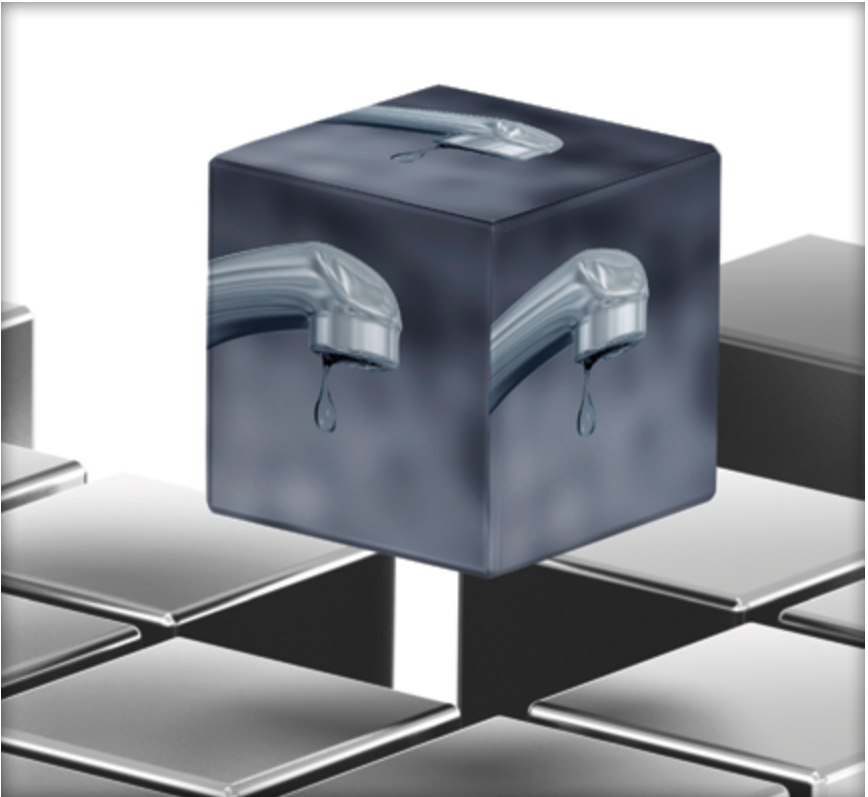


VITAL SIGNS

UNDERSTANDING SAN LUIS OBISPO COUNTY

**WATER SUPPLY AND IMPACTS TO SUSTAINABLE
COMMUNITIES AND ECONOMIC VITALITY**



A TREND REPORT BY

Action
FOR HEALTHY COMMUNITIES

ACTION for Healthy Communities (ACTION) is a consortium of public, private, and non-profit organizations that collaborate to assess the quality of life in San Luis Obispo County. The goals of the project are to raise public awareness, provide accurate and reliable data, improve decision-making, establish community goals, and develop collaborative action plans to achieve those community goals.

ACTION began collecting key datasets about quality of life issues in the county in 1999, with updates completed in 2001, 2003, 2006, 2010 and 2013. The 2013 project includes a telephone survey of a representative sample of 1,102 San Luis Obispo County residents. The term “residents” will be used to describe data from those telephone survey respondents. The overall study also includes a face-to-face survey with homeless individuals and Spanish-speaking parents. These primary data pieces have been combined with data from a wide range of federal, state and local sources to bring you a picture of life in San Luis Obispo County.

The full report may be found at <http://ActionSLO.org>.

INTRODUCTION

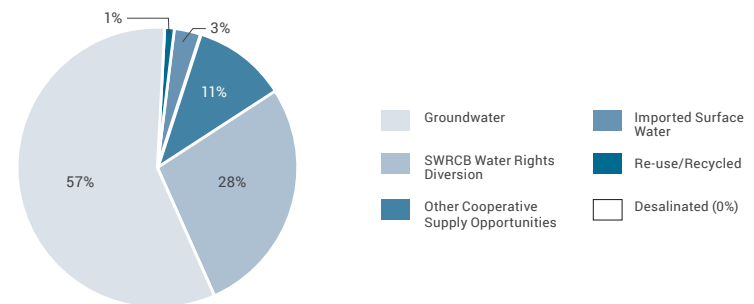
According to the U.S. Drought Monitor, California has been in a severe, multi-year drought; San Luis Obispo County has been in “exceptional” drought — the highest classification — since February 2014.¹ The 2014 water year was the third driest in 119 years of record-keeping.² In short, the current water supply issues facing the region are severe and may present a paradigm shift in how residents, businesses, and agricultural interests think about water supply.

ENVIRONMENT

SURFACE AND GROUNDWATER SUPPLY

For purposes of water planning, the county’s 3,320 square-mile area is divided into three sub-regions: North Coast, North County, and South County; within the sub-regions, there are 16 Water Planning Areas and 26 watersheds. Approximately two-thirds of the county’s water supply comes from **groundwater** in natural underground basins. Supplemental supplies come from local reservoirs or **surface water**. Some water is imported from the State Water Project.³

Figure 1. Apportionment of Urban Water Supplies in San Luis Obispo County (2010)

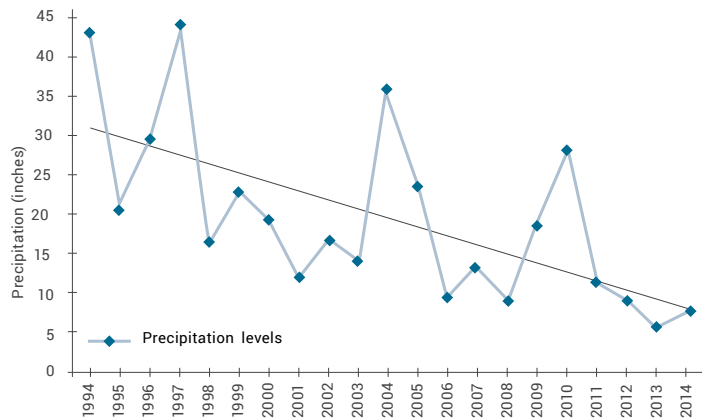


Source: SLO County 2014 Integrated Regional Water Management Plan

THE DROUGHT AND CLIMATE CHANGE

A 2010 state climate report found that changing precipitation patterns will “result in longer and drier droughts and decreased groundwater levels, coupled with a higher frequency and severity of extreme flooding events.”⁴ Experts agree that long-term climate change is already affecting California’s water resources. Statewide we can expect to see more rain, less snow, increased temperatures, earlier snowmelt, and loss of snowpack which may shrink by at least 25% by 2050, reducing the reliability of the man-made delivery system built over the past 50 years to capture and deliver snowmelt.⁵

Figure 2. Precipitation Levels in SLO County (1995-2014)



Source: Pacific Gas and Electric Company, Diablo Canyon Nuclear Power Plant Ocean Lab, Avila Beach, CA., Annual Climatological Summary San Luis Obispo County

Precipitation levels have been falling consistently, with an annual average of just over 16 inches since 1995; and a ten-year average of less than 14 inches.

Figure 3. Reservoir Levels in SLO County (2005 to 2014)

RESERVOIR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Lopez Lake	NA	NA	70.5%	69.2%	54.9%	59.3%	88.8%	82.5%	67.5%	49.5%
Lake Nacimiento	78.7%	79.4%	44.4%	43.4%	24.4%	50.2%	80.0%	53.4%	37.7%	19.5%
Santa Margarita Lake (Salinas Reservoir)	76.8%	77.5%	58.3%	73.5%	50.9%	76.3%	76.6%	58.2%	41.8%	24.4%
Whale Rock Reservoir	93.9%	94.8%	81.4%	71.2%	57.1%	53.0%	76.7%	75.0%	63.9%	49.0%

Source: California Department of Water Resources (Hydrology Branch), SLOCountyWater.org⁶

Why snowpack matters to California?

Snowpack normally provides one-third of the water used by Californians each year.⁷ Sierra Nevada snowpack is at record-low levels of just five percent.⁸

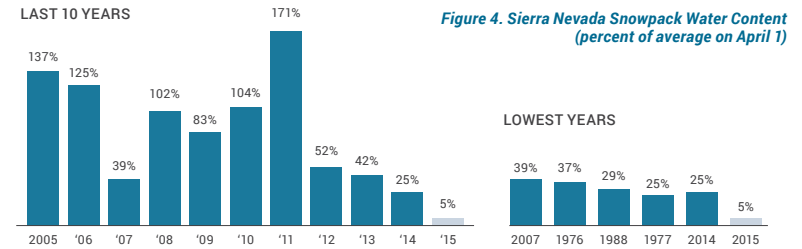


Figure 4. Sierra Nevada Snowpack Water Content (percent of average on April 1)

Source: California Department of Water Resources

ECONOMY

Agriculture and Economy

Irrigation with groundwater in this dry climate can allow dissolved minerals or “salts” to accumulate in the root zone unless flushed back downward by rainfall or extra irrigation. High soil salinity will lead to lower yields and reduced crop quality and in severe cases can cause total crop loss.⁹ The total statewide economic cost of the drought is estimated at \$2.2 billion with a total loss of 17,100 seasonal and part-time jobs.¹⁰

The county’s agricultural crops were valued at \$960.7 million in 2013,¹¹ representing 8.1 percent of the county’s total direct economic output.¹² In 2014 the value decreased nearly two percent. Drought-related factors including reduced irrigation capacity, high soil salinity, reduced yields, less acreage planted, higher feed costs, and tree canopy reduction, contributed to the decline. During 2014, cattle sales peaked to record numbers and prices. The continued drought combined with the high cost of supplemental feed forced cattle ranchers to make difficult decisions about what to keep or what to sell from their already depleted herds.¹³

What impact will water availability have on future growth?

Current and future droughts will pose a significant challenge to providing adequate housing and infrastructure for future growth. According to SLOCOG’s *2040 Regional Growth Forecast*, the region’s population is expected to increase by 56,900 people, add 27,000 new housing units, and add 30,000 jobs by 2040.¹⁴ The forecast did not take into consideration the current development and building restrictions related to water availability. It is reasonable to assume that drought-related growth restrictions will impact the availability of housing and infrastructure necessary to accommodate expected growth. Given that the region is the 11th least affordable housing market in the nation (fifth among small markets),¹⁵ long-term drought conditions may exacerbate the housing affordability crisis, further challenging the region’s capacity to maintain a workforce that can afford to live here.

EQUITY

RESTRICTIONS ON FUTURE DEVELOPMENT

Barriers to affordable housing

Insecure water supplies are affecting development in several communities within the county. For example, in Cambria, there is a moratorium on new construction without having a confirmed water hook-up. The wait list for new water hook-ups in Cambria was closed in 1990 making it extremely difficult to get approval for a building permit in that community. Other areas of the county require retrofitting old plumbing fixtures with new, modern water-conserving fixtures in order to obtain a building permit. Although this requirement helps to ensure water conservation for not just the new development but also existing homes as well, it also hinders construction by making the process more complicated.

Barriers to water supply

Because groundwater represents the majority of the county's water, sustainable management of groundwater supplies is one of the significant challenges facing the region. Three groundwater basins within the county have been identified as high-priority basins (San Luis Obispo Valley, Paso Robles, Santa Maria) and two as medium-priority basins (Cuyama Valley, Los Osos).¹⁶

Typical for many regions, the dependence on groundwater is a result of using the least-cost/best-quality water alternative. Groundwater elevations continue to decline – portions of the Paso Robles Basin have declined in excess of 70 feet – increasing pumping costs. This poses the real threat of seawater intrusion to coastal groundwater basins and increased total dissolved solids, requiring expensive treatment to keep groundwater usable. This situation is driving water purveyors to seek to supplement groundwater with surface water, recycled water, and desalinated water supplies.¹⁷

How are local communities addressing the water problem?

In March 2014, the County Board of Supervisors adopted a resolution proclaiming a local emergency due to drought conditions.¹⁸ In August 2014, the Board approved an ordinance that restricts outdoor water use to Mondays and Thursdays in the Avila Valley, Cayucos, Santa Margarita, and the Shandon county service areas, consistent with state mandates.¹⁹

As the statewide drought has continued, Governor Brown issued a new executive order for mandatory statewide water restrictions in August 2015. The restrictions require a 25% reduction in urban potable water usage across the state as well as water saving practices such as disallowing using potable water to wash sidewalks, mandating a hose with a shutoff nozzle for washing cars, not irrigating within 48 hours following measurable rain, and mandating restaurants serve water only upon request.²⁰

Cities and water districts in the county will need to conserve according to the following standards (see Figure 6).

Figure 5. Statewide Residential Water Conservation Standards Based on Executive Order B-29-15

RESIDENTIAL GALLONS PER CAPITA PER DAY RANGE (R-GCD)	TIER	CONSERVATION STANDARD
Under 55	1	10%
55-110	2	20%
110-165	3	25%
Over 165	4	35%

Source: State Water Resources Control Board

Figure 6. Residential Water Conservation Standards For Area Communities

SUPPLIER NAME	TIER	STANDARD	RESIDENTIAL GALLONS / CAPITA / DAY (R-GCD)
Cambria Community Services District	1	10%	40
Grover Beach	1	10%	53
Morro Bay	2	20%	70
San Luis Obispo	3	25%	115
Arroyo Grande	3	25%	126
Paso Robles	3	25%	150
Atascadero Mutual Water Company	3	25%	155
Nipomo Community Services District	3	25%	156
Pismo Beach	4	35%	175

Source: State Water Resources Control Board²¹

To see what water restrictions are in place where you live, please call the **SLO County Drought Hotline at (805) 781-4466**.

THE FUTURE

The best way to address on-going water supply issues is to establish practices and policies that conserve, enhance, and sustain our valuable water resources. Simple practices like **planting drought-tolerant landscaping, installing grey-water systems, harvesting rainwater, repairing leaks, and monitoring groundwater pumping** will all make our county more sustainable when it comes to water usage. Other potential solutions, such as **desalinization**, will prove much more costly (especially when considering energy-intensity and localized environmental impacts), but should remain under consideration at this time.

Water supply issues facing the region are severe and will likely persist through both wet and dry years. It is imperative for the health, vitality, and sustainability of our community, that collectively we experience a paradigm shift in how residents, businesses, and agricultural interests think about and address our vital water supply. Through thoughtful and equitable planning, policy and practice, water supply issues can be addressed to achieve and maintain a high quality of life in San Luis Obispo County.

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5. Save Our Water website, 2015.
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7. "California Snowpack and the Drought", Natural Resources Defense Council, April 2014.
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11. 2013 Annual Report, San Luis Obispo County Department of Agriculture, Weights and Measures.
12. Economic Contributions of San Luis Obispo County Agriculture, Agricultural Impact Associates for SLO County Agricultural Commissioner's Office (2013).
13. Presentation of the 2014 Annual Agricultural Statistics for San Luis Obispo County, staff report to SLO County Board of Supervisors, April 2015.
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15. National Association of Home Builders/Wells Fargo Bank Housing Opportunity Index: Complete Listing by Affordability Rank (2015 Q2).
16. CAGSEM Monitoring Plan for High and Medium Priority Groundwater Basins in the San Luis Obispo County Flood Control & Water Conservation District, California Statewide Groundwater Elevation Monitoring Program.
17. San Luis Obispo 2014 Integrated Regional Water Management Plan, San Luis Obispo County Water Resources, Division of Public Works, July 2014.
18. SLO County Resolution No. 2014-64, March 11, 2014.
19. SLO County Ordinance No. 3265, August 12, 2014.
20. State of California Executive Order B-29-15, April 1, 2015.
21. "Urban Water Suppliers and Proposed Regulatory Framework Tiers to Achieve 25% Use Reduction", State Water Resources Control Board, based on Executive Order B-29-15.

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