvements to the monitoring well to reduce possible surface water contamination. As a result, Oceano CSD does not believe that the sea water intrusion evidence is conclusive and is developing its own groundwater elevation monitoring to more closely evaluate pumping in comparison to groundwater levels and water quality changes.

Water availability in the NCMA is primarily constrained by water quality issues and water rights. Basin sediments in the management area extend offshore along several miles of coastline, where seawater intrusion is the greatest potential threat to the supply. Low coastal groundwater levels indicated a potential for seawater intrusion that was locally manifested in sentry wells 32S/13E 30N02 and 30N03 in 2009 after 3 dry years, with levels and water quality improving after an average rainfall year in 2010. Following the detection of evidence of seawater intrusion in 2009, the NCMA water purveyors worked cooperatively with each other to reduce groundwater pumping. This approach included the following management strategies:

- Increased surface water use through delivery of surplus supplies from Lopez Reservoir
- Expanded conservation programs and customer education
- Negotiations to secure an emergency allocation of additional SWP supplies, if needed
- Hydraulic evaluation and maintenance of the Lopez pipeline
- Increased groundwater monitoring
- Expanded regional cooperation
- Adoption of the Low Reservoir Response Plan (LRRP) during the declared water emergency for the Lopez Project

Going forward, the NCMA water purveyors plan to implement several initiatives to improve the long-term management and sustainability of their water supplies. These initiatives could include:

- Development of a groundwater model for the Santa Maria Groundwater Basin
- Enhanced conjunctive use of the groundwater basin
- Regional recycled water projects

- Development and adoption of an updated LRRP

Table II-19 – South County Area -- Northern Cities Management Area Existing and Forecasted Water Supply and Demand Based on the 2014 Inland RMS Criteria			
Demand	Oceano CSD	Agriculture	Rural
FY 2017/2018 Demand (AFY)	711.9 ¹	2,056	38
Forecast Demand in 15 Years (AFY)	1,348	2,513	38
Forecast Demand in 20 Years (AFY)	1,348	2,650	38
Buildout Demand (30 Or More Years) (AFY)	1,277 -1,419 ²	2,742	38
Supply			
State Water Project (AFY) ³	750 ⁴	0	0
Lopez Lake Reservoir (AFY)	303	0	0
Santa Maria Groundwater Basin -- Arroyo Grande Plain Sub-Area (AFY) ⁵	900	5,300 ⁷	36
Total Supply:	1,953	Uncertain	Uncertain
Water Supply Versus Forecasted Demand	It cannot be determined with any degree of certainty whether water demand projected over 20 years will equal or exceed the estimated dependable supply. ⁸		

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.60; San Luis Obispo Integrated Regional Water Management Plan Tables D-26 and D-27.

Notes:

1. See Table II-1. Current year data for agriculture and rural are from 2012.
2. Ten percent additional water conservation (beyond what has already been accomplished) assumed for the low end of the forecast buildout demand, except for Grover Beach, which assumed 20% additional reduction.
3. SWP average allocation assumed 66 percent of contract water service amount.
4. In 2016 the Oceano CSD approved a 750 AFY drought buffer
5. "Safe yield" of 9,500 AFY with subdivisions for applied irrigation (5,300 AFY), subsurface outflow to the ocean (200 AFY), and urban use (4,000 AFY). The Gentlemen’s Agreement "safe yield" allotment for urban use is broken down per the number shown.
6. Arroyo Grande had a temporary agreement to purchase 100 AFY of Oceano CSD supplies from groundwater or Lopez Lake water. The temporary agreement expired in 2014.
7. "Safe yield" of 9,300 AFY with subdivisions for applied irrigation (5,300 AFY, and urban use (4,000 AFY)). Subsurface outflow to the ocean is allocated at 200 AFY. The Gentlemen’s Agreement "safe yield" allotment for urban use is broken down per the numbers shown.
8. NCMA cities, NMMA water purveyors, County, District, and local land owners actively and cooperatively manage surface and groundwater with the goal of preserving the long-term integrity of water supplies in the NCMA and NMMA.

Table II-20 – South County Area -- Northern Cities Management Area Existing and Forecasted Water Supply and Demand Based on the 1996 Coastal RMS Criteria			
Demand	Oceano CSD	Agriculture	Rural
FY 2017/2018 Demand (AFY)	711.9 ¹	2,056	38
Forecast Demand in 7 Years (AFY)	963	2,241	38
Forecast Demand in 9 Years (AFY)	1,059	2,293	38
Buildout Demand (30 Or More Years) (AFY)	1,277 -1,419 ²	2,742	38
Supply			
State Water Project (AFY) ³	750 ⁴	0	0
Lopez Lake Reservoir (AFY)	303	0	0
Santa Maria Groundwater Basin -- Arroyo Grande Plain Sub-Area (AFY) ⁵	900	5,300 ⁷	36
Total Supply:	1,953	Uncertain	Uncertain
Water Supply Versus Forecast Demand	It cannot be determined with any degree of certainty whether water demand projected over 7 or 9 years will not equal or exceed the estimated dependable supply. ⁸		

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.60; San Luis Obispo Integrated Regional Water Management Plan Tables D-26 and D-27.

Notes:

1. See Table II-1. Current year data for agriculture and rural are from 2012.
2. Ten percent additional water conservation (beyond what has already been accomplished) assumed for the low end of the forecast buildout demand, except for Grover Beach, which assumed 20% additional reduction.
3. State Water Project average allocation assumed 66 percent of contract water service amount.
4. In 2016 the Oceano CSD approved a 750 AFY drought buffer
5. "Safe yield" of 9,500 AFY with subdivisions for applied irrigation (5,300 AFY), subsurface outflow to the ocean (200 AFY), and urban use (4,000 AFY). The 2002 Groundwater Management Agreement "safe yield" allotment for urban use is broken down per the number shown.
6. Arroyo Grande had a temporary agreement to purchase 100 AFY of Oceano CSD supplies from groundwater or Lopez Lake water. The temporary agreement expired in 2014.
7. "Safe yield" of 9,300 AFY with subdivisions for applied irrigation (5,300 AFY, and urban use (4,000 AFY)). Subsurface outflow to the ocean is allocated at 200 AFY. The 2002 Groundwater Management Agreement "safe yield" allotment for urban use is broken down per the numbers shown.
8. NCMA cities, NMMA water purveyors, County, District, and local land owners actively and cooperatively manage surface and groundwater with the goal of preserving the long-term integrity of water supplies in the NCMA and NMMA.

Key observations for the area include:

- Oceano CSD maintains adequate supply to meet existing and forecast buildout demands. With sufficient conservation, Oceano CSD should have adequate supply to not only meet its customer's needs, but also maintain a reliable supply.
- It cannot be determined with any degree of certainty whether projected water demand will equal or exceed the estimated dependable supply for the unincorporated areas of the Northern Cities Management Area based on either the 1996 Coastal RMS Criteria or the 2014 Inland RMS Criteria. This is due primarily to a lack of information regarding the safe yield of the sub-basin in either the Coastal Zone or Inland Areas.

Based on either the 2014 Inland or 1996 Coastal Zone RMS criteria, **No recommended Level of Severity.**

Nipomo Mesa Management Area

The Judgment granted no specific pumping allocations to individual water producers in the NMMA, nor imposed any obligations on water producers, either individually or collectively, to operate in a way to ensure that any amount of groundwater will migrate to any other management area. However, Nipomo CSD, with cost sharing by Golden State Water Company (GSWC), Rural Water Company (acquired by GSWC in 2015), and Woodlands Mutual Water Company (Woodlands), undertook a prescribed program to transfer water from the City of Santa Maria in the SMVMA to NCSD in the NMMA, to supplement their customers' water demand. Nipomo CSD's prescribed program, named the Nipomo Supplemental Water Project (NSWP) in the Judgment, ultimately aims to purchase and transmit to the NMMA a minimum of 2,500 acre-feet of supplemental water each year.

In 2006 the County certified a Level of Severity III for the NMMA based on a Resource Capacity Study (RCS) prepared in 2004. The County subsequently adopted Ordinance No. 3090 to implement the recommendations of the RCS. Pursuant to the Judgment, a Water Shortage Conditions and Response Plan was included as part of the Monitoring Program for the NMMA and presented to the Court in April 2009. The water shortage conditions are characterized by two different criteria – those for Potentially Severe Water Shortage Conditions and those for Severe Water Shortage Conditions. The response to these conditions includes voluntary and mandatory actions by the parties to the Judgment.

The Judgment requires the preparation of a Well Management Plan (WMP) when either Potentially Severe Water Shortage Conditions or Severe Water Shortage Conditions exist prior to the completion of a NSWP project. The WMP provides for steps to be taken by the Nipomo CSD, GSWC (formerly named Southern California Water Company), and Woodlands, under these water shortage conditions. The WMP has no applicability to either Phillips 66 or Overlying Owners as defined in the Judgment. The WMP was submitted to the Court in April

2010. The NMMA Water Shortage Response Stages (WSRS) were submitted in April 2014 to the Court, as an addendum to the WMP and as a means of identifying steps to be taken to manage NMMA water supplies during continued shortage conditions.

The WSRS is based on five escalating stages of drought. In the spring of 2015, groundwater levels indicated that the NMMA had entered a Stage III water shortage in accordance with a WSRS. In Stages III through V, there are targeted reductions in water use designed to protect long-term groundwater supplies. Stage III represents Severe Water Shortage Conditions and sets a goal of reducing groundwater pumping by 30%. In July 2016, the NMMA had entered a Stage IV water shortage, which triggered additional mandatory conservation measures that prohibits municipal irrigation, suspends pending applications for water service and targets a reduction in groundwater pumping by 50%. By the end of 2017 the NMMA water purveyors had reduced groundwater pumping by 40% compared to the amount of groundwater extracted from the NMMA aquifers in 2013.

Even with additional conservation measures in place, GSWC, Woodlands, and Nipomo CSD could experience supply deficits if groundwater is insufficient to meet increases in demands. To address this need, desalination, increased recycled water use, or increasing delivery from the NSWP (discussed below) are also being considered as long-term alternative sources of supply for the Nipomo CSD and others in the region.

Nipomo Supplemental Water Project. In 2015, the Nipomo CSD completed the initial phase of the planned 3,000 AFY NSWP (2,500 AFY to replace existing demand and 500 AFY for new development within the Nipomo CSD service boundaries). Nipomo CSD began delivering water to the NMMA in July 2015. With the initiation of NSWP deliveries, a minimum purchase schedule 'time clock' was triggered in accordance with the Nipomo CSD/City of Santa Maria Wholesale Agreement. Commencing no later than delivery year eleven (2026), Nipomo CSD is required to purchase from the City of Santa Maria (and import to the NMMA) a minimum of 2,500 AFY.

The initial phase of the NSWP included the construction of a two-mile long pipeline that traverses under the Santa Maria River, across the Santa Barbara/San Luis Obispo County boundary and interconnects the City of Santa Maria's water system to Nipomo CSD's. This interconnection provides the NMMA with its first and only means of importing water and links the NMMA with the City of Santa Maria. The two-mile-long pipeline connecting the City of Santa Maria and NMMA is capable of delivering 6,200 AFY. The License Agreement issued by County of Santa Barbara to facilitate the pipeline crossing the County's flood control levee currently constrains the project to a maximum delivery of 3,000 AFY. Accordingly, the project was designed to deliver 3,000 AFY.

Nipomo CSD is planning additional phases of work to ramp up capacity well ahead of the minimum purchase schedule contained in the Wholesale Agreement. The project initially was capable of delivering 645 AFY. Beginning in July 2016, Nipomo CSD increased delivery from the City of Santa Maria through the NSWP beyond the 800 AFY minimum take stated in

the purchasing agreement. A 500,000-gallon reservoir designed to help manage deliveries from the City of Santa Maria was completed in April 2017.

Funding to bring the NSWP to a full 3,000 AFY has not been fully determined. It is Nipomo CSD's goal to have funding for the NSWP secured by 2023 and the project completed by January 2025. Should basin health further diminish due to drought or other cause, Nipomo CSD will make every effort to accelerate project construction and work with the City of Santa Maria to increase its available water for wholesale.

The highest priority use of NSWP water is generally to offset groundwater pumping within those regions of the NMMA where depressed groundwater levels exist. The major purveyors plan to periodically meet and confer regarding the anticipated distribution of the NSWP water, given the aforementioned priority. Based on input from these meetings, the status of points of interconnection, and other relevant hydrologic conditions, Nipomo CSD will determine the distribution of NSWP water among the purveyors. Nipomo CSD intends to make its determination based upon a reasonable interpretation of how best to manage the then existing hydrologic conditions within the NMMA, the availability of NSWP water, and the ability to rely on existing points of interconnection and will explore the feasibility of establishing a point of interconnection with the GSWC Cypress Ridge system. If the purveyors determine all points of interconnection are necessary to make optimal use of NSWP water, Nipomo CSD and GSWC will develop the most cost effective design and arrange for the construction of a point of interconnection to the GSWC Cypress Ridge system as promptly as practical. This interconnection will be included as a component of the NSWP.

The two other water purveyors, Woodlands and Golden State Water Company, who are sharing in the project costs, will together receive one-third of the mandated minimum water delivery (a total of 833 AFY of 2,500 AFY). The additional 500 AFY capacity has been reserved for use by the Nipomo CSD for new customers within its own service boundary. The additional capacity cannot be used to support annexations by NCSD. Because of the requirement to import 500 AFY of water for all new development occurring after January 1, 2005, the NSWP may have to transmit significantly more than 2,500 AFY. The two water supply requirements of 2,500 and 500 AFY in the Stipulation are cumulative, meaning that Nipomo CSD itself is planning on 3,000 AFY to account for the added development within NCSD since January 1, 2005.

The NMMA water purveyors, the County, and local landowners actively and cooperatively manage groundwater with the goal of preserving the long-term integrity of water supplies in the NMMA. Although the SMGB has been adjudicated, the potential for shortfalls remains a threat to purveyors and overlying users that continue to rely solely on groundwater. In addition, while seawater intrusion has not been observed in the NMMA (sentry) monitoring wells, the recent landward gradient along the coastline (NMMA, 2018) could lead to seawater intrusion, as has been observed in the NCMA. Consequently, further collaboration among NMMA, NCMA, and the South County Sanitation District should be pursued in considering recycled water as an option to improve water resource reliability. Indeed, NMMA

representatives are actively engaged in the development, by Pismo Beach and the South San Luis Obispo County Sanitation District, of a groundwater model encompassing the NCMA, NMMA, and the portion of the SMVMA in San Luis Obispo County. The model, which is currently in a stage of advanced calibration, will be used to evaluate seawater intrusion and, in particular, scenarios involving recharge of recycled water that would otherwise be discharged to the Pacific Ocean, into aquifers in the NCMA, just west of the NMMA. Nevertheless, uncertainties remain about the reliability of water resources serving the NMMA.

**Table II-21 - South County Area - Nipomo Mesa Management Area
Existing and Forecasted Water Supply and Demand
Based on the 2014 Inland RMS Criteria**

Demand	Nipomo CSD	Woodlands Mutual Water Co.	Golden State Water Co.	Industrial	Golf Course	Agriculture	Rural
FY 2017/2018 Demand (AFY) ¹	1,940 ⁵	1,088 ⁶	1,224 ⁴	1,100 ⁴	910 ²	6,153 ¹	653 ³
Forecast Demand in 15 Years (AFY)	3,967	1,386	1,250	1,100	910 ²	7,575	522
Forecast Demand in 20 Years (AFY)	4,103	1,520	1,250	1,100	910 ²	8,291	566
Buildout Demand (30 Or More Years) (AFY)	4,244 ⁷	1,520	1,847	1,100	910 ²	8,291	566
Supply							
Nipomo Supplemental Water Project (AFY) ⁵	2,166 ⁸	417 ⁸	417	0	0	0	0
Santa Maria Groundwater Basin - Nipomo Mesa Sub-Area (AFY)	2,078	903	852	1,100	818	8,291	566
Recycled Water (AFY)	0	200 ⁷		0	92 ⁹	0	0
Total Supply:	4,244	1,520	1,269	1,100	910 ²	8,291	566
Water Supply Versus Forecasted Demand	Water demand projected over 15 years is projected to equal or exceed the estimated dependable supply. ⁴						

Source: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.60; San Luis Obispo Integrated Regional Water Management Plan, Tables D-25 and D-26; Nipomo CSD 2015 Urban Water Management Plan, Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017

Notes:

1. Table 3-5: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.

2. Table 3-4: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017 (Excludes Monarch Dunes)
3. Table 3-6: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.
4. Table 3-3: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.
5. Table 3-3 and Section 3.1.10: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.
6. Tables 3-3, 3-4, 3-5: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.
7. 2015 Urban Water Management Plan.
8. Nipomo Supplemental Water Project, completion planned for no later than 2026.
9. See Table 3-8: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.

Table II-22 – South County Area – Nipomo Mesa Management Area Existing and Forecasted Water Supply and Demand Based on the 1996 Coastal RMS Criteria							
Demand	Nipomo CSD	Woodlands Mutual Water Co.	Golden State Water Co.	Industrial	Golf Course	Agriculture	Rural
FY 2017/2018 Demand (AFY) ¹	1,940 ⁵	1,088 ⁶	1,224 ⁴	1,100 ⁴	910 ²	6,153 ¹	653 ³
Forecast Demand in 15 Years (AFY)	2,926	1,156	1,250	1,100	910 ²	7,575	522
Forecast Demand in 20 Years (AFY)	3,255	1,277	1,250	1,100	910 ²	8,291	566
Buildout Demand (30 Or More Years) (AFY)	4,244 ⁷	1,520	1,847	1,100	910 ²	8,291	566
Supply							
Nipomo Supplemental Water Project (AFY) ⁵	2,166 ⁸	417 ⁸	417	0	0	0	0
Santa Maria Groundwater Basin - Nipomo Mesa Sub-Area (AFY)	2,078	903	852	1,100	818	8,291	566
Recycled Water (AFY)	0	200 ⁷	0	0	92 ⁹	0	0
Total Supply:	4,244	1,520	1,269	1,100	910²	8,291	566
Water Supply Versus Forecast Demand	Water demand projected over 15 years is projected to equal or exceed the estimated dependable supply. ⁴						

Source: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.60; San Luis Obispo Integrated Regional Water Management Plan, Tables D-25 and D-26; Nipomo CSD 2015 Urban Water Management Plan, Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017

Notes:

1. Table 3-5: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.

2. Table 3-4: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017 (Excludes Monarch Dunes)
3. Table 3-6: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.
4. Table 3-3: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.
5. Table 3-3 and Section 3.1.10: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.
6. Tables 3-3, 3-4, 3-5: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.
7. 2015 Urban Water Management Plan.
8. Nipomo Supplemental Water Project, completion planned for no later than 2026.
9. See Table 3-8: Nipomo Mesa Management Area 10th Annual Report Calendar Year 2017.

Key observations for the area include:

- Water demand is projected to equal or exceed the estimated dependable supply within 15 years based on the 2014 LOS Criteria for Inland Areas. When the 1996 LOS Criteria for Coastal Areas are applied, the reliable supply is equaled or exceeded in 7 years for the Golden State Water Company.
- While seawater intrusion has not been observed in the NMMA (sentry) monitoring wells, the recent landward gradient along the coastline (NMMA, 2018) could lead to seawater intrusion, as has been observed in the NCMA.
- A Level of Severity III designation based on the 2014 LOS Inland RMS Criteria
- A Level of Severity II designation based on the 1996 LOS Criteria for Coastal Areas.

Because the Inland RMS Criteria offers more protection for the resource, and because the majority of the water supply comes from the Inland portion of the County, the RSR recommends a **Level of Severity III**.

Water Systems

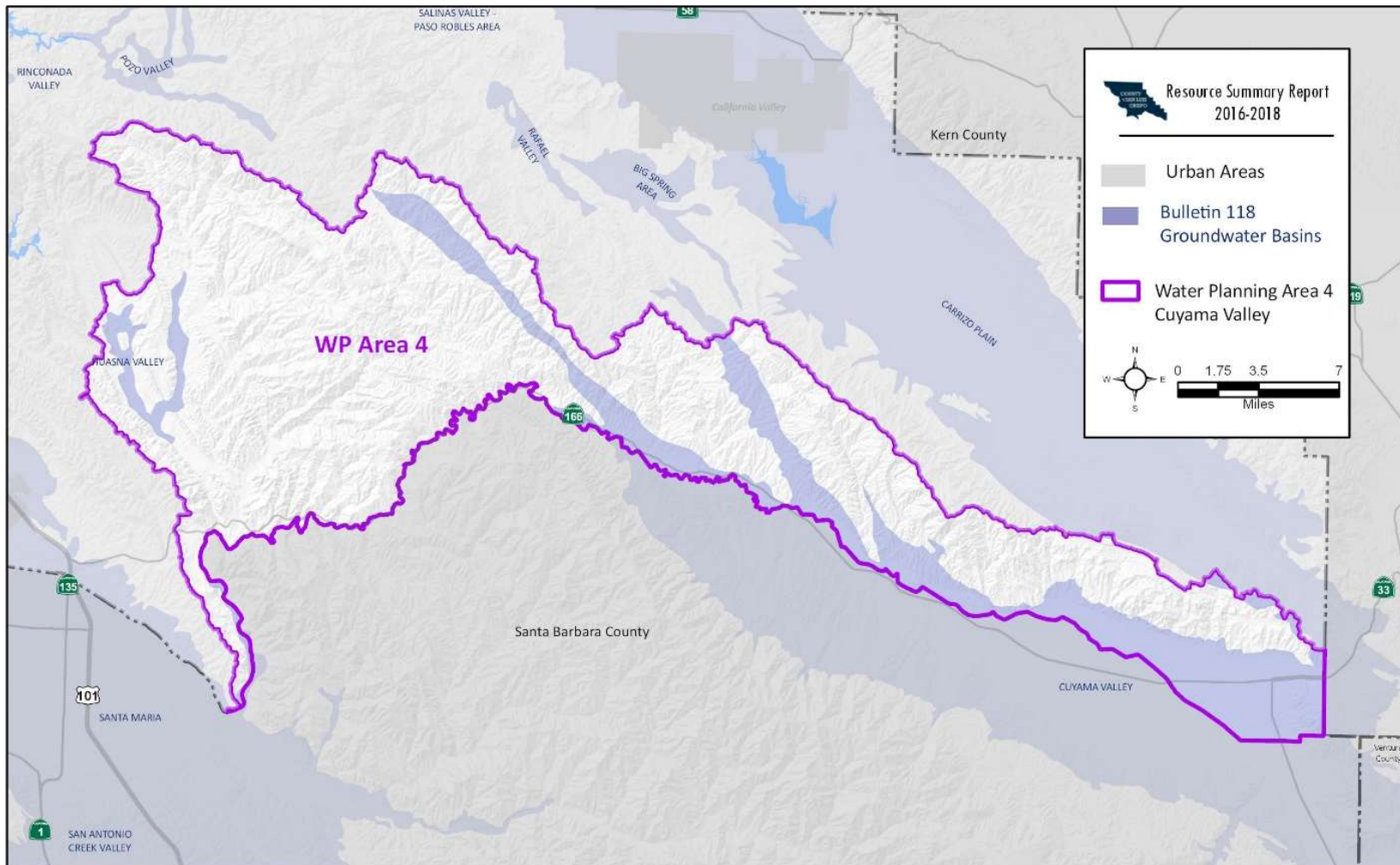
Nipomo CSD

Nipomo CSD is currently constructing the Supplemental Water Project, described above. No other significant water system improvements or limitations were reported. **No recommended Levels of Severity.**

WPA 4 Cuyama River Area

Water Supply

Figure II-16 – Water Planning Area 4 – Cuyama River Area



DWR designated the Cuyama Valley Groundwater Basin (referred to as Cuyama Basin) as a medium priority basin subject to critical conditions of overdraft; therefore, this area is required to comply with SGMA. On June 6, 2017, the Santa Barbara County Water Agency, County of San Luis Obispo, County of Kern, County of Ventura, Cuyama Community Services District and Cuyama Basin Water District executed a Joint Exercise of Powers Agreement to form a single GSA over the Cuyama Basin. This Agreement created the Cuyama Basin GSA as a Joint Powers Agency (JPA), which is a public entity that is legally separate from the parties to the Agreement. The JPA's purpose is comply with SGMA regulations by serving as the GSA, developing, adopting and implementing a GSP, and sustainably managing the Cuyama Basin.

In December 2017, the GSA hired a consultant to prepare a GSP for the Cuyama Basin. The consultant is developing the GSP under the direction of the GSA Board of Directors, and in collaboration with the Stakeholder Advisory Committee and community. The GSP will study the groundwater conditions, estimate the current and future water budget, define what sustainability looks like for each basin, and set measurable objectives and thresholds for ongoing monitoring of progress towards achieving sustainability within 20 years of GSP adoption. SGMA requires that the GSA Board finalize and adopt the GSP no later than January 31, 2020.

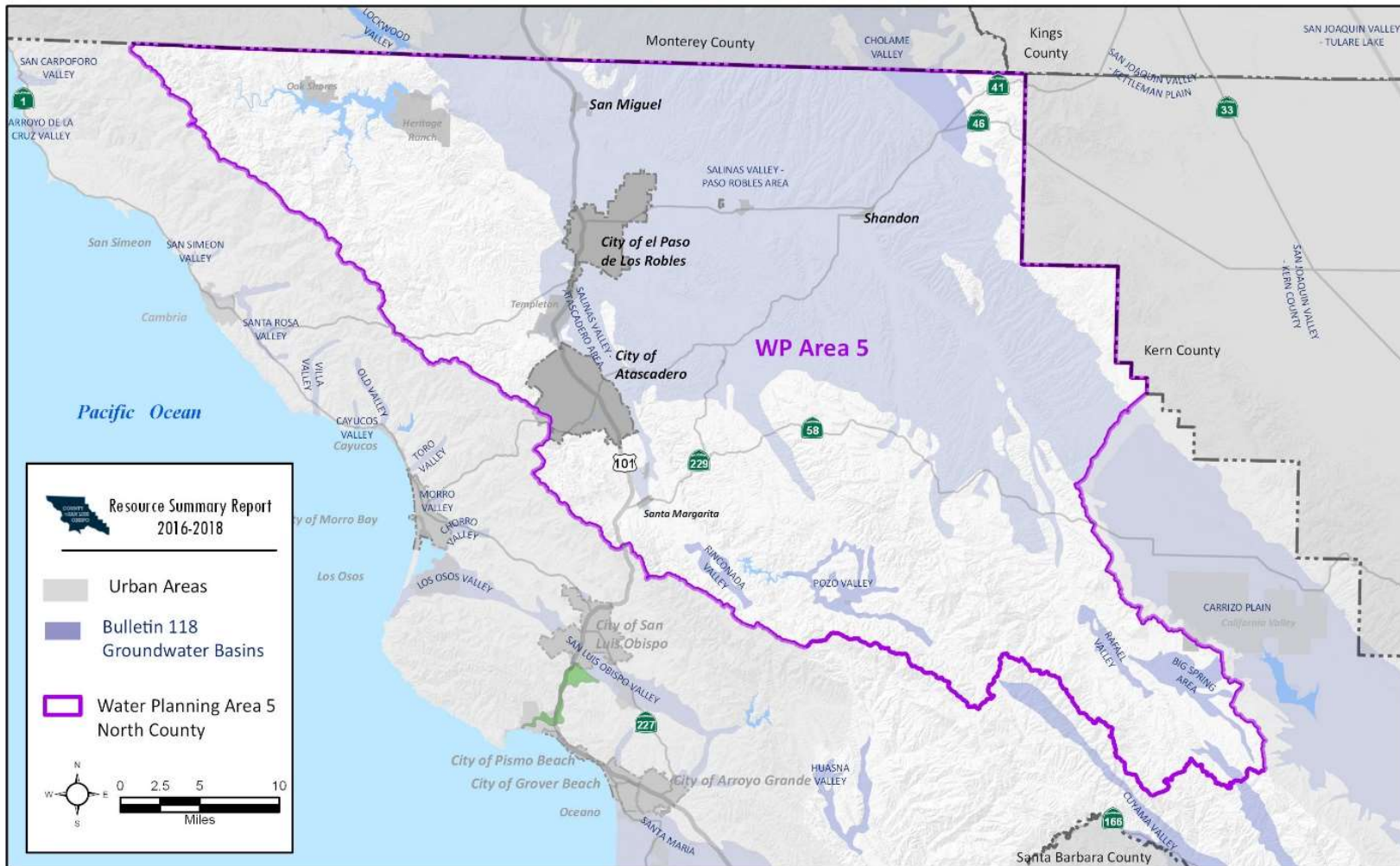
No Level of Severity evaluation has been conducted for WPA 4.

Water Systems

No evaluation was conducted, as this area does not have significant community water systems.

WPA 5 North County

Figure II-17 – Water Purveyors in the North County Area



The water supply in the North County area is provided by several sources: groundwater basins, including the Salinas Valley - Paso Robles Area Subbasin (DWR Bulletin 118 No. 3.004.06; referred to as the Paso Basin) and the Salinas Valley - Atascadero Area Subbasin (DWR Bulletin 118 No. 3.004.11; referred to as the Atascadero Basin); surface water including the Nacimiento Water Project, Salinas Reservoir (Santa Margarita Lake), and State Water Project; recycled water and other sources.

The communities in the North County area include Santa Margarita, Atascadero, Templeton, Paso Robles, San Miguel, Shandon, and others. The major water purveyors within the unincorporated County are CSA 23 (serving Santa Margarita), Atascadero MWC (serving County areas outside of the City of Atascadero as well as within), San Miguel CSD, and CSA 16 (serving Shandon).

DWR designated the Paso Basin as a high priority basin subject to critical conditions of overdraft; therefore, this area is required to comply with SGMA. On May 16, 2017, the County Board of Supervisors formed the Paso Basin – County of San Luis Obispo GSA— (County GSA) joining four other local public agencies that formed GSAs, collectively covering the entire Paso Basin. On August 22, 2017, the County GSA executed a Memorandum of Agreement regarding preparation of a GSP for the Paso Robles Groundwater Basin and forming the Paso Basin Cooperative Committee. The Memorandum of Agreement was entered into by the five local agencies in San Luis Obispo County that formed GSAs (i.e., City of Paso Robles, San Miguel Community Services District, Heritage Ranch Community Services District, County of San Luis Obispo and Shandon-San Juan Water District) for the purpose of developing a single GSP over the portion of the Paso Basin within the San Luis Obispo County. The Salinas Valley Basin GSA (SVBGSA) overlies the portion of the Paso Basin in Monterey County and is pursuing a jurisdictional basin boundary modification at the County line. Coordination with the SVBGSA is anticipated, though the form of this coordination has yet to be determined.

In early 2018 and per the terms of the Memorandum of Agreement, the City hired a consultant to prepare a GSP for the Paso Basin. The consultant is developing the GSP under the direction of the GSAs and the Cooperative Committee, and in collaboration with the community. The GSP will study the groundwater conditions, estimate the current and future water budget, define what sustainability looks like for the basin, and set measurable objectives and thresholds for ongoing monitoring of progress towards achieving sustainability within 20 years of GSP adoption. SGMA requires that each GSA finalize and adopt the GSP no later than January 31, 2020. Given the anticipated content of the GSP based on statutory and regulatory requirements, the Resource Summary Report does not attempt to evaluate this water supply.

In 2016, DWR approved a basin boundary modification request to create the Atascadero Basin; however, that subbasin has not been reprioritized yet, but may still be subject to SGMA requirements. On May 2, 2017, the County Board of Supervisors executed a Memorandum of Agreement forming the Atascadero Basin Groundwater Sustainability Agency (GSA) with

the City of Atascadero, City of Paso Robles, Templeton Community Services District and other participating parties. The Memorandum of Agreement formed the Atascadero Basin GSA, covering the entire Atascadero Basin, and created the Executive Committee as the GSA's governing body. The Executive Committee is comprised of representatives from the County, City of Atascadero, City of Paso Robles, Templeton Community Services District, Atascadero Mutual Water Company and representatives of both small water systems and at-large groups representing beneficial uses and users. The GSA was formed in order to comply with SGMA. The GSA intends to develop a GSP by January 31, 2022, although the Atascadero Basin may no longer be subject to SGMA requirements pending DWR finalizing its 2018 basin re-prioritization¹³. DWR's final re-prioritization is anticipated in November 2018.

The GSA has not yet determined its path towards selecting a GSP Consultant. However, once initiated, the GSP will study the groundwater conditions, estimate the current and future water budget, define what sustainability looks like for the basin, and set measurable objectives and thresholds for ongoing monitoring of progress towards achieving sustainability within 20 years of GSP adoption. SGMA requires that each GSA finalize and adopt the GSP no later than January 31, 2020. Given the anticipated contents of the GSP based on statutory and regulatory requirements, the 2016-2018 Resource Summary Report recommends maintaining the following recommendations of the 2014-2016 Resource Summary Report:

Salinas Valley - Atascadero Area Subbasin – **No Recommended Level of Severity**

Salinas Valley - Paso Robles Area Subbasin – **Recommended Level of Severity III**

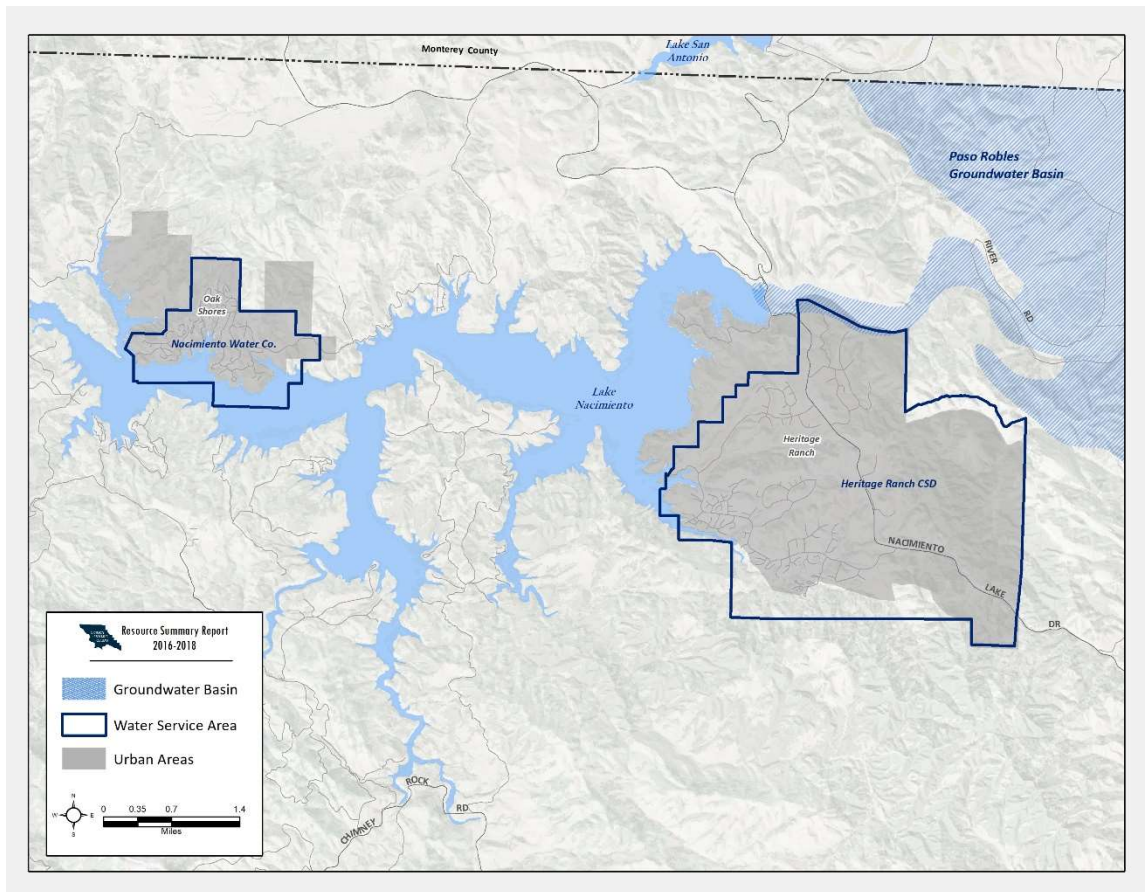
Water Systems

No significant water system limitations were reported. **No recommended Levels of Severity.**

¹³ In October 2016, DWR approved a modified basin boundary to create a new subbasin of the Salinas Valley Groundwater Basin, referred as Bulletin 118 Basin No. 3-004.11 Atascadero Area Subbasin. Consistent with Water Code Section 10722.4(c), DWR will reassess statewide basin prioritization in 2018. The draft re-prioritization published in May 2018 indicates that the Atascadero Basin may be prioritized as "very low," no longer requiring SGMA compliance but making it voluntary.

Lake Nacimiento Area

Figure II-18 – Lake Nacimiento Area and Water Service Areas



There are two water purveyors serving the Lake Nacimiento area: the Heritage Ranch CSD and the Nacimiento Water Company which serves the community of Oak Shores. The Heritage Ranch CSD has only one water supply source, surface water from Lake Nacimiento, which is normally fed through three horizontal wells (the Gallery Wells) located in the Nacimiento River bed just downstream of the Nacimiento Dam. Heritage Ranch CSD serves a residential community along the southern shores of Lake Nacimiento. 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. If no water is released from the lake, or there is no water to release, the Heritage Ranch CSD may not have a water supply. 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.

The 1,100 AFY Nacimiento Reservoir allocation for Heritage Ranch CSD is sufficient to provide water for anticipated buildout demand, but the configuration of the delivery system leaves the Heritage Ranch CSD vulnerable to a termination in water supply in an extreme drought. If the lake's water level drops below the dam outlet (has never occurred but came to within

two feet of the lower outlet works in October 1989), then Heritage Ranch CSD could temporarily lose its water supply. As an emergency alternative means of receiving water, a pipeline intertie project connecting Heritage Ranch CSD treatment plant to the Nacimiento Water Project pipeline was completed in 2016.

Heritage Ranch CSD is studying the feasibility of augmenting the District's water resources portfolio by adding recycled water usage for potential customers (MKN & Associates, January 2017). The 2017 study considers several alternatives for recycled water use and concludes that there is sufficient demand for 70 AFY of recycled water serving one potential customer. However, no commitments have been obtained by the potential recycled water customer as of August 2018. However, this represents a potential 70 AFY saving in the future demand for potable water.

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. The 600 AFY Nacimiento Reservoir allocation for the Nacimiento Water Company is sufficient to provide water for anticipated buildout demand for the Oak Shores Area.

Key observations:

- The 1,100 AFY Nacimiento Reservoir allocation for Heritage Ranch CSD is sufficient to provide water for anticipated buildout demand, but the configuration of the delivery system leaves the Heritage Ranch CSD vulnerable to a termination in water supply in an extreme drought.
- Heritage Ranch CSD is studying the feasibility of augmenting the District's water resources portfolio by adding recycled water usage for potential customers
- Water demand projected over 20 years is not expected to equal or exceed the dependable supply.

Based on the 2014 Inland RMS Criteria. **No recommended Level of Severity.**

Table II-23 -- Lake Nacimiento Area Existing and Forecasted Water Supply and Demand Based on the 2014 Inland RMS Criteria				
Demand	Heritage Ranch CSD ¹	Nacimiento Water Company	Agriculture	Rural
FY 2017/2018 Demand (AFY)	399.6	+++	2,602	385
Forecast Demand in 15 Years (AFY)	987	600	5,097	700
Forecast Demand in 20 Years (AFY)	987	600	5,928	805
Buildout Demand (30 Or More Years) (AFY)	935 - 1,039 ²	600	4,740-7,120	730-880
Supply				
Lake Nacimiento (AFY)	1,100 ²	600 ⁵	0	0
Other Groundwater Sources (AFY)	0	0	5,928 ⁵	805 ⁵
SWRCB Water Diversions (AFY)	0	0	(6)	(6)
Total Supply:	1,100	600	5,928	805
Water Supply Versus Forecasted Demand	Water demand projected over 20 years is not expected to equal or exceed the dependable supply. ^{3,6}			

Sources: Water System Usage forms: July 2016 – June 2017; July 2017 – June 2018, San Luis Obispo County Master Water Report, 2012, Table 4.69; 2014 San Luis Obispo Integrated Regional Water Management Plan, Tables D-45 and D-46

Notes:

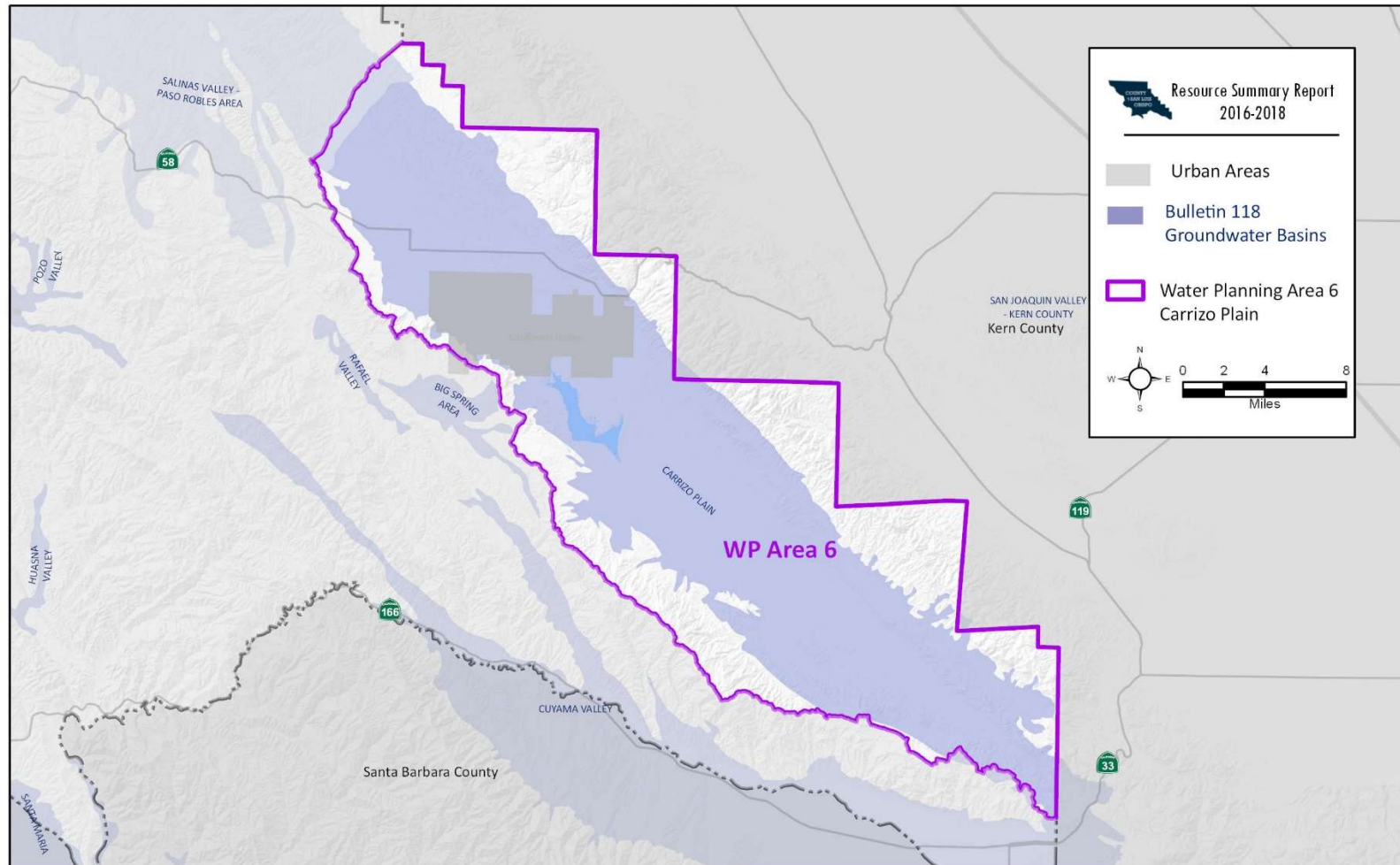
1. See Table II-1. Current year data for agriculture and rural are from 2012.
2. Heritage Ranch CSD's allocation of Lake Nacimiento is 1,100 AFY.
3. The Lake Nacimiento supply allocation is sufficient to meet forecast demands. However, if the lake's water level drops below the dam outlet (has never occurred but came to within two feet of the lower outlet works in October 1989), then Heritage Ranch CSD could lose its water supply.
4. No estimate of existing or forecast demand is available.
5. Groundwater supply sources around Lake Nacimiento are the typical sources of supply for wells that serve agricultural and rural users. There is no information describing the safe yield for these groundwater supplies.
6. Diversions do not distinguish type of use. Potentially 1,048 AFY could be diverted for use to either agriculture or rural residential.
7. It is uncertain whether an agricultural or rural supply deficit exists. Future studies should invest the resources to determine the basin safe yield for these groundwater supplies and the uses for the creek/river diversions. It is possible that the combined supplies from groundwater and creek diversions are sufficient to meet the agricultural and rural demands.
8. +++ Indicates no data were provided

Water Systems

No significant water system limitations were reported. **No recommended Levels of Severity.**

WPA 6 Carrizo Plain

Figure II-19 – Water Planning Area 6 – Carrizo Plain Area



Water supply for the Carrizo area comes primarily from the Carrizo Plain Groundwater Basin (DWR Bulletin 118 No. 3-19). The basin is 173,000 acres (270 square miles) in size and is situated between the Temblor Range to the east and the Caliente Range and San Juan Hills to the west. The basin has internal drainage to Soda Lake. Groundwater in the basin is found in alluvium, the Paso Robles Formation, and the Morales Formation (DWR, 2003). The upper alluvium and Paso Robles Formation deposits are more than 3,000 feet thick in the eastern portion of the basin and decrease in thickness to the west. Recharge to the basin is predominantly from percolation of stream flow and infiltration of precipitation.

There is one small public water system serving the local school (part of the Atascadero Unified School District). All other pumping in the basin is by overlying users for agricultural and residential purposes and for use related to the solar facilities operations. According to existing zoning, it is possible that the Carrizo area could have extensive residential development. However, it is unlikely that the number of residential units that are zoned as potential residential will be developed due to limited water availability and other factors. Several proposed cannabis cultivation sites have been proposed and may increase water demand in the future.

Constraints on water availability in the basin include physical limitations and water quality issues. The low safe yield estimate of this basin relative to its large size, and the high TDS concentrations in areas (e.g., Soda Lake) suggest that water availability in the region is limited. Other than water quality issues associated with the internal drainage structure of the basin, other constraints are not well defined.

Published hydrogeologic information for this basin is compiled from older reports and may not be representative of current conditions. Additionally, the Carrizo area has limited unincorporated population; therefore, no evaluation of water supply is included in this RSR. If the County requires more current or detailed information for this basin, new studies would be necessary.

Summary of Recommended Levels of Severity

Water Supply

Table II-24 -- Summary of Recommended Levels of Severity - Water Supply		
Community Areas and Major Water Purveyors	Recommended LOS¹	
	Based On 1996 RMS Criteria	Based On 2014 RMS Criteria
WPA 1 San Simeon / Cambria		
San Simeon Area <u>Water Purveyors</u> San Simeon CSD <u>Bulletin 118 Groundwater Basins</u> Pico Creek San Simeon Valley Arroyo De La Cruz Valley None defined in DWR Bulletin 118	II	N/A
Cambria Area <u>Water Purveyors</u> Cambria CSD <u>Bulletin 118 Groundwater Basins</u> San Simeon Valley Groundwater Basin Santa Rosa Valley Groundwater Basin Villa Valley	III	N/A
WPA 2 Cayucos / Morro Bay / Los Osos		
Cayucos Area <u>Water Purveyors</u> CSA 10A - Cayucos Morro Rock MWC Cayucos Beach MWC <u>Bulletin 118 Groundwater Basins</u> Cayucos Valley Groundwater Basin Old Valley	None	None

Table II-24 -- Summary of Recommended Levels of Severity – Water Supply		
Community Areas and Major Water Purveyors	Recommended LOS¹	
	Based On 1996 RMS Criteria	Based On 2014 RMS Criteria
<p>Morro Bay Area</p> <p>No evaluation was conducted for the Morro Bay area as this is a largely incorporated area of the County and does not include a significant unincorporated population.</p>		
<p>Los Osos Area</p> <p><u>Water Purveyors</u> Los Osos CSD Golden State Water Co. S&T Mutual Water Co.</p> <p><u>Bulletin 118 Groundwater Basins</u> Los Osos Valley Groundwater Basin</p>	III	III
WPA 3 San Luis Obispo / South County		
<p>San Luis Obispo/Edna Valley Area</p> <p><u>Water Purveyors</u> City of San Luis Obispo Golden State Water Company Edna Ranch Mutual Water Company Edna Valley Growers Mutual Water Company Varian Ranch Mutual Water Company</p> <p><u>Bulletin 118 Groundwater Basins</u> San Luis Obispo Valley Groundwater Basin</p>	N/A	None
<p>Avila Area</p> <p><u>Water Purveyors</u> Avila Beach CSD Avila Valley MWC San Miguelito MWC CSA 12 – Avila</p> <p><u>Bulletin 118 Groundwater Basins</u> None defined in DWR Bulletin 118</p>	None	None

Table II-24 -- Summary of Recommended Levels of Severity – Water Supply		
Community Areas and Major Water Purveyors	Recommended LOS¹	
	Based On 1996 RMS Criteria	Based On 2014 RMS Criteria
South County Area: Northern Cities Management Area <i>Water Purveyors</i> Oceano CSD <i>Bulletin Groundwater Basins</i> Santa Maria Valley Groundwater Basin	None	None
South County Area: Nipomo Mesa Management Area <i>Water Purveyors</i> Nipomo CSD Woodlands MWC Golden State Water Co. Rural Water Co. <i>Bulletin 118 Groundwater Basins</i> Santa Maria Valley Groundwater Basin	II	III
WPA 4 Cuyama River		
<i>Water Purveyors</i> None <i>Bulletin 118 Groundwater Basins</i> Cuyama River Valley Groundwater Basin	Not included in RSR analysis	Not included in RSR analysis
WPA 5 North County		
Paso Robles/San Miguel/Shandon Area <i>Water Purveyors</i> San Miguel CSD CSA 16 – Shandon <i>Bulletin 118 Groundwater Basins</i> Salinas Valley – Paso Robles Area Subbasin	N/A	III

Table II-24 -- Summary of Recommended Levels of Severity – Water Supply		
Community Areas and Major Water Purveyors	Recommended LOS¹	
	Based On 1996 RMS Criteria	Based On 2014 RMS Criteria
Atascadero/Santa Margarita Area <u>Water Purveyors</u> Templeton CSD Atascadero MWC <u>Bulletin 118 Groundwater Basins</u> Salinas Valley – Atascadero Basin	N/A	None
Lake Nacimiento Area <u>Water Purveyors</u> Heritage Ranch CSD Nacimiento Water Co. <u>Bulletin 118 Groundwater Basins</u> None defined in DWR Bulletin 118	N/A	None
WPA 6 Carrizo Plain		
<u>Water Purveyors</u> None <u>Bulletin 118 Groundwater Basins</u> Carrizo Plain	Not included in RSR analysis	Not included in RSR analysis

Notes:

1. Evaluations and recommended LOS for WPA 4 Cuyama River or WPA 6 Carrizo were not conducted.

Water Systems

Based on the analysis conducted for the 2016-2018 RSR, no Levels of Severity are recommended for any water systems within the County.

Recommended Actions

General Recommendations

- Continue to support efforts to improve water conservation, the efficient use of water, and water re-use.
- Continue to collect development impact fees for the construction of water supply infrastructure.
- Coordinate the County's land use authority with the planning and actions necessary to achieve the sustainability goals identified in local Groundwater Sustainability Plans.
- Support efforts to develop sustainable supplemental sources of water.

Water Planning Area 1 -- San Simeon/Cambria

San Simeon Area

1. Recommended Level of Severity II based on the 1996 RMS criteria.
2. Support efforts of the San Simeon CSD to develop feasible water supply alternatives.

Cambria Area

1. No recommended Level of Severity based on the 1996 RMS criteria.
2. Collaborate with the Cambria Community Services District for the issuance of a limited number of intent-to-serve letters and building permits based on the continued use of a demand offset conservation program that offsets new demand from new water connections.
3. Revise the County Growth Management Ordinance in collaboration with the Cambria Community Services District to accommodate the issuance of an allowable number of building permits for new development.
4. Collaborate with the Cambria Community Services District to prepare and obtain a Regular Coastal Development Permit for the Sustainable Water Facility along the lower San Simeon Creek aquifer.

Water Planning Area 2 – Cayucos/Morro Bay/Los Osos

Cayucos Area

1. Support efforts to develop a reliable water supply reserve as an alternative to groundwater. Recycled water should be considered as an alternative supply.

Los Osos Area

1. LOS III to remain in place based on either the 1996 or 2014 RMS criteria.
2. Continue to support efforts to implement the Basin Management Plan.
3. Implement the water management strategies of the Los Osos Community Plan following adoption.
4. To the extent necessary pending DWR's consideration of boundary changes, continue to support efforts of the GSA to actively and cooperatively meet SGMA requirements.

Water Planning Area 3 – San Luis Obispo/South County

San Luis Obispo and Avila Valley Areas

1. Support efforts to determine the safe yield of the San Luis Obispo Valley Basin.

South County Area: Northern Cities Management Area

1. No recommended LOS for the NCMA based on either the 1996 or 2014 RMS criteria.
2. Support implementation of the NCMA 2014 *Strategic Plan* and the 2015 *Water Supply, Production and Delivery Plan*.
3. Continue to help fund area wide water conservation through the fee on new construction.
4. Collaborate with NCMA to develop a groundwater model that supports efforts towards achieving groundwater sustainability and supports SGMA compliance in the basin "fringe areas" subject to SGMA.
5. Continue to support efforts of the GSAs to actively and cooperatively develop a Groundwater Sustainability Plan that meets SGMA requirements.

South County Area; Nipomo Mesa Management Area

1. LOS II for the NMMA based on the 1996 RMS criteria. LOS III for the NMMA based on the 2014 RMS criteria.
2. Consider ending the Title 8 retrofit-upon-sale ordinance in the Nipomo Mesa Water Conservation Area.
3. Support implementation of NCS D *Supplemental Water Project*. Coordinate any needed County actions such as an AB 1600 study to quantify the costs and benefits of the identified supplemental water project for groundwater users outside the Nipomo CSD.
4. Collaborate with the Nipomo CSD, South County Sanitation District and other stakeholders to assist in their efforts to improve water supply reliability, including the use of recycled water.
5. Continue to help fund area wide water conservation through the fee on new construction.
6. Collaborate with the NMMA to develop a groundwater model that supports efforts towards achieving groundwater sustainability and supports SGMA compliance in the basin "fringe areas" subject to SGMA.
7. Continue to support efforts of the GSAs to actively and cooperatively develop a Groundwater Sustainability Plan that meets SGMA requirements.

Water Planning Area 4 – Cuyama Valley

No recommended actions.

Water Planning Area 5 -- North County

Atascadero/Santa Margarita Area

1. No recommended LOS.
2. Support efforts to develop additional sustainable water supplies for CSA 23.
3. Continue to support efforts of the GSA to actively and cooperatively develop a Groundwater Sustainability Plan that meets SGMA requirements.

Paso Robles/San Miguel/Shandon Area

1. Maintain LOS III for the Basin based on LOS Designation of previous (2014-2016) RSR.
2. Continue to support efforts of the GSAs to actively and cooperatively develop a Groundwater Sustainability Plan that meets SGMA requirements.

Lake Nacimiento Area

1. No recommended LOS.
2. Continue to support efforts to improve water conservation, the efficient use of water, and water re-use.
3. Continue to collect development impact fees for the construction of water supply infrastructure.
4. Support efforts to develop sustainable supplemental sources of water.

Water Planning Area 6 – Carrizo Plain

No recommended actions.