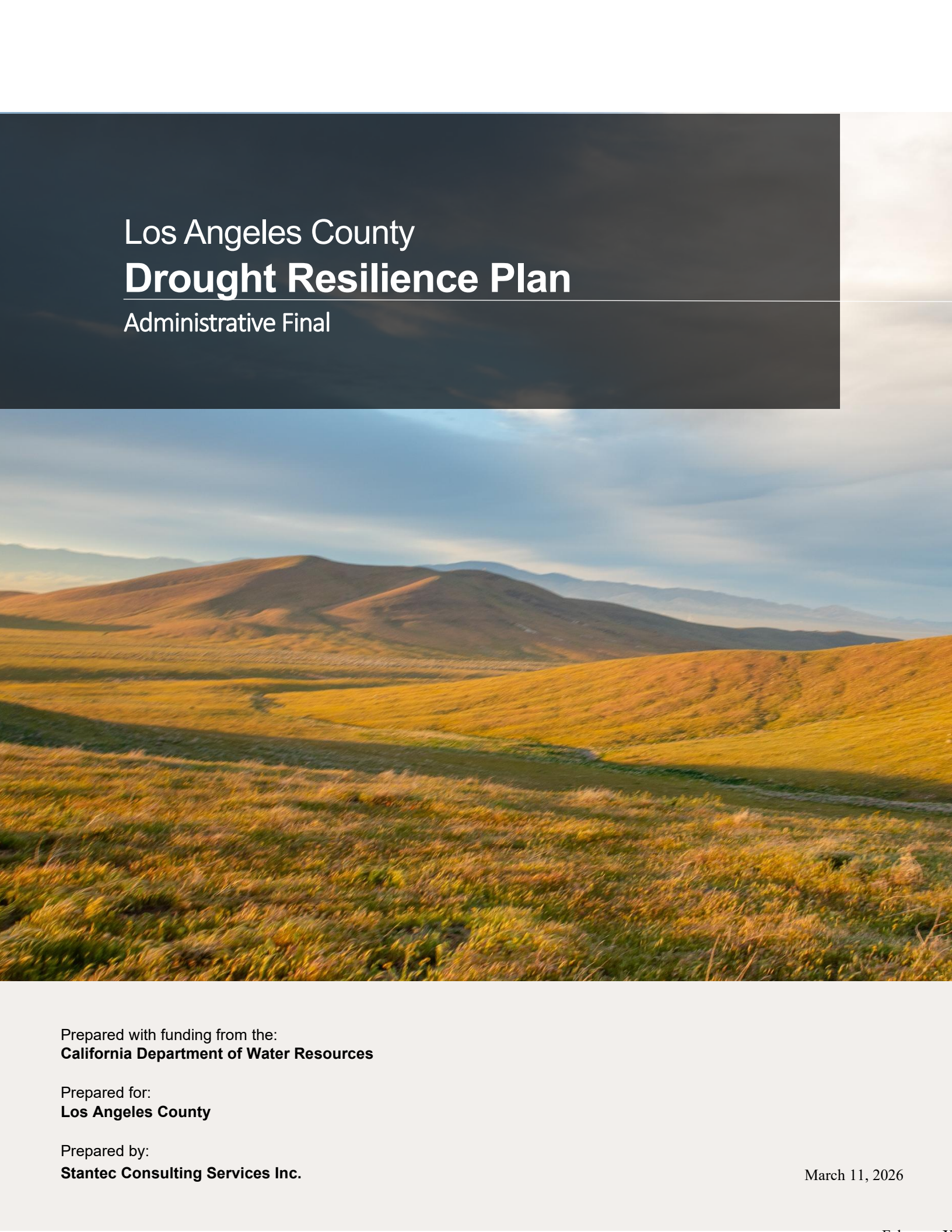




Los Angeles County **Drought Resilience Plan**

Administrative Final

Prepared with funding from the:
California Department of Water Resources

Prepared for:
Los Angeles County

Prepared by:
Stantec Consulting Services Inc.

March 11, 2026

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Los Angeles County Drought Resilience Plan

Administrative Final Drought Resilience Plan

March 2026

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Abbreviations and Acronyms

°F	degrees Fahrenheit
2018 Legislation	Water Conservation and Drought Planning (SB 606 [Hertzberg] and AB 1668 [Friedman], as amended
ACS	American Community Survey
CDAG	County Drought Advisory Group
County	Los Angeles County
CWC	California Water Code
CWP	Los Angeles County Water Plan
DRP	Drought Resilience Plan
DWR	California Department of Water Resources
DWWM	Drinking Water Well Mitigation
EIDWD	Interim Drinking Water Distribution
FEMA	Federal Emergency Management Agency
GSA	groundwater sustainability agency
GSP	Groundwater Sustainability Plan
Guidebook	California Department of Water Resources' County Drought Resilience Guidebook
HSC	California Health and Safety Code
HUC	Hydrological Unit Code
LTMSA	long-term mitigation strategies and action
PCE	tetrachloroethylene
PCT	Project Coordination Team
PFAS	polyfluoroalkyl substances
PLSS	Public Land Survey Section
SB	Senate Bill
SGMA	<i>Sustainable Groundwater Management Act</i>
SSWS	state small water system
State Water Board	State Water Resources Control Board

State	State of California
STRA	short-term response action
Task Force	County Water Plan Small Water System Task Force
TCE	trichloroethylene
TDS	total dissolved solids
UCLA	University of California, Los Angeles
WG	Working Group
WSVE	Water Shortage Vulnerability Explorer

1 Introduction

The Los Angeles County (County) Drought Resilience Plan (DRP) documents how the County, its DRP Working Group (WG) members, and other entities with water supply and drought management responsibilities will address water supply vulnerabilities for two types of systems in the County: domestic wells, as defined in California Health and Safety Code (HSC) Section 116681(i) and California Water Code (CWC) Section 10609.51(d); and state small water systems (SSWS), as defined in HSC Section 116275(n) and CWC Section 10609.51(l). The County DRP was prepared pursuant to Senate Bill (SB) 552: Drought Planning for Small Water Suppliers, State Small Water Systems, and Domestic Well Communities (Hertzberg; see Section 1.2 for additional detail). This County DRP was developed by the County with funding and technical support provided by the California Department of Water Resources (DWR) Drought Resilience Planning Assistance Program.

1.1 Document Organization

Organization of this document draws from the California Department of Water Resources' *County Drought Resilience Plan Guidebook* (Guidebook) (DWR 2023). The Guidebook is a resource for counties to develop a County DRP specifically for SSWSs and domestic wells. Consistent with the Guidebook, the County DRP is organized into six chapters, as follows:

- **Chapter 1: Introduction** provides an overview of the legislation relating to SB 552 and the development of the County DRP. This chapter also includes background on County demographics, geography, and an overview of domestic wells and SSWSs within the County's jurisdiction.
- **Chapter 2: County Drought Resilience Plan Working Group** provides an overview of the DRP WG, including its development process and charter, membership, roles, purpose, and meeting frequency.
- **Chapter 3: Drought and Water Shortage Risk Assessment** characterizes the vulnerability of domestic wells and SSWSs within the County to drought and water shortage. This chapter also presents the approach and data used to assess vulnerability. It highlights areas within the County that have a higher risk of drought and water shortage where domestic wells and SSWSs are present. Additionally, data gaps are identified to help inform potential long-term strategies.
- **Chapter 4: Short-Term Response Actions** details the proposed short-term response actions (STRA) for emergency and interim drought solutions, including specific actions, local response triggers, and public engagement.
- **Chapter 5: Long-Term Mitigation Strategies and Actions** details the proposed long-term mitigation strategies and actions (LTMSA) for improving the water supply resilience of domestic wells and SSWSs.
- **Chapter 6: Implementation Considerations** presents a roadmap for implementing STRAs and LTMSAs consistent with the mission and authority of involved agencies. This includes identifying agencies and entities responsible for implementation, the status of implementation, funding, authorization for implementation, and the anticipated schedule. This section also summarizes the level of multi-agency collaboration identified by agencies to support implementation.

- **Chapter 7: References** provides a list of references used in this plan.

1.2 Legislative Requirements

Signed into law September 2021 by Governor Gavin Newsom, SB 552 (Hertzberg)¹ obligated the State of California (State) and local governments to share the responsibility in preparing for and responding to a water shortage event. These new requirements are expected to improve the ability of Californians to manage future droughts and help prevent catastrophic impacts on drinking water for communities vulnerable to the effects of climate change. The bill outlines the new requirements for small water suppliers, county governments, DWR, and the State Water Resources Control Board (SWRCB) to implement more proactive drought planning and better prepare for future water shortage events or dry years.

SB 552 builds upon legislation on Water Conservation and Drought Planning (SB 606 [Hertzberg] and AB 1668 [Friedman], as amended; collectively referred to as “2018 Legislation”) passed by the State Legislature. The 2018 Legislation provides a new framework for urban water use efficiency; directives for eliminating water waste; additional requirements for strengthening local drought resilience for urban areas, vulnerable small water suppliers, and rural communities; and recommendations for improving agricultural water use efficiency and drought planning.

Water users protected under SB 552 include:

- **Small Water Supplier:** A community water system serving 15 to 2,999 service connections, inclusive, and that provides less than 3,000 acre-feet of water annually (CWC Section 10609.51(k)).
- **Community Water System:** A public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system, as defined in HSC Section 116275(i) and Section 10609.51(a).
- **State Small Water System:** A system for the provision of piped water to the public for human consumption that serves at least 5, but not more than 14, service connections and does not regularly serve drinking water to more than an average of 25 individuals daily for more than 60 days out of the year, as defined in HSC Section 116275(n) and Section 10609.51(m).
- **Domestic Well:** A groundwater well used to supply water for the domestic needs of an individual residence or a water system that is not a public water system and that has no more than four service connections, as defined in HSC Section 116275(n) and Section 10609.51(d).

¹ In 2018, DWR convened a County Drought Advisory Group (CDAG) to assist in a vulnerability assessment and to develop recommended actions for improving drought planning for small water suppliers and rural communities. The CDAG consisted of representatives from counties and other local agencies, small water systems, tribes, academics, non-profit organizations, and other interested parties. The CDAG’s recommendations were provided to the Legislature in March 2021 and served as the basis for SB 552. DWR has also established a standing drought and water shortage interagency task force, in coordination with the State Water Board and other relevant state agencies, to facilitate proactive state planning and coordination for pre-drought planning, emergency response, and post-drought management, consistent with SB 552. The interagency task force, called the Drought Resilience Interagency and Partners Collaborative, serves as a public forum with State and non-State agency members to advance drought strategies and continue building resilience to the increasingly arid conditions California faces. More information is available at: [Drought Resilience Interagency & Partners Collaborative](#).

- **Nontransient Noncommunity Water System:** A public water system that is not a community water system and that regularly serves at least 25 of the same persons over six months per year, as defined in HSC Section 116275(k) and Section 10609.51(f).

This County DRP will address water shortage vulnerabilities for domestic wells and SSWSs. The other protected water users covered under SB 552 not included in this County DRP have separate requirements to address water shortage vulnerabilities.

1.2.1 County Agency Requirements

This plan fulfills County requirements for preparation of a plan that includes potential drought and water shortage risk and proposed interim and long-term solutions for domestic wells and SSWS stems within the County's jurisdiction (CWC Section 10609.70). While measures to protect small water suppliers and nontransient noncommunity water systems are not within the scope of this document, this plan considers integration opportunities consistent with the intent of SB 552. Applicable County requirements are listed below and summarized in Table 1-1:

- Establish a standing County Drought and Water Shortage Task Force, known herein as the DRP WG (CWC Section 10609.70(a))
- Develop a plan that considers, at a minimum, each of the following (CWC Section 10609.70(b)):
 - 1) Consolidations for existing water systems and domestic wells
 - 2) Domestic well drinking water mitigation programs
 - 3) Provision of emergency and interim drinking water solutions
 - 4) Analysis of the steps necessary to implement the plan
 - 5) Analysis of local, State, and Federal funding sources available to implement the plan

Table 1-1. Summary of County Requirements Addressed in the Drought Resilience Plan

Requirement	Water Code Section	Addressed in DRP
Establish a standing County Drought and Water Shortage Task Force	CWC Section 10609.70(a)	Chapter 2
Assess potential drought and water shortage risk	CWC Section 10609.70 (b)	Chapter 3
Provide emergency and interim drinking water solutions in the county drought and water shortage risk mitigation plan (plan)	CWC Section 10609.70 (b)(3)	Chapter 4
Consider consolidations for existing water systems and domestic wells in the plan.	CWC Section 10609.70 (b)(1)	Chapter 5
Consider domestic well drinking water mitigation program in the plan.	CWC Section 10609.70 (b)(2)	Chapter 5
Consider an analysis of the steps to implement the plan	CWC Section 10609.70 (b)(4)	Chapter 6
Consider an analysis of local, State, and Federal funding sources available to implement the plan.	CWC Section 10609.70 (b)(5)	Chapter 6

Key:

CWC = California Water Code

DRP = Drought Resilience Plan

1.2.2 State Agency Involvement and Implementation

SB 552 defined a series of requirements for the State Water Board and DWR. These include the following:

State Water Resources Control Board (CWC Section 10609.70(c)):

The state board shall work with counties, groundwater sustainability agencies, technical assistance providers, nonprofit organizations, community-based organizations, and the public to address state small water system and domestic well community drought and emergency water shortage resiliency needs, including both of the following:

- (1) Proactive communication to domestic well communities before a drought occurs, such as information on local bottled water and water tank providers.*
- (2) Funding for installation of basic drought and emergency water shortage resiliency infrastructure, such as well monitoring devices.*

California Department of Water Resources (CWC Section 10609.80(a)):

The department shall take both of the following actions to support implementation of the recommendations of its County Drought Advisory Group:

- (1) Maintain, in partnership with the state board and other relevant state agencies, the risk vulnerability tool developed as part of the County Drought Advisory Group process and continue to refine existing data and gather new data for the tool, including, but not limited to, data on all of the following:*
 - (A) Small water suppliers and nontransient noncommunity water systems serving a school.*
 - (B) State small water systems and rural communities.*
 - (C) Domestic wells and other self-supplied residents.*
- (2) Update the risk vulnerability tool for small water suppliers and rural communities periodically, by doing all of the following:*
 - (A) Revise the indicators and construction of the scoring as more data becomes readily available.*
 - (B) Make existing and new data publicly available on the California Open Data internet web portal.*
 - (C) In consultation with other relevant state agencies, identify deficits in data quality and availability and develop recommendations to address these gaps.*
- (b) (1) The department, in collaboration with the state board and relevant state agencies, shall establish a standing interagency drought and water shortage task force to facilitate proactive state planning and coordination, both for predrought planning and post-drought emergency response, to develop strategies to enhance collaboration between various fields, and to consider all types of water users.*

(2) The interagency drought and water shortage task force shall include representatives from local governments, community-based organizations, nonprofit technical assistance providers, the public, and experts in land use planning, water resiliency, and water infrastructure.

1.3 Purpose of Los Angeles County Drought Resilience Plan

The County DRP documents how the County, DRP WG members, and other entities with water supply and drought management responsibilities intend to address water supply vulnerabilities of water users protected under SB 552 in the County. It is a single document for ease of reference and future updates. It describes the water shortage vulnerabilities present in the County, the responses to identified vulnerabilities, and the policy, financial, and regulatory considerations necessary for the implementation of the County DRP. Implementation of the County DRP is led by the Los Angeles County Public Works in close coordination with other departments, including the County Department of Public Health, County Chief Sustainability Office, and County Chief Executive Office - Office of Emergency Management. The County DRP was developed by the County with funding and technical support provided by DWR's Drought Resilience Planning Assistance Program and conforms to the legislative requirements of SB 552.

1.4 Los Angeles County Overview

Los Angeles County is located in Southern California and is the most populous county in the United States. The administrative center of Los Angeles County is in the City of Los Angeles.

1.4.1 Demographics

Selected demographics of the County are summarized below per the 2020 Census (USCB 2020) and 2023 American Community Survey (ACS) (USCB 2023).

- **Population:** The County is an urban area and has a population of 10,014,009 people (USCB 2020). The five most populous cities in the County are the Cities of Los Angeles, Long Beach, Santa Clarita, Glendale, and Lancaster.
- **Age:** The County has a median age of 38.6 years. 20.2 percent of the population is under 18 years old, while 15.7 percent is 65 years and over (USCB 2020).
- **Ethnicity:** The three largest ethnic groups in the County are Hispanic or Latino (48 percent), White (Non-Hispanic) (33 percent), Hispanic or Latino (48 percent), and Asian (15 percent). Black or African American make up 8 percent and Native Hawaiian or Other Pacific Islander make up 8 percent and 0.2 percent of the County's population, respectively (USCB 2020).
- **Language:** 55.1 percent of the population speaks a language other than English at home. This is greater than the statewide average of 45 percent (USCB 2020).
- **Household Income:** The median household income of the County, per the 2023 ACS 1-Year Estimates, is \$86,587. This is lower than the statewide median household income of \$95,521.
- **Education:** The County has a slightly lower-than-average percentage of residents 25 years or older with a bachelor's degree or higher at around 36.5 percent, compared to 37.5 percent for California overall (USCB 2020).
- **Poverty Level:** About 13.7 percent of the population in the County live below the poverty line, a number that is higher than the statewide average of 12 percent. The largest demographic living

in poverty are residents under 18 years of age, followed by those 65 years and older, followed by those in between (USCB 2020).

1.4.2 Geography

The County is expansive—4,084 square miles— and includes mountainous regions, valleys, deserts, and coastlines. It contains 88 incorporated cities approximately 1,430 square miles, along with 120 unincorporated areas covering a total of 2,650 square miles (Los Angeles County n.d.-a). Service Planning Areas divide the County into eight regions: Antelope Valley, San Fernando Valley, San Gabriel Valley, Metropolitan Los Angeles, West Los Angeles, South Los Angeles, East Los Angeles, and South Bay.

1.4.3 Hydrology

Hydrological Unit Codes (HUC) classify and identify watersheds in the United States. HUCs are numeric codes representing a geographic area, with longer codes indicating smaller and specific watershed units. There are three HUC-6 basins in the County: the Ventura-San Gabriel Coastal Basin (HUC 6-180701), Northern Mojave Basin (HUC 6-180902), and the Santa Ana Basin (HUC 6-180702). Figure 1-1 shows the seven HUC-8 basins in the County: Antelope-Fremont Valleys, Santa Clara, Ventura, Calleguas, Santa Monica Bay, San Gabriel basins, and a small portion of the Mojave and Middle Kern Upper Tehachapi Grapevine basins.

Major rivers flowing through the County include the Los Angeles River, which flows southeast from the Santa Susana Mountains through downtown Los Angeles and into the Pacific Ocean; the San Gabriel River, which flows south from the San Gabriel Mountains to the Pacific Ocean; and the Santa Clara River, which flows from east to west through Los Angeles and Ventura County into the Pacific Ocean. Portions of the Los Angeles River and San Gabriel River were channelized in the 19th and 20th centuries as flood mitigation measures. While the efforts reduced flood risk, it also disrupted ecosystems and reduced natural recharge.

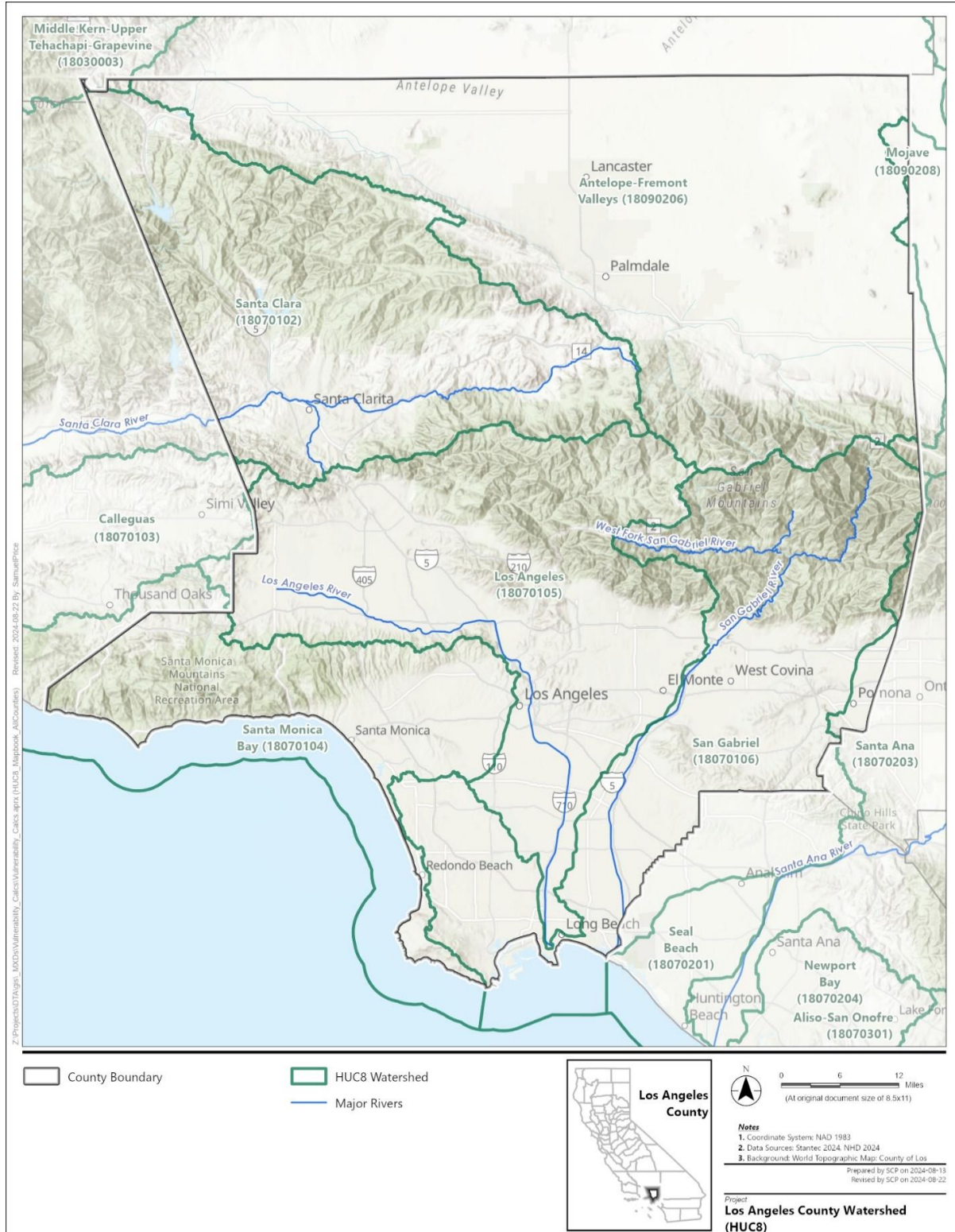


Figure 1-1. Hydrologic Subregions Within Los Angeles County

1.4.4 Precipitation

The County's precipitation is highly seasonal—most falls between December through March, with almost none during the summer. In Water Years 2023 and 2024, the Los Angeles Civic Center station recorded 30.78 inches and 22.97 inches of rain, respectively (CDEC 2024). This amount is significantly higher than the 6.14 inches and 7.69 inches of rainfall recorded in Water Years 2021 and 2022 (CDEC 2024). The average rainfall for Los Angeles Civic Center from Water Years 2014 to 2024 is 13.8 inches; however, this can be highly variable year-to-year, ranging from 4.72 inches of total rainfall in Water Year 2018 to 30.78 inches of total rainfall in Water Year 2024 (CDEC 2024). Over a 100-year period, the historic average annual precipitation for the County has been approximately 15 inches of rainfall (Los Angeles County Public Works). Precipitation also varies significantly due to the topographic influence of the San Gabriel Mountains, with the coastal plain receiving the average numbers described above, the coastal facing slopes can receive significantly more during the same season, while the areas north and east of the mountains exist in a rain shadow, and have lower average values.

1.4.5 Topography

The County's topography is shown in Figure 1-2. A majority of the land in the southern half of the County ranges from 0 feet to 2,000 feet, including San Gabriel Valley, Metropolitan Los Angeles, West Los Angeles, South Los Angeles, East Los Angeles, South Bay, and San Fernando Valley. The San Gabriel Mountains, located along the San Gabriel Valley, San Fernando Valley, and Antelope Valley regions, features higher elevation areas, with Mount San Antonio (also known as Mount Baldy) as the highest point in the County at 10,064 feet (US Forest Service n.d.).

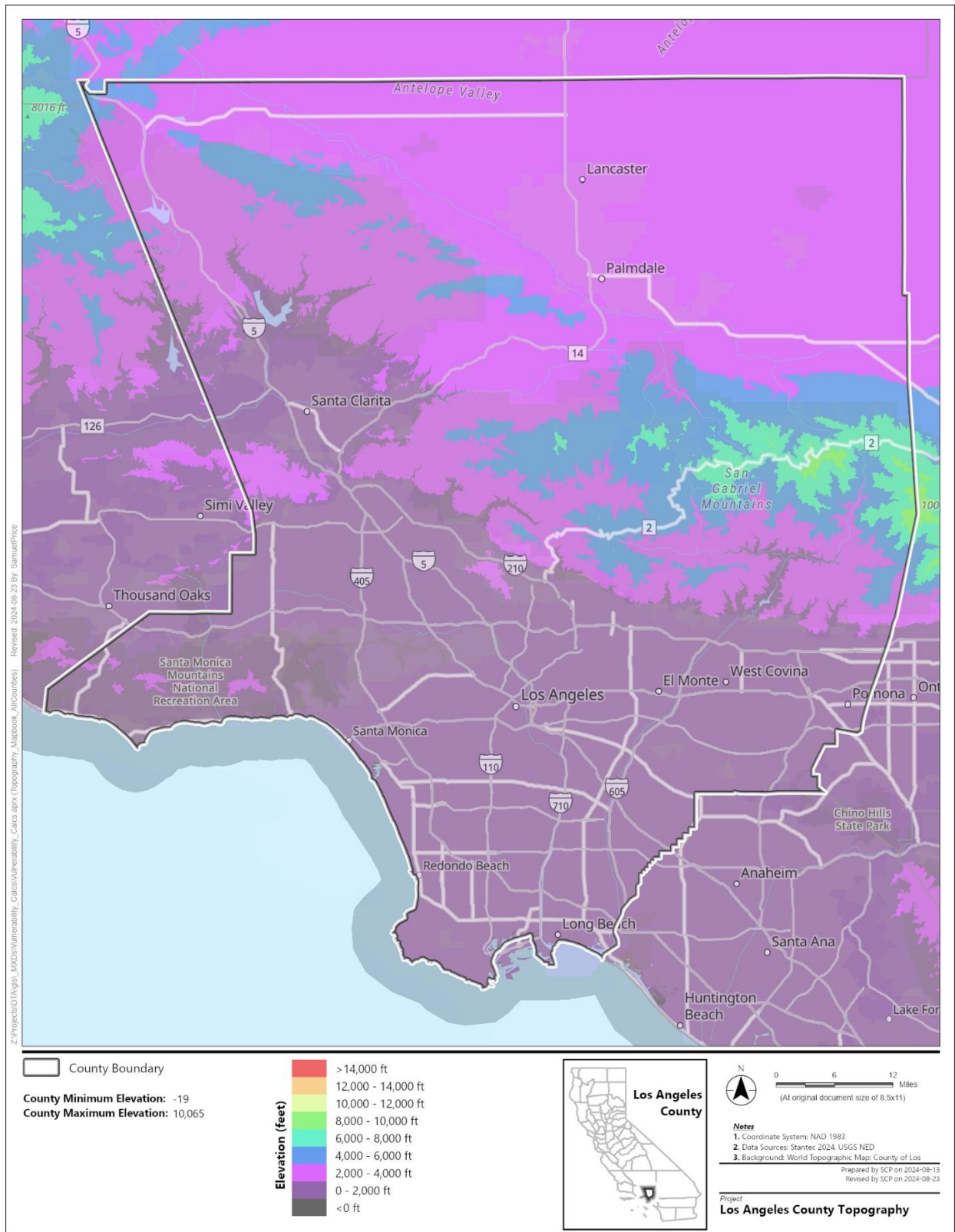


Figure 1-2. Topography of Los Angeles County

1.4.6 Land-Use

The most populous urban area is concentrated around the City of Los Angeles, in the southern portion of the County. There is a small portion of agricultural area in the Antelope Valley in the northeast, as shown in Figure 1-3. The most common crops produced are alfalfa, corn, and other grain and hay crops. About 25 percent of the County's land area is part of the Angeles National Forest, managed by the United States Forest Service (United States Department of Agriculture n.d.). The County also contains minimal Department of Defense land—Air Force Plant 42 in Palmdale, which the United States Air Force uses for manufacturing and testing aircraft.

Land use patterns can impact water supply and water quality. Depending on use, wells in groundwater zones can deplete groundwater supply. According to the Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan, the land use of the groundwater management zones is 84 percent open space, 7 percent residential, 7 percent commercial/industrial, and 1 percent agricultural/park/golf courses (Santa Clarita Valley Groundwater Sustainability Agency 2022).

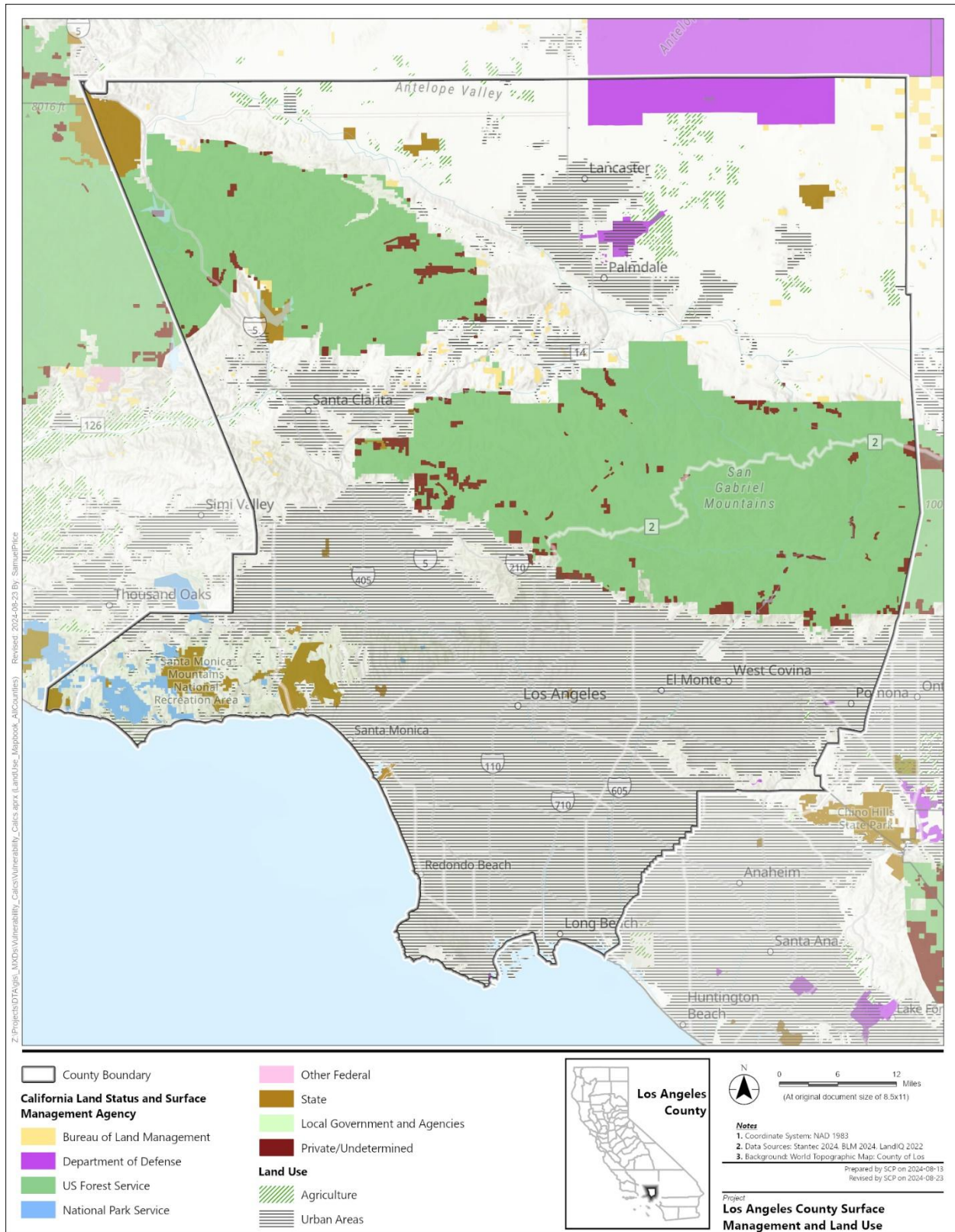


Figure 1-3. Land Use Within Los Angeles County

1.4.7 Geology

The County has compiled a GIS database of nearly two dozen mapped soil types, including loams; clayey, silty, and sandy loams; clay adobes; and various alluvial and mountain soil (Los Angeles County Department of Regional Planning 2022).

The County primarily contains three geomorphic provinces (naturally defined geologic regions): the Mojave Desert, the Transverse Ranges, and the Peninsular Ranges. Each makes up approximately one third of the County's area (Los Angeles County 2022).

The Mojave Desert covers the northern third of the County, including Antelope Valley, and is characterized by isolated mountain ranges separated by expanses of desert plains. It includes several prominent fault lines, ephemeral lakebeds, and small hills that are remnants of ancient mountain topography.

The Transverse Ranges include the Santa Monica Mountains, the San Fernando Valley, part of Antelope Valley, and northern portions of the San Gabriel Valley. This region features prominent basins and peaks and several active fault lines, including the San Andreas Fault.

The Peninsular Ranges include South Bay and the southern and western portions of Metropolitan Los Angeles area. This region features mountain ranges separated by northwest-trending valleys running subparallel to faults branching from the San Andreas Fault, as well as geology that includes granitic rock intruding older metamorphic rock.

1.5 Water Landscape: Supply, Use, and Management

Water supplies for domestic, industrial, agricultural, and environmental use within the County are described below (Los Angeles County Public Works, n.d.-a, n.d-b).

Water Supplies:

- Groundwater: Groundwater is a crucial component of the County's local water supply. Most of the groundwater basins in the County are adjudicated by court decisions, and the producers within these basins follow management guidelines established by their respective adjudications. Groundwater basin recharge can happen naturally through existing and restored channel bottoms or rainwater percolation, known as natural recharge. However, natural recharge is typically insufficient to sustain basin water levels and current pumping rates due to the prevalence of impervious surfaces and clay soils in some areas of the County. Many agencies depend on enhanced aquifer recharge by diverting local water from rivers or creeks during optimal flow conditions to spreading grounds or basins, which typically have sandy soils that facilitate infiltration.
 - In the Santa Clara River Valley East Groundwater Subbasin, municipal use accounted for 84 percent of total water use, while agricultural and private wells accounted for 16 percent (Santa Clarita Valley Groundwater Sustainability Agency 2022).
 - In the Santa Monica Groundwater Subbasin, land use is predominantly residential (64 percent), with commercial, industrial and public facilities accounting for 23.5 percent and open space for 11.5 percent.

These figures highlight the critical role of groundwater as a reliable source of water for the County.

- **Surface Water:** The three major bodies of local surface water supplies are the Santa Clara, San Gabriel, and Los Angeles rivers. A significant amount of the water from these rivers originates from the San Gabriel mountains and urban stormwater runoff. These rivers are not generally used for drinking water but serve as essential surface water sources that help recharge aquifers and sustain groundwater basin supply via infiltration.
- **Imported Water:** Imported water is sourced primarily from the State Water Project, Los Angeles Aqueduct, and Colorado River Aqueduct. Water retailers purchase imported water from local contractors or regional wholesale water agencies. Some imported water is also used for groundwater recharge to help replenish local aquifers and support long-term water supplies.
- **Recycled Water:** Recycled water is purified wastewater that has undergone multiple treatments of disinfection. The recycled water is produced by the County Sanitation Districts of Los Angeles County and sold through local public and private water suppliers. A network of purple pipes and pumps distributes recycled water to users. Recycled water is also injected into coastal seawater intrusion barriers, partially contributing to groundwater replenishment.

Water Uses:

- **Municipal and Domestic:** The primary use of water in the County is for municipal and domestic purposes, including residential, commercial, and institutional uses, estimates suggesting over 85% of total water consumption for urban needs.
- **Industrial and Commercial:** A smaller but significant portion of water is used for industrial processes, commercial facilities, and energy production. This includes manufacturing, refineries, and power plants, contributing to approximately 5% to 10% of total water use.
- **Agriculture:** Agriculture is a minor water user in Los Angeles County, accounting for less than 2% of total water use. Agricultural activity is limited due to urbanization, though some farming still occurs in areas like the Antelope Valley.

Water Management Actions:

- **Groundwater Sustainability Plan (GSP):** There are two GSPs in the County with basins subject to the *Sustainable Groundwater Management Act (SGMA)*: the Santa Clara River Valley East Groundwater Subbasin GSP and the Coastal Plan of Los Angeles-Santa Monica Mountains GSP. The Santa Clara River Valley East Groundwater Subbasin GSP was adopted in January 2022 and the basin is classified as high-priority, while the Coastal Plan of Los Angeles-Santa Monica Mountains GSP was adopted in October 2023 and the basin is classified as medium-priority. The GSPs outline the actions necessary to reach or maintain sustainability, including for critically overdrafted groundwater basins to reach long-term sustainability.
- **Los Angeles County Water Plan (CWP):** In 2023, the County released its first CWP, which focuses on achieving countywide water resilience through 14 collaborative strategies. The Plan aims to work across regional agencies to address water issues as they relate to regional water supply reliability, groundwater management and quality, small water system resilience and drinking water equity, and watershed sediment management.
- **Stormwater Management:** The County's Safe, CWP focuses on developing and implementing stormwater capture projects that improve water quality, increase water supply, and provide

community investment benefits. The Program provides funding for both regional and local concepts development, project construction, and ongoing operations and maintenance

- **Regional Recycled Water Initiatives:** There are several large-scale partnership programs underway that will maximize recycled water production for use to offset imported water, such as the Metropolitan Water District of Southern California and Los Angeles County Sanitation District's Pure Water Southern California, and Palmdale Water District's Pure Water Antelope Valley.
- **Integrated Flood Management:** In addition to local drainage and regional flood control plans and operational policies, there are several integrated planning efforts with concepts that will maintain flood protection while introducing additional benefits (e.g., LA River Master Plan).
- **Land Stewardship:** Understanding the important nexus between water and land management, the CWP recognizes the network of ongoing urban land use, forest, and watershed stewardship efforts conducted by planning agencies and entities throughout the County.

1.5.1 Groundwater Detail

Bulletin 118 Subbasins are specific divisions within California's groundwater basins, categorized by DWR based on geological and hydrological conditions. These subbasins help manage and regulate groundwater resources effectively across the State (California Department of Water Resources, n.d.-a). The County contains 18 Bulletin 118 Subbasins, as outlined in Table 1-3.

Analysis completed by DWR to support implementation of SGMA classified the Santa Clara River Valley East (DWR Basin Number 4-004.07) as a high-priority² basin, the Coastal Plain of Los Angeles – Santa Monica (DWR Basin Number 4-011.01) as a medium-priority basin, and other basins in the County as very low priority basins, or basins subject to critical conditions of overdraft. Passed in 2014, SGMA represents a statewide framework to protect groundwater resources over the long term. SGMA led local public agencies, pursuant to CWC Section 10721(n), to form groundwater sustainability agencies (GSA) in high- and medium-priority basins and develop GSPs to avoid undesirable results and mitigate overdraft within 20 years.

The Santa Clarita GSA was formed in 2018 for the Santa Clara River Valley East Subbasin. It is a joint-powers authority governed by a seven-member board: four members appointed by Santa Clarita Valley Water, and one member each appointed by the City of Santa Clarita, the Los Angeles County Board of Supervisors, and Los Angeles County Waterworks Division 36. The GSA prepared and adopted its GSP in 2022, which DWR approved in January 2024.

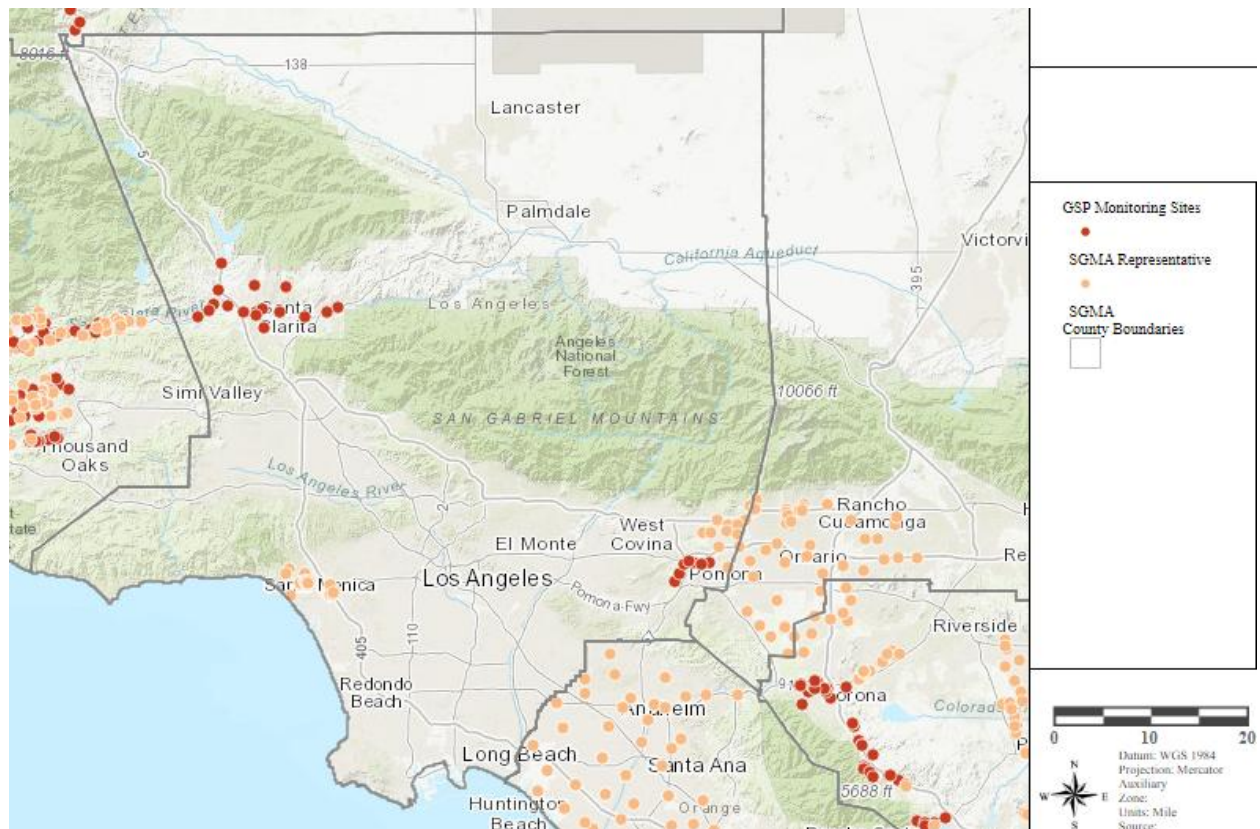
The Santa Monica Basin GSA was formed in 2017 for the Coastal Plain of Los Angeles – Santa Monica (Santa Monica Groundwater Subbasin). The GSA's five member agencies include the cities of Santa Monica, Beverly Hills, and Culver City; the City of Los Angeles, by and through its Department of Water and Power; and the County of Los Angeles. The GSA prepared and adopted its GSP in 2022, which DWR approved in October 2023 (Santa Monica Basin Groundwater Sustainability Agency 2022).

² DWR assigns prioritizations to determine whether SGMA provisions apply in the basin. The four prioritization rankings—very low, low, medium, or high—indicate the relative importance of groundwater in relation to Water Code Section 10933. Prioritization does not assess groundwater and basin sustainability (DWR 2020).

The Spadra Basin GSA submitted a GSP for the San Gabriel Valley Basin, though the basin is designated very low priority by DWR and a GSP was not required. The GSA completed the plan due to funding awarded by the Proposition 1 Sustainable Groundwater Planning Grant and to capture the benefits of developing a GSP.

One of the keys to successful groundwater management is having reliable data on groundwater conditions. As part of SGMA compliance, GSAs conduct regular groundwater monitoring and reporting on conditions and implement management actions outlined in their GSPs. Figure 1-4 shows GSA monitoring wells within the County.

Areas managed under a court-ordered adjudication occur when water users within a basin are in dispute over legal rights to the water. Adjudications can cover an entire basin, a portion of a basin, or a group of basins and all non-basin locations between. These may also adjoin or be located within the boundaries of a GSA established pursuant to SGMA. The court decree will define the area of adjudication. The court typically appoints a watermaster to administer the court's decree. Adjudicated groundwater basins in Los Angeles County are listed in and shown in Figure 1-5.



Source: [SGMA Data Viewer](#), Accessed: 10/2024

Figure 1-4. Groundwater Sustainability Agency Monitoring Wells in Los Angeles County

Table 1-2. Adjudicated Basins in Los Angeles County

Basin Name	Water Management Area	Watermaster	Basin ID #
Raymond	Raymond Basin	Raymond Basin Watermaster	4-023
San Gabriel Valley	Main San Gabriel Basin	Main San Gabriel Basin Watermaster	4-013
Antelope Valley	Antelope Valley	Antelope Valley Watermaster	6-044
Coastal Plain of Los Angeles - West Coast	West Coast Basin	WRD - West Coast Basin Watermaster Administrative Body	4-011.03
Upper Santa Ana Valley - Chino	Chino Basin	Chino Basin Watermaster	8-002.01
San Fernando Valley	Upper Los Angeles River Area	Upper Los Angeles River Area Watermaster, c/o Richard C. Slade & Associates LLC	4-012
Coastal Plain of Los Angeles - Central	Central Basin	WRD - Central Basin Watermaster Administrative Body	4-011.04
San Gabriel Valley	Puente Basin	Puente Basin Watermaster c/o Walnut Valley Water District	4-013
	Six Basins - Pomona Basin	Six Basins Watermaster	4-013
	Six Basins - Canyon Basin	Six Basins Watermaster	4-013
	Six Basins - Upper Claremont Heights Basin	Six Basins Watermaster	4-013
	Six Basins - Ganesha Basin	Six Basins Watermaster	4-013
	Six Basins - Live Oak Basin	Six Basins Watermaster	4-013

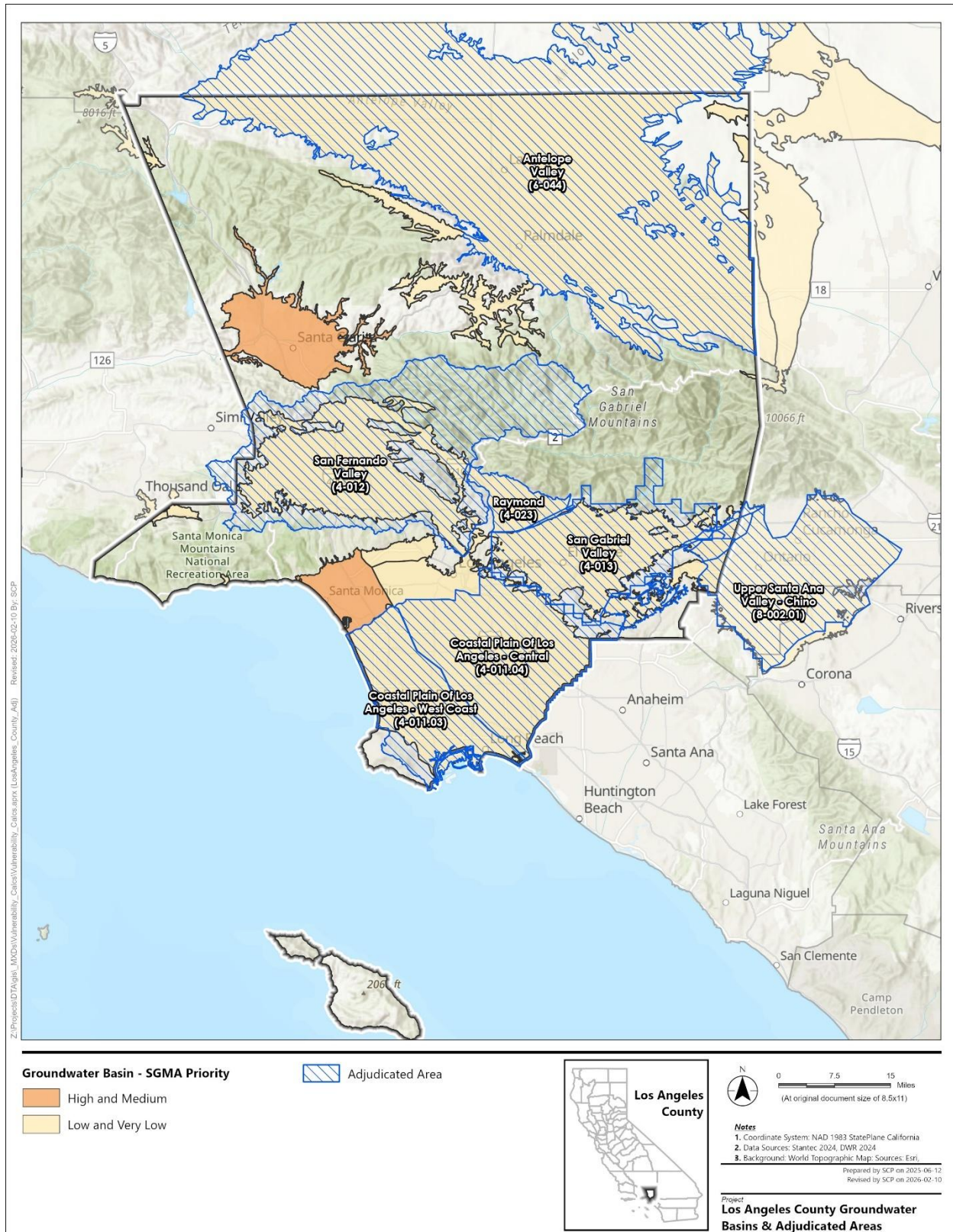


Figure 1-5. Adjudicated Basins in Los Angeles County

1.5.2 Water Systems Within Los Angeles County's Jurisdiction

CWC Section 10609.70 requires the County DRP includes planning and response measures for domestic wells and SSWs. Figure 1-6 shows the location of domestic wells³ and SSWs within the County, and Table 1-3 summarizes how many domestic wells and SSWs are in the Bulletin 118 basins. The majority of domestic wells lie within a low priority basin and adjudicated areas. Areas outside of a Bulletin 118 basin are considered fractured rock. Both the figure and table show domestic wells that are outside the County but still in groundwater basins that are within the County. It should be noted that domestic well locations are approximate based on well completion report data, which may be inaccurate and/or place the well not at the actual well location. As a result, the number of domestic wells may be overestimated, and the placement of wells may not reflect actual locations.

³ Geographic information on well completion reports may be inaccurate and/or place the well not at the actual well location. As a result, the number of domestic wells may be overestimated, and the placement of wells may not reflect actual locations.

Table 1-3. Summary of Groundwater Basins, Domestic Wells, and State Small Water Systems in Los Angeles County

Bulletin 118 Basin ID	Groundwater Basin Name	Partial or Full	SGMA Priority	Wells Drilled Post 1977	Wells Drilled Pre-1977	Wells in Basin but Outside County	SSWS
4-004.07	Santa Clara River Valley - Santa Clara River Valley East	Partial	High	131	50	0	0
4-005	Acton Valley	Full	Very Low	174	5	0	0
4-011.01	Coastal Plain of Los Angeles - Santa Monica (<i>Adjudicated</i>)	Full	Medium	3	4	0	0
4-011.02	Coastal Plain of Los Angeles - Hollywood	Full	Very Low	2	1	0	0
4-011.03	Coastal Plain of Los Angeles - West Coast (<i>Adjudicated</i>)	Full	Very Low	11	16	1	0
4-011.04	Coastal Plain of Los Angeles - Central (<i>Adjudicated</i>)	Full	Very Low	53	345	0	0
4-012	San Fernando Valley (<i>Adjudicated</i>)	Full	Very Low	45	13	0	0
4-013	San Gabriel Valley (<i>Adjudicated</i>)	Partial	Very Low	44	82	0	0
4-018	Hungry Valley	Partial	Very Low	0	1	0	0
4-019	Thousand Oaks Area	Partial	Very Low	0	0	2	0
4-020	Russell Valley	Partial	Very Low	2	7	1	0
4-022	Malibu Valley	Full	Very Low	3	1	0	0
4-023	Raymond (<i>Adjudicated</i>)	Full	Very Low	6	2	0	0
5-082	Cuddy Canyon Valley	Partial	Very Low	0	0	10	0
6-041	Middle Mojave River Valley (<i>Adjudicated</i>)	Partial	Very Low	0	0	294	0
6-043	El Mirage Valley (<i>Adjudicated</i>)	Partial	Very Low	0	1	238	0
6-044	Antelope Valley (<i>Adjudicated</i>)	Partial	Very Low	1,203	260	650	6
8-002.01	Upper Santa Ana Valley - Chino (<i>Adjudicated</i>)	Partial	Very Low	0	2	650	0
N/A	Fractured Rock Aquifer Wells	N/A	N/A	1,434	197	N/A	2

Key:

N/A = not applicable

SGMA = *Sustainable Groundwater Management Act*

SSWS = state small water system

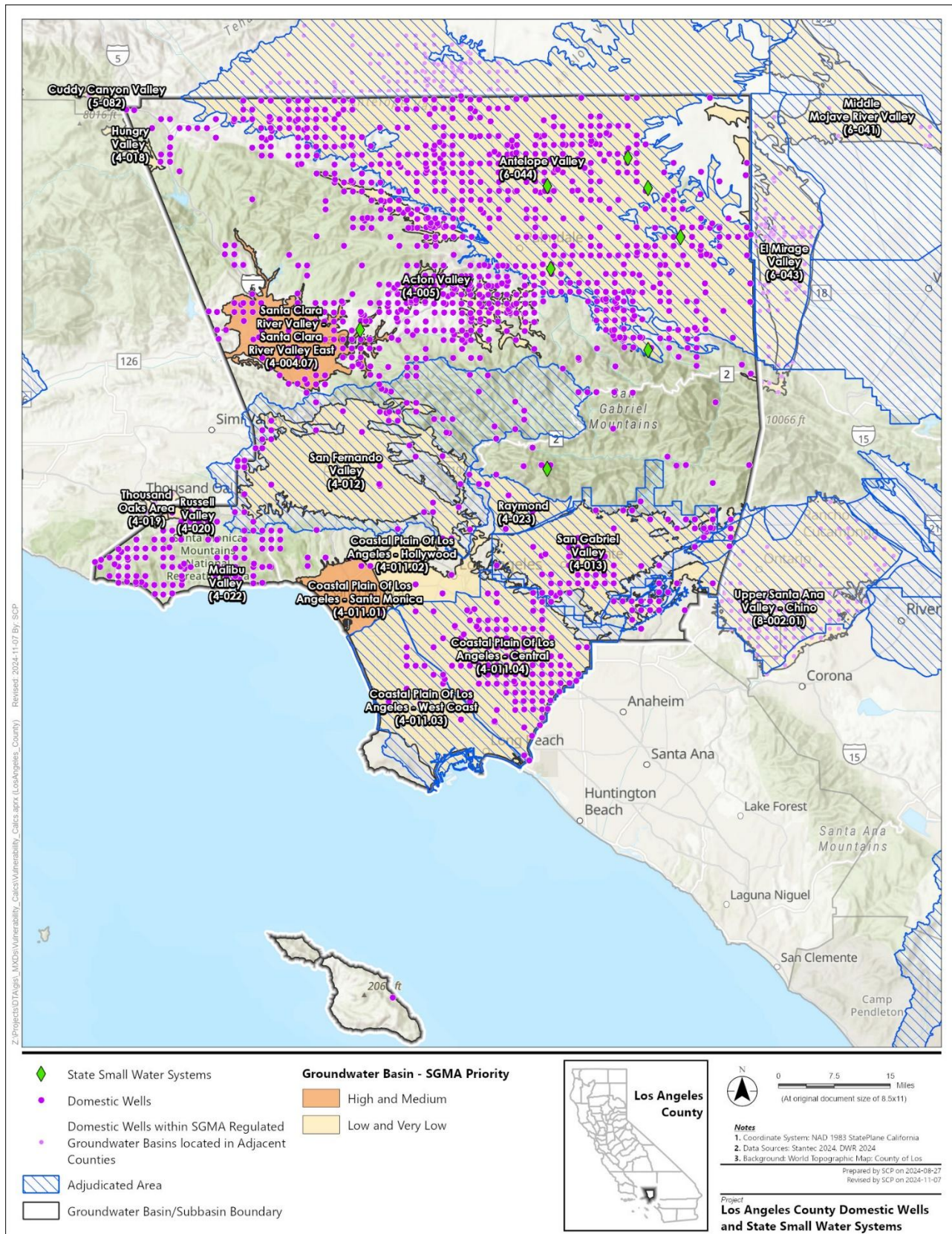


Figure 1-6. Locations of Domestic Wells and State Small Water Systems in Los Angeles County

2 County Water Plan Drought Resilience Plan Working Group

2.1 Purpose

This section describes the Drought and Water Shortage Task Force, operating as the DRP WG. Los Angeles County Public Works created the DRP WG under the existing County Water Plan Small Water System Task Force (Task Force) to focus on the coordination and implementation of the County's DRP. The DRP WG will serve as the Drought and Water Shortage Task Force in compliance with CWC 10609.70(a)(1).

Parties covered by this section include the Los Angeles County DRP Project Coordination Team (PCT), the Task Force, and the DRP WG. In the context of the County's DRP, these bodies achieve the following objectives:

- Facilitate drought and water shortage plan development for domestic wells and SSWSs within the County's jurisdiction.
- Facilitate regular coordination and communication among staff of relevant County departments, local water agencies, local water suppliers, GSAs, and others representing the concerns of domestic well and SSWS users.
- Develop a County DRP that supports drought and water shortage preparedness and responsiveness for domestic wells and SSWSs within the County's jurisdiction.
- Support implementation of drought and water shortage actions as identified in the County DRP.

2.2 Organization

The Task Force was established in 2024 by Los Angeles County Public Works to implement priority tasks from the County Water Plan 2-Year Action Plan in support of the County's small water systems, improve drinking water equity, and create longer-term resilience and higher-quality supplies. The Task Force is led by Los Angeles County Public Works, with consultant support, and chaired by the Deputy Director of Water Resources.

Task Force members may include participants from small water systems, State and Federal agencies, non-governmental organizations, academia, and other interested parties. Membership includes:

- American Society of Civil Engineers
- Antelope Valley-East Kern Water Agency
- California Association of Mutual Water Companies
- California State Water Resources Control Board
- Community Water Systems Alliance
- Conservation and Natural Resources Group
- Crescenta Valley Water District
- Golden State Water Company
- Heal the Bay

- La Habra Heights County Water District
- Los Angeles County Board of Supervisors
- Los Angeles County Chief Sustainability Office
- Los Angeles County Public Health
- Los Angeles County Public Works (Stormwater Planning Division, Waterworks Districts)
- Los Angeles County Youth Climate Commission
- Los Angeles Regional Water Quality Control Board
- Mike Bubalo Construction
- Palmdale Water District
- Rebuild SoCal Partnership
- Sierra Club
- Sleepy Valley Water Company
- Southern California Edison Catalina Water Utility
- Suburban Water Systems
- The Acton Town Council
- United States Bureau of Reclamation
- University of California, Los Angeles (UCLA) Institute of the Environment and Sustainability, Luskin Center for Innovation
- Walnut Park Mutual Water Company
- Water Replenishment District

The DRP WG works under the auspices of the Task Force, created to provide more detailed and frequent feedback on County initiatives, including the County's DRP. The DRP WG is made up of volunteer representatives from the Task Force and additional representatives from SSWs and domestic wells. The DRP WG was established to comply with CWC 10609.70(a)(1) and will provide direct feedback on County DRP development and implementation and other related efforts. Membership includes:

- Agua Dulce Town Council
- California Association of Mutual Water Companies
- California Department of Water Resources
- California State Water Resources Control Board
- City of Santa Monica / Santa Monica Groundwater Sustainability Agency
- Golden State Water Company
- Los Angeles County Chief Executive Office, Office of Emergency Management

- Los Angeles County Chief Sustainability Office
- Los Angeles County Public Health
- Los Angeles County Public Works (Stormwater Planning Division, Waterworks Districts)
- Rubio Canyon Land & Water Association
- Santa Clarita Valley Groundwater Sustainability Agency
- Santa Clarita Valley Water Agency
- Sierra Club
- Sleepy Valley Water Company Inc.
- Suburban Water Systems
- UCLA Institute of the Environment and Sustainability, Luskin Center for Innovation
- United States Forest Service
- Walnut Park Mutual Water Company
- Water Replenishment District

County DRP development and implementation is overseen by the PCT. The PCT includes:

- California Department of Water Resources
- Los Angeles County Chief Executive Office, Office of Emergency Management
- Los Angeles County Chief Sustainability Office
- Los Angeles County Public Health
- Los Angeles County Public Works (Lead)

Task Force and DRP WG membership are subject to change. The organization of the Task Force, DRP WG, PCT, and reporting structure is shown in Figure 2-1.

2.3 Decision-Making Structure

Below is the decision-making structure and accompanying flow chart (Figure 2-1) of relevant groups.

- **Small Water Systems Task Force** – The Task Force is an advisory body that provides input and recommendations to the County on related efforts that may connect to the County DRP. The Task Force does not have decision-making authority.
- **DRP WG** – The DRP WG is an advisory body that provides direct input and recommendations on the County DRP. The DRP WG does not have decision-making authority.
- **Project Coordination Team** – Los Angeles County Public Works is the lead County entity preparing and implementing the County DRP in coordination with the remainder of the PCT. Los Angeles County Public Works convenes and staffs the Task Force and DRP WG. The PCT consulted with other County departments, relevant GSAs, and other agency staff as needed to prepare and update the County DRP.

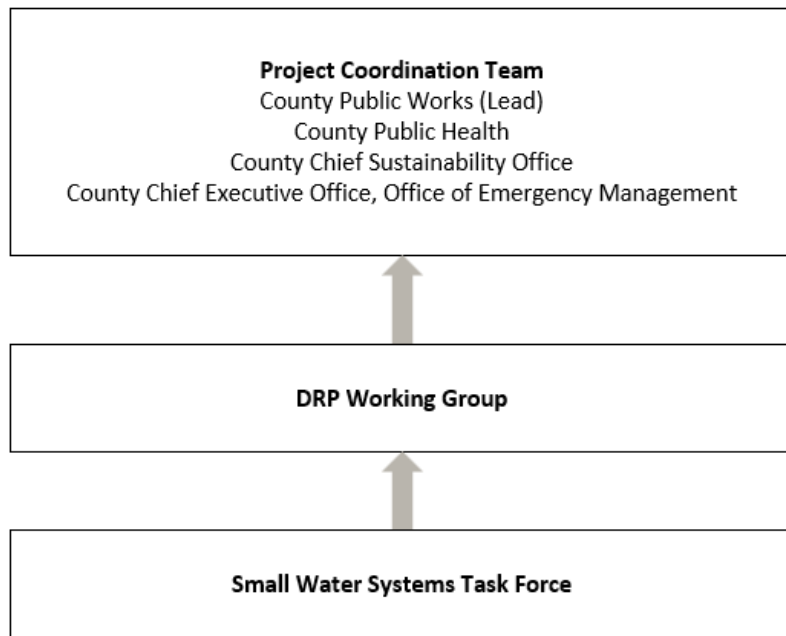


Figure 2-1. Structure of Parties Involved

2.4 Responsibilities

The DRP WG reviewed and advised the PCT on the development of the County DRP and will assist in guiding its implementation. The level of member participation in the DRP WG will be frequent and as needed while the County DRP is being developed. Ongoing participation in the DRP WG during the implementation phase will depend on conditions and needs identified in the County DRP.

DRP WG members are expected to accomplish the following:

- Review progress on the development of the County DRP, review and make recommendations on the draft County DRP, and assist in the County DRP’s subsequent implementation once adopted
- Review current drought conditions and potential risk factors using tools provided by State agencies, identify drought-related issues that will impact County residents, and help develop short-term actions and long-term strategies to address identified issues
- Disseminate DRP WG findings and recommendations to their respective agencies and organizations and seek feedback to be shared during task force meetings
- Attend scheduled DRP WG meetings
- Facilitate coordination and communication during drought or water shortage emergencies

2.5 Term

Pursuant to CWC Section 10609.70, counties are required to maintain ongoing coordination, collaboration, and cooperation during development and implementation of the County DRP. The State Legislatures’ intent is for counties to establish either a standing county drought and water shortage task force (CWC Section 10609.70(a)(1)³) or other mechanism under the alternative process (CWC Section 10609.70(a)(2)⁴) to regularly engage interested parties during non-emergency settings and during active

drought or water shortage emergencies. There is no term limit for DRP WG members. DRP WG members are volunteer-based, and are encouraged to regularly participate in meetings as they are held.

2.6 Meetings

During County DRP development, the DRP WG met monthly to discuss technical information under review for the inclusion in the County DRP, in addition to other related studies. Los Angeles County Public Works, with consultant support, scheduled meetings with advance notification and distributed agendas and related materials for review in advance of each meeting.

After the County DRP is developed, the DRP WG will discuss drought conditions at least annually, unless drought conditions necessitate more frequent meetings for action planning and coordination.

Attendance at all meetings is expected, or DRP WG members can designate someone to attend in their place as long as the alternate is aware of all Task Force developments, can productively engage in discussions, and can provide input on behalf of their respective agency.

2.7 Communication and Engagement

To assist in disseminating and collecting information to prepare the County DRP, Los Angeles County Public Works will implement a series of communication and engagement actions. These actions support providing opportunities for broad community awareness among County DRP interested parties. These activities provide a mechanism for long-term engagement following completion of the County DRP. The County will implement the strategies defined below:

- County Water Plan Website: The CWP has an established [website](#) to support distribution and dissemination of information associated with the County DRP. The page will be used to post meeting materials and summaries, as well as draft and final documents.
- Los Angeles County Public Works will establish a page/section on the CWP Website to support distribution and dissemination of information associated with the County DRP. The page may include:
 - Background on SB 552 and related informational links, such as:
 - California Department of Water Resources Direct Technical Assistance Program
 - California Department of Water Resources Water Shortage Vulnerability Tool
- Contact information for the County’s project manager (email)
- Final DRP document
- Notifications: Los Angeles County Public Works maintains a Task Force email distribution list to communicate information relevant to SB 552 to individuals, organizations, and agencies that have expressed interest in being informed on the County DRP. This email distribution list is used to create an email listserv for DRP interested parties to receive notices relating to plan preparation, meeting announcement, draft plans, and other relevant documents. DRP interested parties can sign up on the CWP [website](#).

3 Drought and Water Shortage Risk Assessment

A drought and water shortage risk assessment (risk assessment) was prepared in development of the County DRP as directed in CWC Section 10609.70(b). This risk assessment evaluated water shortage vulnerability for the County's domestic well and SSWS assets. The risk assessment outcomes informed short-term response actions and long-term mitigation strategies and actions for water shortage emergencies and to build future water sustainability (see Chapters 4 and 5).

The risk assessment presented in this County DRP does not replace the regulatory requirements of the Federal Emergency Management Agency (FEMA). The County DRP could make the County eligible for FEMA's Pre-Disaster Mitigation and Hazard Mitigation Grant programs. However, if a jurisdiction is also seeking approval of the drought and/or water shortage risk assessment within the 2020 All-Hazards Mitigation Plan, it should follow the requirements outlined in the FEMA *Local Mitigation Planning Handbook* (FEMA 2013).

3.1 Terminology

The County DRP adapted the following definitions from the FEMA *Local Mitigation Planning Handbook* (FEMA 2013) within the context of drought and water shortage planning:

- **Community assets:** The people, structures, facilities, and systems that have value to the community. The minimum assets considered as part of the SB 552 plan include domestic wells, SSWSs, and populations relying on those water supplies.
- **Hazard:** A source of harm or difficulty created by meteorological, environmental, geological, hydrological, or other event conditions. In the context of SB 552, hazards are the natural, human-made, and social processes that can lead to water shortages in the County.
- **Impact:** The consequences or effects of a hazard related to drought and water shortages on the community and its assets.
- **Risk:** The potential for damage, loss, or other impacts (e.g., water shortage) created by the interaction of natural hazards with community assets and their physical and social vulnerabilities.
- **Risk Assessment:** Product or process that collects information and assigns values to risks for the purpose of informing priorities, developing or comparing courses of action, and informing decision-making.
- **Vulnerability:** Characteristics of community assets or populations that make them susceptible to damage from a given hazard. It includes both physical vulnerability and social vulnerability.

3.2 Risk Assessment Methodology

The nature and severity of hazards that can cause water shortages vary at regional and local scales due to differences in conditions, such as precipitation patterns, groundwater levels, topography, geology, infrastructure, and regulatory frameworks. Communities lacking access to reliable water sources are most vulnerable to water shortage caused by such hazards. A risk assessment was conducted using physical and social vulnerability indicators. The risk assessment was completed following the four steps outlined below.

1. **Describe Major Hazards in the County:** Drought, climate change, and water quality hazards were summarized and described.
2. **Complete Draft Risk Assessment using DWR Water Shortage Vulnerability Explorer:** The DWR Water Shortage Vulnerability Explorer (WSVE) Tool was used to (1) identify areas within the County where domestic wells and SSWs are vulnerable to water supply shortages, and (2) characterize the hazards driving vulnerability. This information was included in a draft risk assessment. The County and the DRP WG reviewed the draft risk assessment, provided feedback, and identified data gaps. Additional detail on the WSVE Tool and how it was applied in the risk assessment is included below.
3. **Revise the Draft Risk Assessment:** County and DRP WG feedback on the draft risk assessment was used to develop a revised risk assessment.
4. **Incorporate Results of Revised Risk Assessment into County DRP:** Information from the revised risk assessment was included in the County DRP (Section 3.4). Findings from the revised risk assessment were used by the County and DRP WG to develop short-term actions and long-term strategies to improve water supply sustainability (Chapters 4 and 5).

Developed by DWR in collaboration with the County Drought Advisory Group (CDAG), the WSVE Tool is an online geospatial application that assesses water shortage risk using physical (Table 3-2) and social (Table 3-3) vulnerability indicators. These indicators were selected by DWR and the CDAG to reflect the hazards that could make a domestic well or SSW vulnerable to water supply shortage.

The WSVE Tool calculates both a physical vulnerability score and a social vulnerability score, which is described below.

- The physical vulnerability score was calculated at the Public Land Survey Section⁴ (PLSS) scale by normalizing the indicator value between 0 and 1, with 1 representing the highest possible vulnerability. Normalized scores were multiplied by a weighting factor from 1 to 5 that was assigned by DWR and CDAG to capture how some indicators contribute more to water shortage vulnerability than others. A summary of weighting factors for physical vulnerability indicators is provided in Table 3-1.
- The social vulnerability score was calculated at the Census Block Group⁵ scale by normalizing the indicator value between 0 and 1 and summing the values together without additional weighting.

DWR periodically revises the WSVE Tool to incorporate improved data and/or updated methodology. Data for the risk assessment used the 2024 methodology (DWR 2024).

⁴ A Public Land Survey Section is a geographic delineation of an area equivalent to one square mile.

⁵ A Census Block Group is a geographic unit with a population between 600 and 3,000 people that are a smallest geographical unit that the U.S. Census Bureau publishes data collected from a fraction of households.

Table 3-1. Indicator Weightings for Physical Vulnerability

Indicator	Alluvial Basin Area	Fractured Rock Areas
Temperature Shift (RC1a)	1	1
Saline Intrusion Projected (RC1b)	1	1
Wildfire Risk (RC1c)	1	1
2024 Precipitation (RC2a)	2	2
Multiple Dry Years (RC2aa)	2	2
Wildfire Risk (RC2b)	3	3
Geology (RC2c)	N/A	3
Water Quality Aquifer Risk (RC2i)	3	3
Subsidence (RC2d)	2	N/A
Basin Salt (RC2e)	3	3
Overdrafted Basin (RC2f)	2	N/A
Chronic Declining Water Levels (RC2g)	3	N/A
Surrounding Land Use (RC2j)	3	3
Dry Domestic Well Susceptibility in Basins (RC3a)	5	N/A
Domestic Well Density in Fractured Rock Areas (RC3c)	N/A	5
Reported Household Outage on Domestic Well (RC5a)	5	5

Key:

N/A = not applicable

Table 3-2. Water Shortage Vulnerability Explorer Indicators Used in the Development of Physical Vulnerability Score

Indicator Name1	Indicator Description
Climate Change	
Temperature Shift (RC1a)	Projected change in max temperatures by mid-century
Saline Intrusion Projected (RC1b)	Spatial extent of projected 1-meter sea level rise by 2040 into coastal aquifers
Wildfire Risk (RC1c)	Projected area burned by 2035–2064
Current Environmental Conditions and Events	
2024 Precipitation (RC2a)	If Water Year 2024 precipitation was less than 70 percent of normal.
Multiple Dry Years (RC2aa)	Count of dry years within the last five water years
Wildfire Risk (RC2b)	U.S. Forest Service Wildfire Hazard Potential
Geology (RC2c)	Fractured rock basin within the PLSS
Water Quality Aquifer Risk (RC2i)	SAFER Needs Assessment 2024 water quality composite score
Subsidence (RC2d)	Amount of subsidence as measured by remote sensing
Basin Salt (RC2e)	Presence of saltwater intrusion into coastal aquifer

Indicator Name ¹	Indicator Description
Overdrafted Basin (RC2f)	SGMA critically overdrafted groundwater basin
Chronic Declining Water Levels (RC2g)	Amount of declining groundwater levels over the last 20 years (Water Years 2003–2023)
Surrounding Land Use (RC2j)	Proportion of irrigated agriculture in PLSS
Infrastructure Susceptibility	
Dry Domestic Well Susceptibility in basins (RC3a)	Dry well susceptibility
Domestic Well Density in Fractured Rock Areas (RC3c)	Density of well completion reports
Record of Shortage	
Reported Household Outage (RC5a)	Presence of one or more households with reported outages in PLSS

Notes:

¹ Abbreviations are included next to Indicator Name (i.e., “RC1a”) for clarity to underlying methodology

Key:

PLSS = Public Land Survey Section

SAFER = Safe and Affordable Funding for Equity and Resilience Program

SGMA = Sustainable Groundwater Management Act

Table 3-3. Water Shortage Vulnerability Explorer Indicators Used in the Development of Social Vulnerability Score

Indicator Name	Indicator Description
Socioeconomic Status	
Poverty Level	Percent of persons below poverty level
Unemployment	Percent of persons aged 16 years of age or older that are unemployed
Per Capita Income	Per capita income
Language and Education	
Education Attainment	Percent of persons without a high school diploma
English Language Proficiency	Percent of persons who speak little to no English
Demographics	
Elderly Population	Percent of persons 65 years of age or older
Non-Adult Population	Percent of persons 17 years of age or younger
Minority Population	Percent of persons that are in a minority population
Disability	Percent of persons 5 years of age or older with a disability
Single Parent Households	Percent of single-parent households
Housing and Transportation	
Multi-Unit-Housed Population	Percent of persons living in a multi-unit structure
Mobile Home-Housed Population	Percent of persons living in a mobile home
Crowded Conditions	Percent of persons living in conditions with more than one person per room

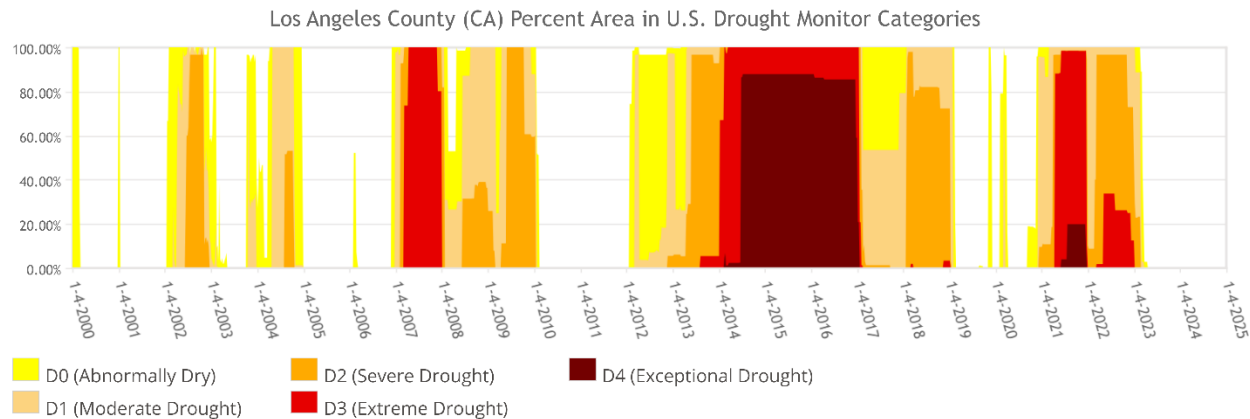
Indicator Name	Indicator Description
No Vehicle Access	Percent of households with no vehicle available
Race and Ethnicity	
Persons of Color	Percent of persons that identify with a race other than White or identify ethnically as Hispanic or Latino

3.3 Hazards in Los Angeles County

This section summarizes the recent drought, projected climate change, current water quality, and groundwater hazards in the County. Section 3.4 provides more detail on the vulnerabilities related to these hazards.

3.3.1 Drought

The County experienced what the U.S. Drought Monitor categorizes as “Exceptional Drought” from 2014 to 2017, and again in 2021 to 2022, as shown in Figure 3-1. The figure highlights the cyclical nature of droughts within the County, where periods of “Extreme Drought” or “Exceptional Drought” are followed by periods without drought (National Drought Mitigation Center and United States Department of Agriculture, and National Oceanic and Atmospheric Administration 2024).



From the U.S. Drought Monitor website, <https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx>, 11-5-2024



Source: [Time Series | U.S. Drought Monitor](#), Accessed: 11/2024

Figure 3-1. Occurrence of Drought in Los Angeles County

3.3.2 Climate Change

According to California’s Fourth Climate Change Assessment, climate change has increased both average temperatures and the frequency and intensity of heat waves or extreme heat events. While global temperature increases are between 1.8 degrees Fahrenheit (°F) to 3.6°F, local observed increases that affect neighborhoods and ecosystems are more variable and often of greater magnitude. The Los Angeles Region Report subsection predicted changes over this century to include continued warming throughout the Los Angeles region, with maximum average temperatures projected to increase around 4°F to 5°F by mid-century, and 5°F to 8°F by the late 21st century (Hall et al. 2018).

Droughts in California are triggered by a lack of large winter storms, and water shortages are further exacerbated by high temperatures, which increase the evaporative loss of water from soils, rivers,

canals, and reservoirs, an increase in the demand for landscape irrigation in developed areas like those in Los Angeles County. Drought conditions, particularly when persisting for several years, can cause mental and physical stress in people, reduce the number of workable farm-labor days, and lead to deteriorated air and water quality (Greene 2018; Barreau et al. 2017).

Historical data show daily precipitation extremes have intensified in most areas of the country, including California. As the atmosphere continues to warm, extreme precipitation events could become more frequent, as storms can hold about 6 percent to 7 percent more water for each degree Celsius of warming. Climate model simulations that consider such effects suggest this trend will continue. By the late 21st century, the wettest day of the year is expected to increase across most of the Los Angeles region, with some locations experiencing 25 percent to 30 percent increases under RCP8.5 (Hall et al. 2018). Increased frequency and severity of atmospheric river events are also projected to occur for this region (Hall et al. 2018).

Simulations of future climate indicate only modest changes in annual precipitation accumulation, with some shifts in the seasonality of precipitation that may be relevant for water management: less precipitation from November through January, and possibly more from February through May.

Anthropogenic climate change has contributed to the increase in areas burned in wildfires in the American West. Specifically, rising temperatures, increased periodic droughts, and periodic Santa Ana winds increase the likelihood of wildfires. An example of this is the numerous wildfires that ignited throughout the County in January 2025, including the Palisades and Eaton Fires. Wildfires can damage infrastructure and cause water quality issues, including those discussed in Section 3.3.3.

3.3.3 Water Quality

The County faces various water quality concerns affecting both surface water and groundwater. Stormwater and urban runoff are major sources of pollution, especially following wildfires and heavy rain events. Rain washes debris, ash, chemicals, and other pollutants from the land into waterways, which leads to elevated levels of contaminants. These conditions strain water treatment systems, making it difficult to deliver clean water. Surface waters in the County are also impacted by landscaping fertilizer application, domestic animals, and wildlife, which contribute to bacteria and nutrients. As of now, many waterbodies and waterways in the County are classified as having “impaired water quality” due to these and other sources of contamination (Los Angeles County n.d.-b).

Groundwater quality in the County is impacted by pollutants stemming from historic and current land uses, such as pesticides and fertilizers from agriculture, toxic substances from leaking tanks and landfills, seawater intrusion into coastal aquifers, and illegal discharges (Los Angeles Regional Board 2024). Naturally occurring arsenic and chromium-6 from geological formations in the region are also constituents of concern for groundwater.

Monitoring wells managed by GSAs in the County reveal several key groundwater quality constituents identified in localized concentrations. In the Santa Monica subbasin, areas with past and present industrial activity, such as eastern Playa Vista, show elevated total dissolved solids (TDS) and sulfate values. This subbasin also has a history of MTBE contamination, a chemical used as a fuel additive (Santa Monica GSA Basin 2022). The Santa Clara River Valley East GSP has identified high concentrations of salt and nutrients in local areas, as well as perchlorate, tetrachloroethylene (PCE), trichloroethylene (TCE), and per- and polyfluoroalkyl substances (PFAS) (Santa Clara Valley GSA 2022). In the Spadra Basin GSP, monitoring wells have detected exceedances in nitrate, PCE, TCE, TDS, MTBE, chloride, and sulfate

(Spadra Basin GSA 2022). The County is also aware of private wells and small water systems having detected elevated values of arsenic and chromium-6 in their drinking water.

The key water quality constituents are summarized below:

- *Arsenic*: This constituent is a metalloid that occurs naturally in the environment, including soils and rock, and is also introduced by anthropogenic activities such as pesticide application and mining of metals. Ingestion of arsenic via drinking water has led to documented human deaths (ATSDR 2007).
- *Chromium-6*: Chromium occurs naturally in the environment and has several forms, including chromium-6, which is listed as a carcinogen by the International Agency for Research on Cancer (ATSDR 2012).
- *Nitrate (and nitrite)*: These constituents occur naturally in the environment and can also be introduced via fertilizers, mining, septic and landfill leaks, and animal and industrial waste (among other pathways). Ingestion of nitrates is known to cause methemoglobinemia in infants and may lead to some types of cancer (ATSDR 2017).
- *Salinity*: Salinity, a type of dissolved solid, is driven by coastal seawater intrusion due to the overextraction of freshwater aquifers in coastal regions. This can be toxic to plants and animals dependent on fresh water (USGS CA Water Science Center n.d.).
- *Chloride*: This dissolved solid has seen increased prevalence in US waterways, especially in urban areas, due to anthropogenic activity (USGS 2019).
- *TDS*: TDS are the concentration of dissolved organic and inorganic substances in water, often naturally present in groundwater due to the characteristics of an aquifer but also exacerbated by human activity. Elevated TDS value can impact the water's taste, intend use, and contribute to the corrosion of plumbing fixtures (USGS 2019)
- *Sulfate*: Sulfate is naturally present in many aquifers due to the dissolution of minerals. Anthropogenic sources include sewage infiltration, fertilizer, detergents, and other industrial materials. Excessive exposure to sulfate can have health impacts on people and wildlife (Wang and Zhang 2019).
- *Perchlorate*: This constituent occurs naturally and anthropogenically. It can be manufactured and used in chemical manufacturing and found in products such as rocket propellants, explosives, and fireworks. It has also been found in public drinking water systems and food (EPA 2024).
- *MTBE*: This constituent is a compound historically added to gasoline. Leaks from storage tanks introduce chemicals into soil and groundwater. No known human studies are available for possibility of death and cancer following exposure (ATSDR 2023).
- *Elevated bacteriological levels*: Such levels can be caused by seepage of sewage into well water and can lead to gastrointestinal disease (EPA 2024).
- *PFAS*: PFAS are human-made substances used in industry and manufacturing due to their resistance to heat, water, and oil. PFAS bioaccumulate in the body and are toxic even at low levels, causing cancer and adverse liver, immune, and thyroid effects (SWRCB 2025).

- *PCE and TCE*: PCE and TCE are chlorinated solvents known to contaminate water sources through industrial and manufacturing activity. Chronic exposure to these constituents has been linked to various cancers (SWRCB 2017a; SWRCB 2017b)

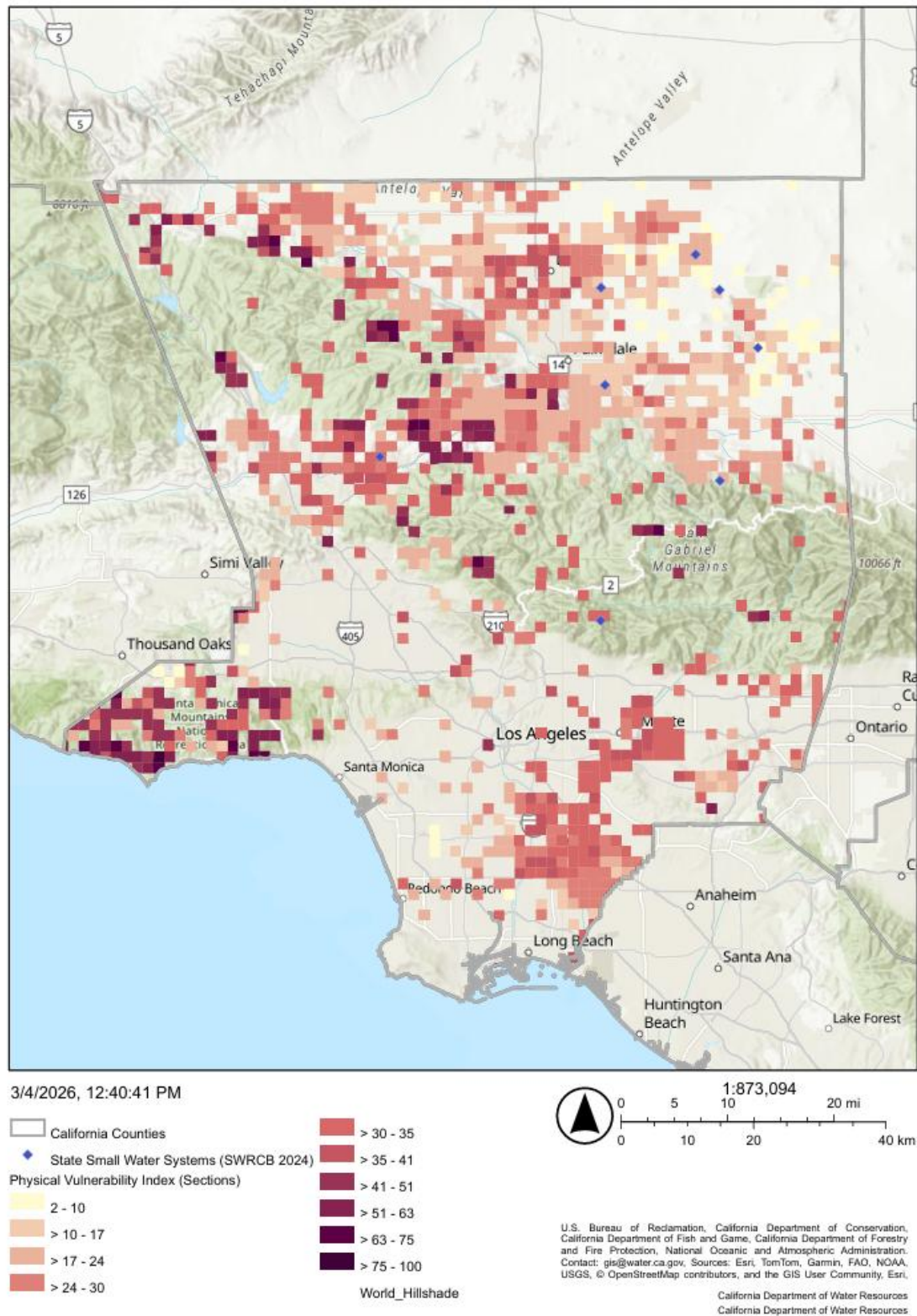
3.4 Risk Assessment Results

This section summarizes the risk assessment results, including the County's physical and social vulnerability scores, followed by discussions of the individual indicators driving physical vulnerability. This information was used to identify the regions of water supply shortage vulnerability described in Section 3.5.

3.4.1 Physical Vulnerability and Social Vulnerability Scores

Physical vulnerability scores within the County are shown in Figure 3-2, with darker shaded areas (or PLSSs) indicating higher physical vulnerability scores. Physical and social vulnerability were scored for the entire State, but the figures in this DRP show PLSSs only containing domestic wells and/or SSWs. It should be noted that domestic well locations are approximate based on well completion report data, which may be inaccurate and/or place the well not at the actual well location. As a result, the number of domestic wells may be overestimated, and the placement of wells may not reflect actual locations. Areas with high physical vulnerability include the Santa Monica Mountains, Santa Clarita Valley through San Francisquito/Bouquet Canyon, Castaic, Soledad Canyon, and western Antelope Valley. Regions with a medium to high physical vulnerability include Santa Clarita Valley, Palmdale, and Lancaster.

Physical Vulnerability in LA County

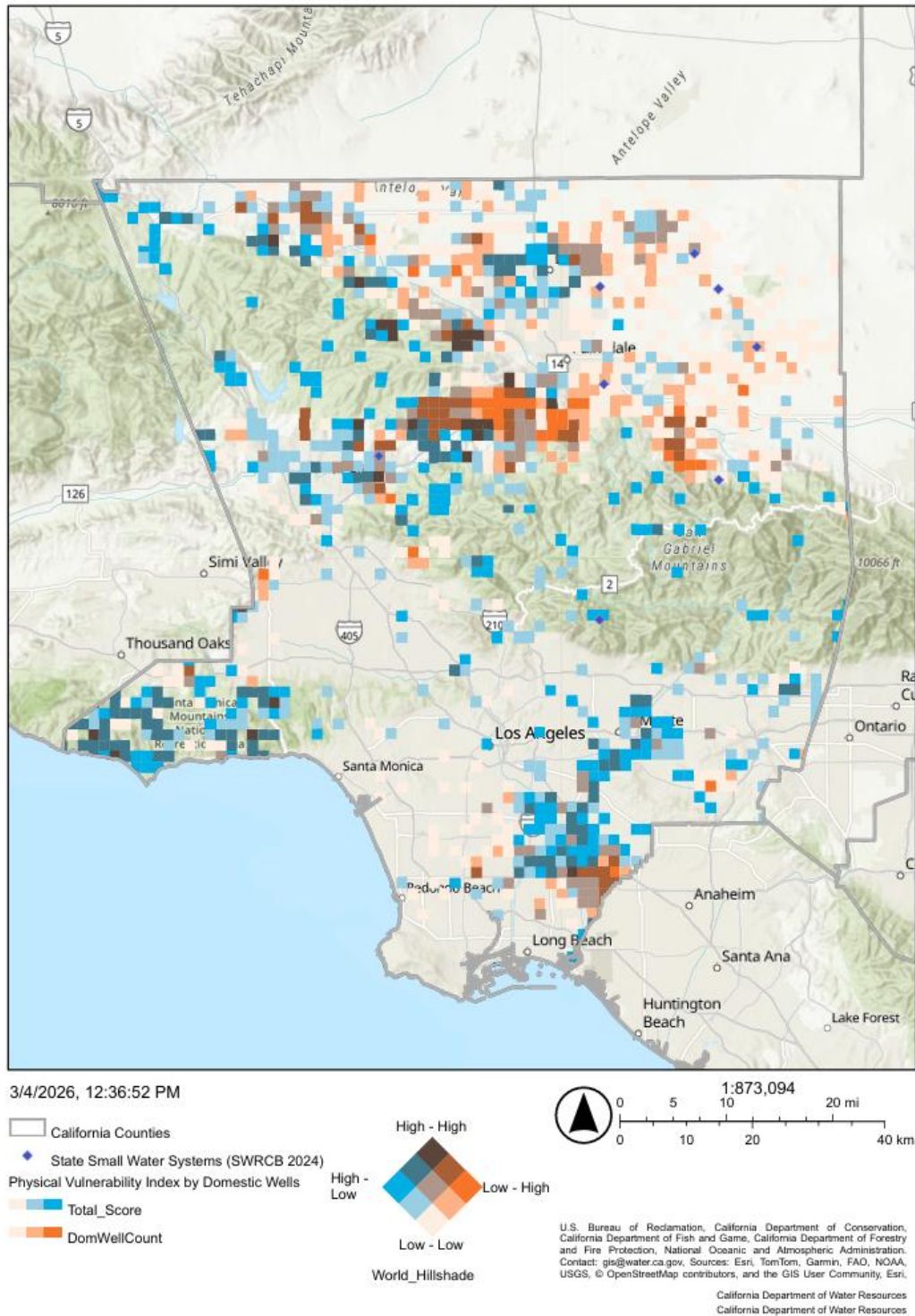


Source: Water Shortage Vulnerability Explorer Tool, [Water Shortage Vulnerability Explorer Tool](#), Accessed: 3/2026

Figure 3-2. Physical Vulnerability in Los Angeles County

Figure 3-3 displays the intersection of physical vulnerability, and approximate domestic well density within the County. A darker shaded area indicates a higher presence of domestic wells within an area with high physical vulnerability. A blue area has a higher physical vulnerability but minimal domestic wells, and an orange area has a high presence of domestic wells but low physical vulnerability. This figure was used to identify highly vulnerable regions containing domestic wells and SSWs. The areas with high physical vulnerability and a higher density of domestic wells include the Santa Monica Mountains region, Lancaster, Santa Clarita Valley through San Francisquito/Bouquet Canyon, Castaic, Soledad Canyon, and western Antelope Valley. SSWs, shown as blue diamonds, are generally located near existing domestic wells indicating potential overlapping vulnerabilities between SSWs and domestic well users.

Physical Vulnerability by Domestic Wells in LA County



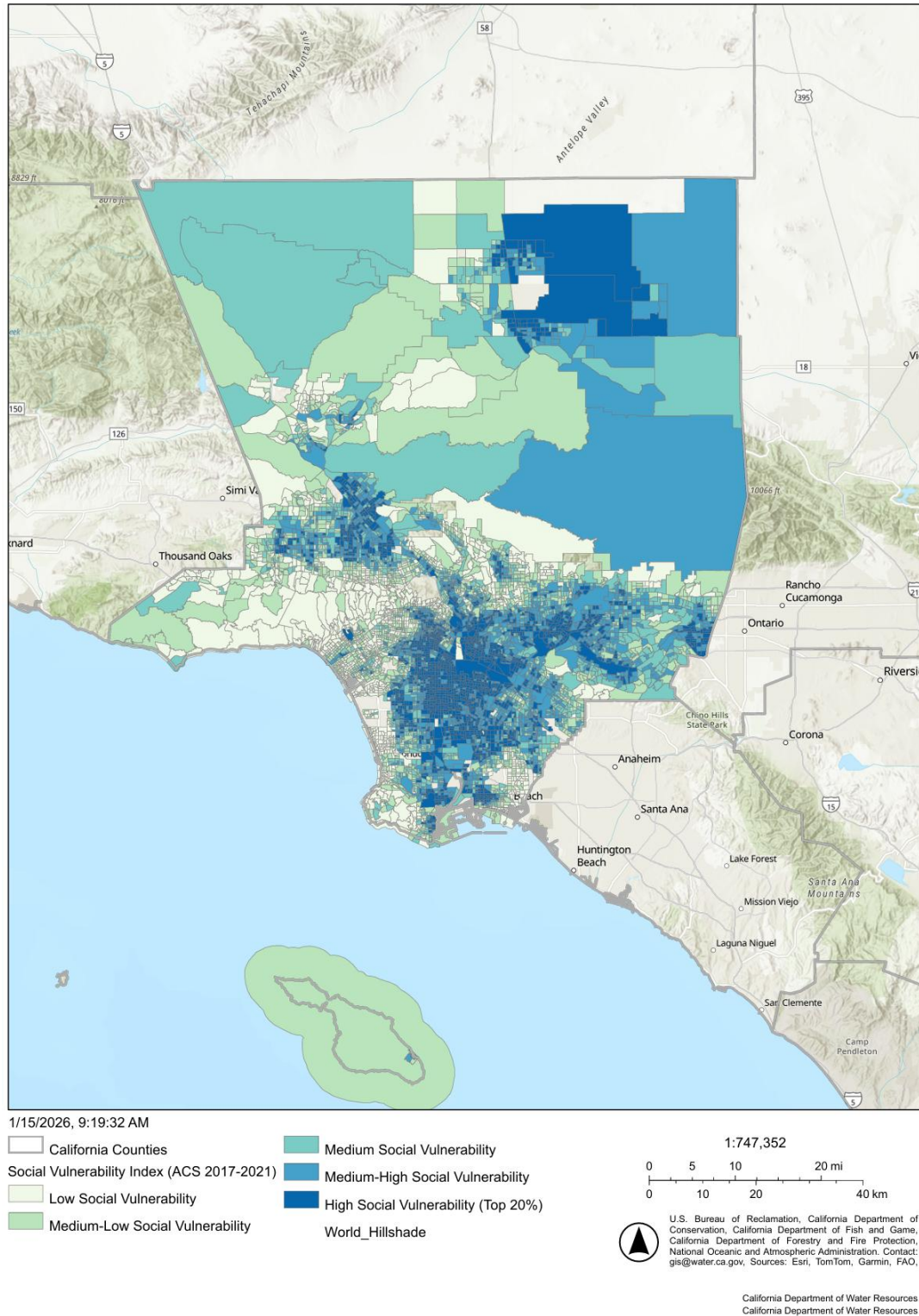
Source: Water Shortage Vulnerability Explorer Tool, [Water Shortage Vulnerability Explorer Tool](#), Accessed: 3/2026

Figure 3-3. Intersection of Physical Vulnerability and Density of Domestic Wells Systems in Los Angeles County

Social vulnerability is also an important factor to consider in the risk assessment because rural communities often lack access to resources and assistance during water shortage emergencies. Social vulnerability is high in Palmdale, Lancaster, and Santa Clarita (Figure 3-4). Comparing Figure 3-3 and Figure 3-4, the County can better understand where high physical and social vulnerability overlap and how compounding indicators contribute to water shortage risk.

The Los Angeles County Climate Vulnerability Assessment Social Sensitivity Index similarly characterizes the communities of Lancaster and Palmdale as regions with high social sensitivity (Los Angeles County Chief Sustainability Office 2024), affirming risk assessment results.

Social Vulnerability Index in LA County



Source: Water Shortage Vulnerability Explorer Tool, [Water Shortage Vulnerability Explorer Tool](#), Accessed: 1/2026

Figure 3-4. Social Vulnerability Scores in Los Angeles County

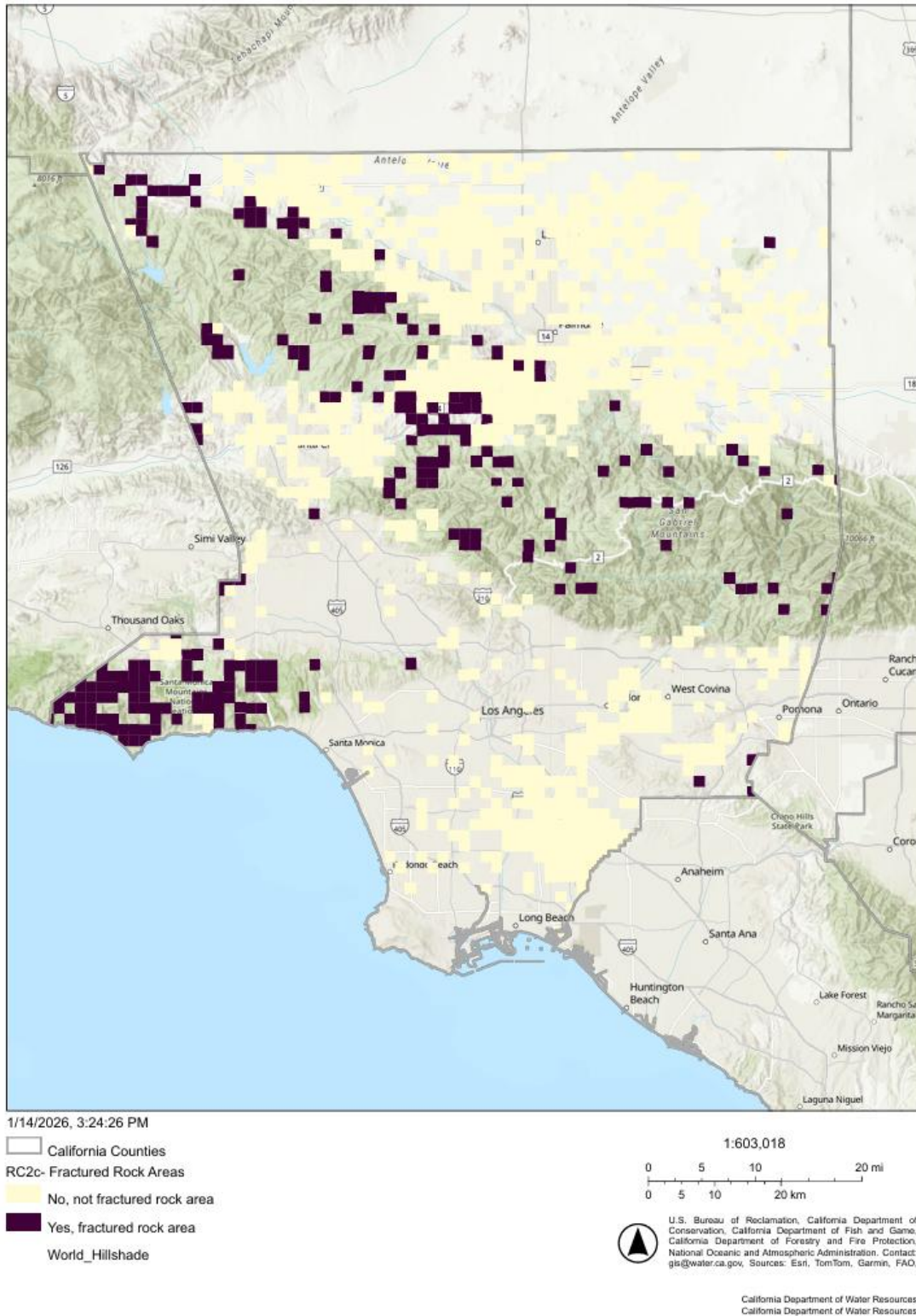
3.4.2 Physical Vulnerability Indicators

The risk assessment identifies regions containing domestic wells and SSWs that may be vulnerable to water shortage. Each physical vulnerability indicator is described in more detail in Table 3-3.

Within the County, the indicators driving physical vulnerability are domestic well density in a fractured rock basin, potential water quality risk, wildfire risk, and multiple dry years. Each driving indicator is discussed more below.

Due to the complex nature of water flow in fractured rock areas, there is no standard way to measure water supply in this type of geology. Domestic well density per PLSS was calculated as a proxy to represent competing water demand in fractured rock areas. Fractured rock areas are found sporadically throughout the San Gabriel Mountains heading east and are more prevalent in the Santa Monica Mountains (Figure 3-5). There is generally low competing demand in fractured rock areas, except for areas in the Santa Clarita Valley region through Agua Dulce Canyon and Pelon Valley, Juniper Hills/Pearblossom, and southeast Los Angeles (Figure 3-6). A high density of domestic wells increases demand for water and stresses the groundwater supply. Figure 3-5 and Figure 3-6 show fractured rock area is PLSSs with domestic wells and SSWs.

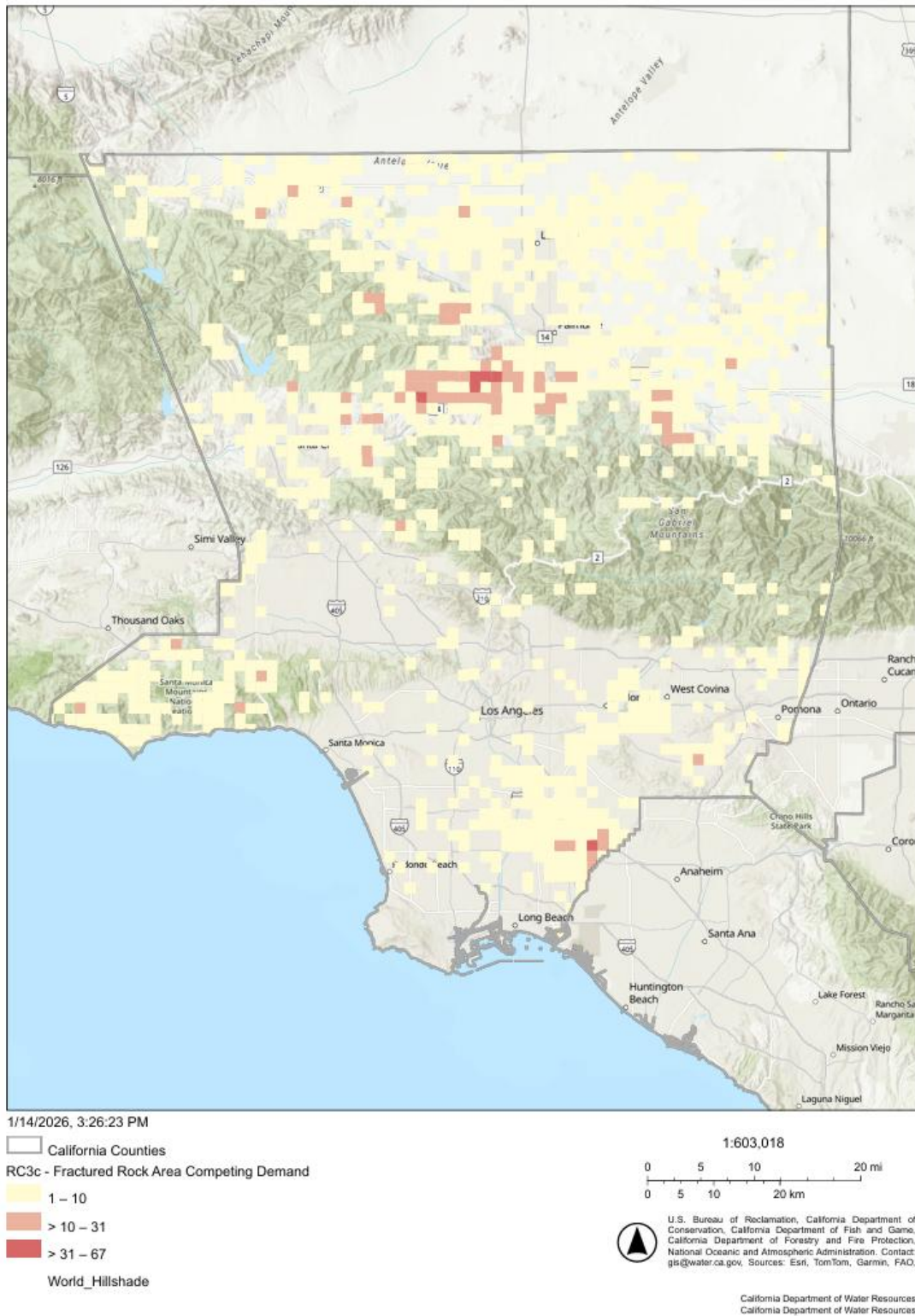
Fractured Rock Areas in LA County



Source: Water Shortage Vulnerability Explorer Tool, [Water Shortage Vulnerability Explorer Tool](#), Accessed: 1/2026

Figure 3-5. Fractured Rock Areas in Los Angeles County

Fractured Rock Areas with Competing Demand in LA County

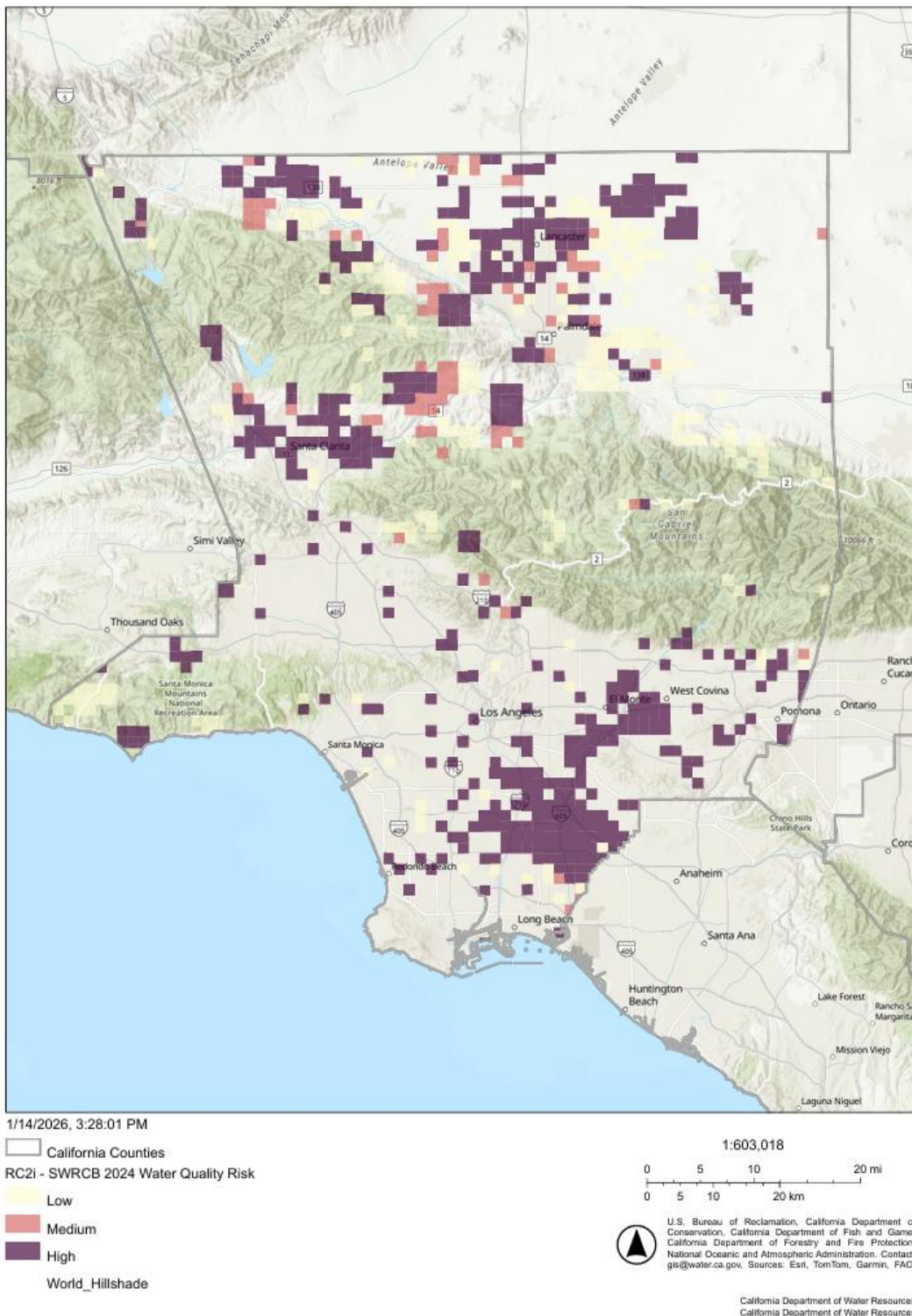


Source: Water Shortage Vulnerability Explorer Tool, [Water Shortage Vulnerability Explorer Tool](#), Accessed: 1/2026

Figure 3-6. Density of Domestic Wells in Fractured Rock Area in Los Angeles County

The quality of groundwater in the County can impact vulnerability due to the costly treatment and reduced availability of water for drinking, agricultural, or industrial purposes. Figure 3-7 shows potential water quality risk in aquifers. Regions with potential water quality issues include the Santa Monica Mountains, Santa Clarita, Castaic, Bouquet/Soledad/Mint Canyon, Acton/Paris, Lakeview, Lancaster/Palmdale/Little Rock, Redman, Lake Los Angeles, Southeast Los Angeles regions, and portions of the San Gabriel Valley.

Water Quality Aquifer Risk in LA County

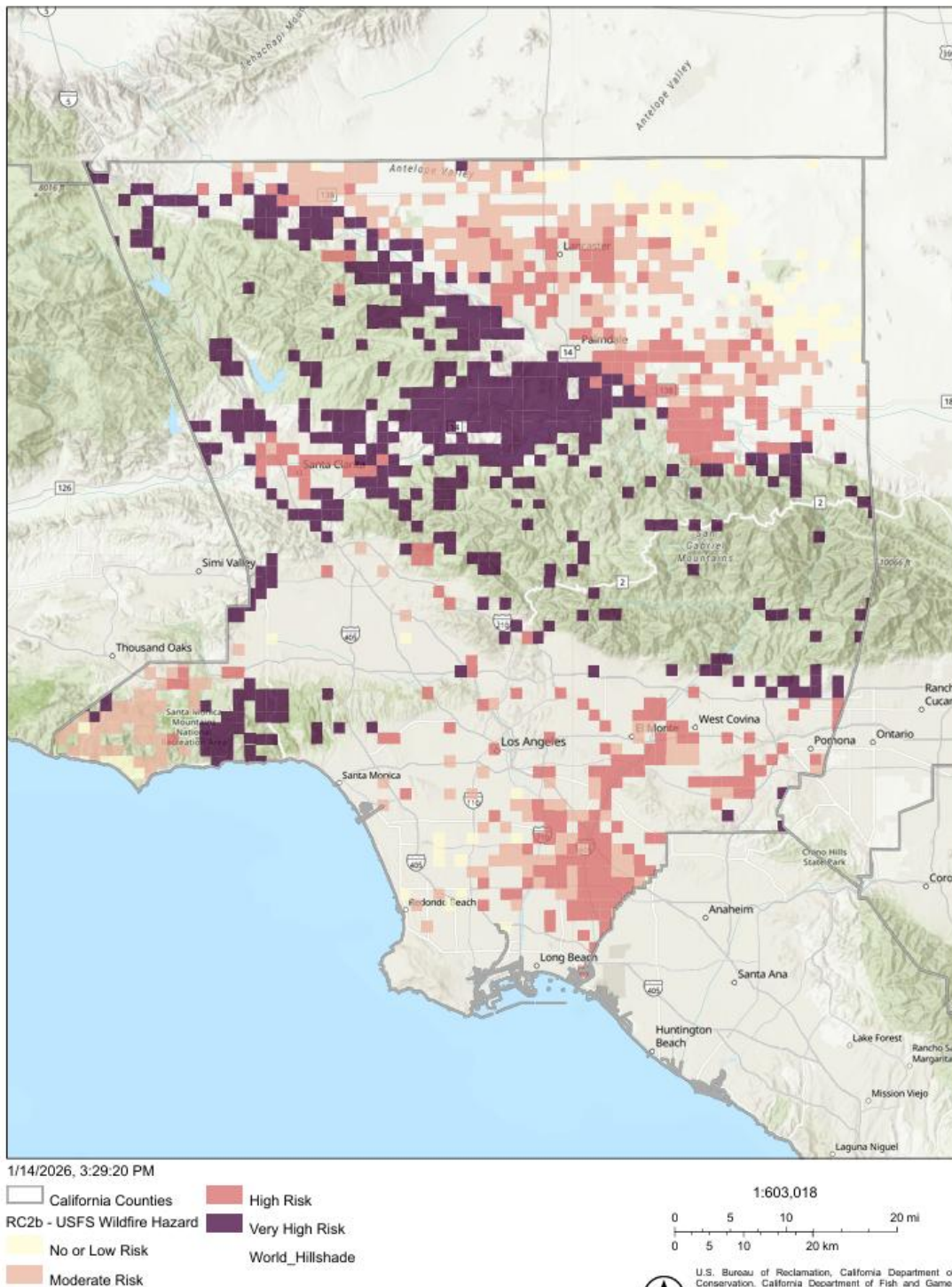


Source: Water Shortage Vulnerability Explorer Tool, [Water Shortage Vulnerability Explorer Tool](#), Accessed: 1/2026

Figure 3-7. Potential Water Quality Aquifer Risk in Los Angeles County

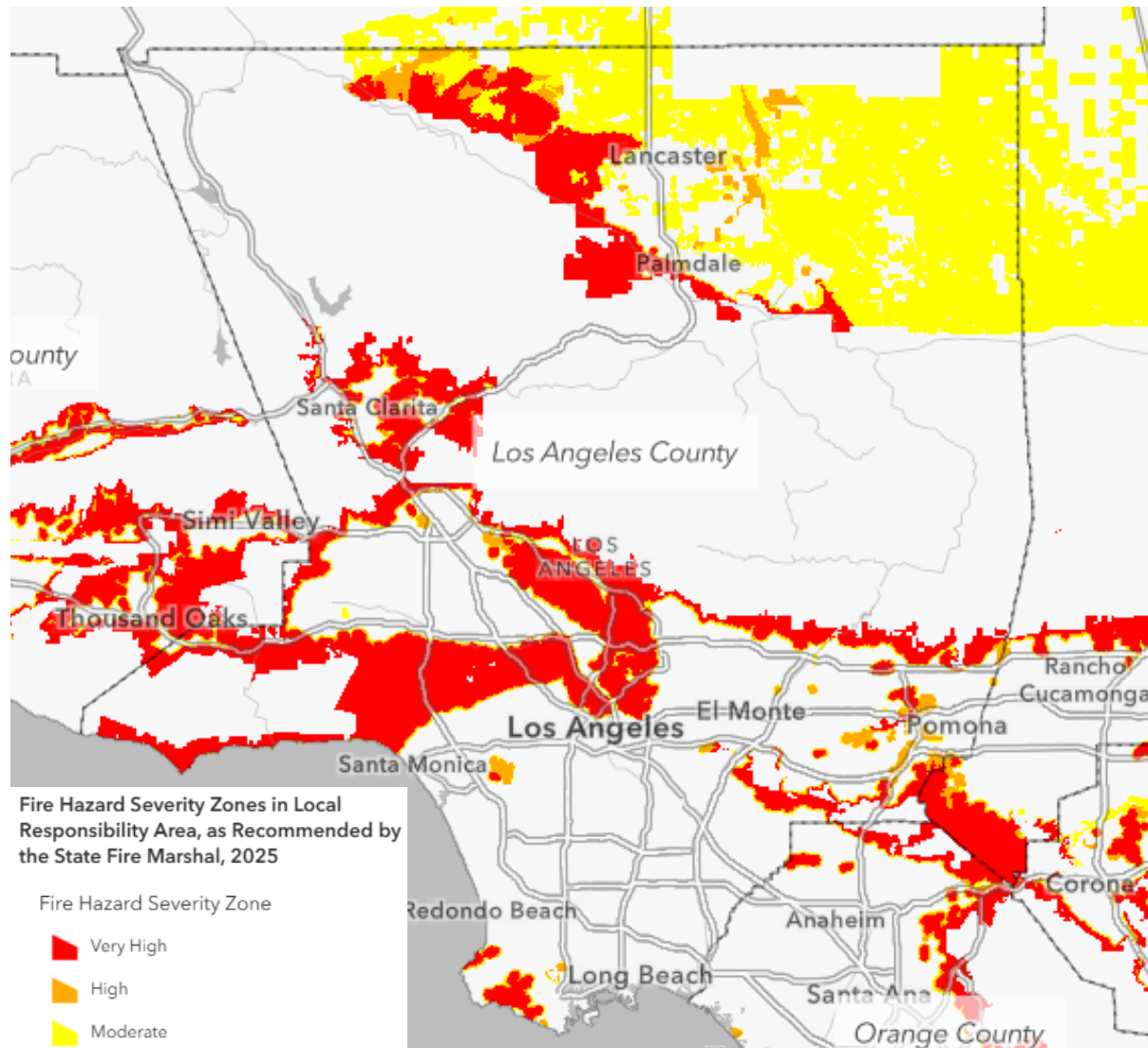
Figure 3-8 and Figure 3-9 shows that the County has primarily very high and high wildfire risk. Areas with very high risk are concentrated in the Antelope Valley (including Castaic, Caswell, Bouquet Canyon, Agua Dulce/Acton, and Largo Vista/Valyermo), Malibu/Topanga, and San Gabriel Valley (Live Oak and San Gabriel Canyon, including portions of the San Gabriel Valley). Wildfire can cause extreme damage to the natural environment and processes, as well as infrastructure like pipelines and storage tanks. For domestic wells and SSWs, it may be difficult to financially recover from wildfire damage. Based on feedback from DRP WG Members, the 2025 CalFire Fire Hazard Severity Zones map (Figure 3-9) was cross-referenced to more holistically assess wildfire risk in the County. The USFS map (Figure 3-8) captures wildfire risk for more areas, while the CalFire map (Figure 3-9) only shows State and Local Responsibility Areas. Overall, moderate, high, and very high wildfire severity areas are very similar between the two sources. However, the USFS identifies parts of the Antelope Valley (including Agua Dulce and Acton) as very high risk while the CalFire map does not identify a fire hazard severity for these communities. The CalFire map identifies Malibu and Rancho Palos Verdes as very high wildfire risk, whereas the USFS identifies Malibu as moderate or low risk and does not identify a fire hazard severity for Rancho Palos Verdes. While the CalFire map was cross-referenced, this information is not factored into the composite Physical Vulnerability scores.

USFS Wildfire Hazard in LA County



Source: Water Shortage Vulnerability Explorer Tool, [Water Shortage Vulnerability Explorer Tool](#), Accessed: 1/2026

Figure 3-8. United States Forest Service Wildfire Hazard in Los Angeles County

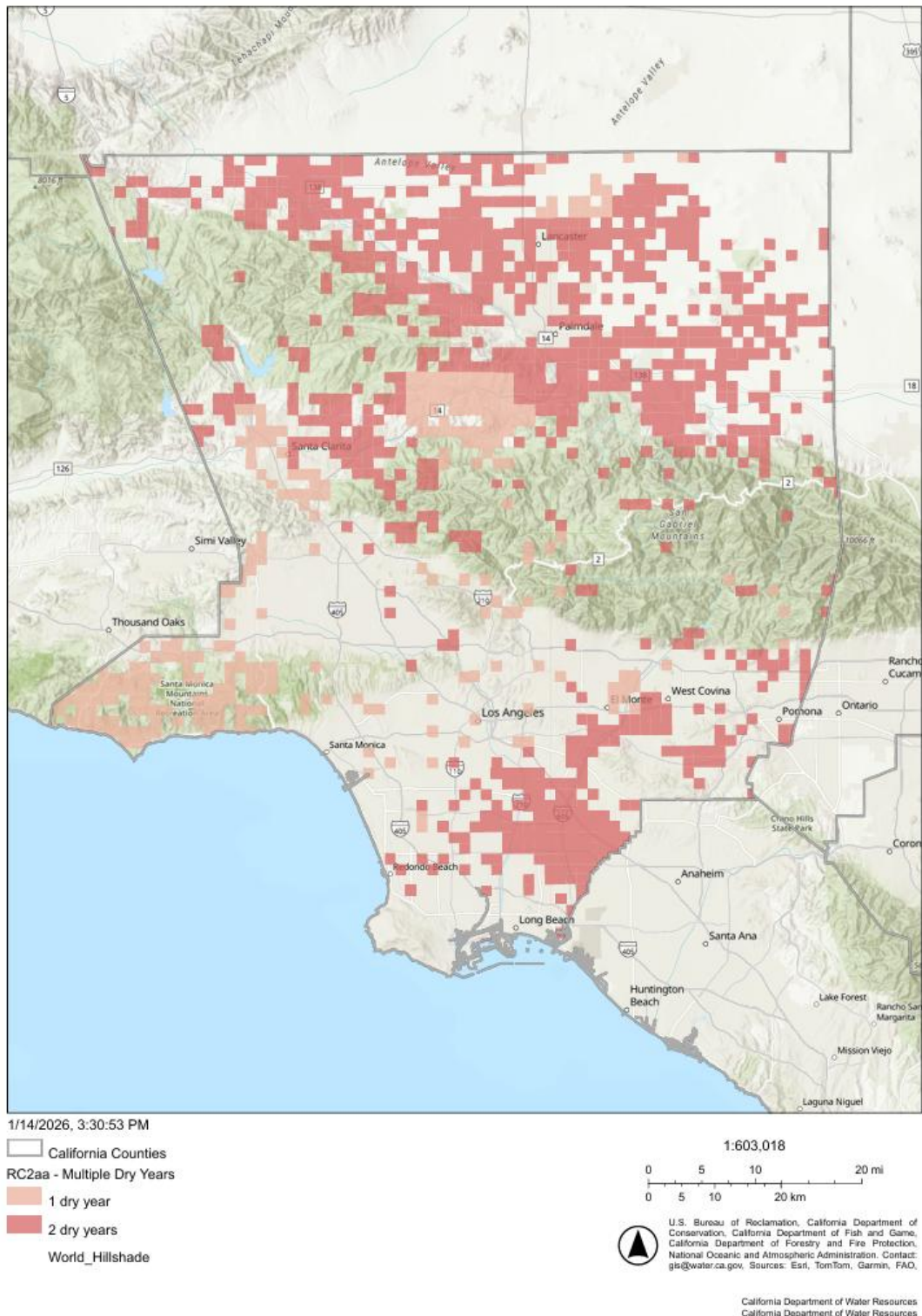


Source: [CalFire](#) Accessed: 6/2025

Figure 3-9. 2025 CalFire Fire Hazard Severity Zones

Figure 3-10 shows the number of years where precipitation was below 70% of the historical average for a given water year, or dry year, throughout the County during a five-year period. Much of the County has experienced two dry years, particularly most of the Antelope Valley region, Santa Clarita Valley, Southeast Los Angeles, and the eastern portion of the San Gabriel Valley. A higher number of recent dry years may increase the physical vulnerability of water supply conditions due to resource depletion and prolonged periods without sufficient water.

Multiple Dry Years in LA County



Source: Water Shortage Vulnerability Explorer Tool, [Water Shortage Vulnerability Explorer Tool](#), Accessed: 1/2026

Figure 3-10. Multiple Dry Years in Los Angeles County

Table 3-4 summarizes all physical vulnerability indicators within the County.

Table 3-4 Summary of Observed Conditions for Physical Vulnerability Indicators in Los Angeles County

Physical Vulnerability Indicator		¹Observed Conditions
Climate Change		
Temperature Shift (RC1a)		The highest projected change in the maximum temperature by mid-century shows an increase of greater than 3.3°F to 4°F, primarily in Santa Clarita Valley, Antelope Valley, Glendora, and Azusa. Increased temperatures could increase water supply demands from users, evapotranspiration, and others, thereby increasing vulnerability to drought and/or water shortage impacts.
Saline Intrusion Projected (RC1b)		A majority of the County is not tidally influenced and is not anticipated to experience saltwater intrusion. The select communities that may experience saltwater intrusion include regions in the Santa Monica Mountains, Malibu coastlines, Ballona Creek, Dominguez Channel, and along Coyote Creek. There are existing operations along the coastline that inject recycled water to maintain a saline intrusion barrier for the West Coast and Central Groundwater Basins. The West Coast Basin has an historic saline plume that is being mitigated over time.
Wildfire Risk (RC1c)		Projections indicate moderate to severe increases in wildfire risk throughout the County by 2035–2064. The largest increase is projected along the wildland-urban interface within the Central regions of the Antelope Valley (Agua Dulce and Soledad Canyon), the eastern regions (Paradise Springs and Mile High) and portions of the San Gabriel Mountains and Angeles National Forest, and across the south- and north- facing slopes of the Santa Monica Mountains. The projected increase in wildfire frequency and severity includes inherent high risks that increase the vulnerability of water sources.
Current Environmental Conditions and Events		
2024 Precipitation (RC2a)		Precipitation in Water Year 2024 was above the historic average in all areas in the County. The start of Water Year 2024 brought record or near-record dryness during the region’s rainy season that intensified drought conditions in Southern California. Below average precipitation trends are expected to continue through Water Year 2025 (U.S. Drought Portal 2025).
Multiple Dry Years (RC2aa)		Most of the County has experienced two dry years over the last five years, such as Antelope Valley, Santa Clarita Valley, Southeast Los Angeles, and the eastern portion of the San Gabriel Valley. A higher number of recent dry years may increase the physical vulnerability of water supply conditions due to resource depletion and prolonged periods without sufficient water.

Physical Vulnerability Indicator	¹ Observed Conditions
Wildfire Risk (RC2b)	Most of the County's area is currently at very high and high wildfire risk. Very high-risk areas are concentrated in the Antelope Valley (including Castaic, Caswell, Soledad/Mint Canyon/Bouquet Canyon, Pelona Valley, Leona Valley, and Mile High/Largo Vista), Malibu/Topanga, and San Gabriel Valley (Live Oak and San Gabriel Canyon). Regions with higher wildfire risks contribute to higher physical vulnerability for water sources. In January 2025, several significant wildfires ignited across Los Angeles County, including in Pacific Palisades, Malibu, Altadena, Pasadena, and near Castaic Lake. Smaller wildfires also occurred throughout the County during the same period.
Geology (RC2c)	Fractured rock is present across the Santa Monica Mountains-Malibu area and throughout the western portion of the Antelope Valley (Caswell, Three Points, Castaic, Soledad Canyon), and throughout San Gabriel Mountains. Water availability in fractured rock areas is more difficult to monitor and, therefore, more uncertain for those relying on it as a source of water.
Water Quality Aquifer Risk (RC2i)	This indicator shows groundwater likely accessed by domestic wells or state small water systems that may contain concentrations of constituents above regulatory levels. Regions with potential water quality issues include the Santa Monica Mountains, Santa Clarita, Castaic, Bouquet/Soledad/Mint Canyon, Acton/Paris, Lakeview, Lancaster/Palmdale/Little Rock, Redman, Lake Los Angeles, Southeast Los Angeles regions, and portions of the San Gabriel Valley.
Subsidence (RC2d)	No subsidence has been reported in the County.
Basin Salt (RC2e)	The majority of water in the County is not tidally influenced and is not anticipated to experience saltwater intrusion. The select communities that may experience saltwater intrusion include regions in the Santa Monica Mountains, Malibu coastlines, Ballona Creek, Dominguez Channel, and along Coyote Creek, however, Ballona Creek, Dominguez Channel, and Coyote Creek are protected by seawater barrier operations (i.e. injection well barriers and tidal gates).
Overdrafted Basin (RC2f)	Groundwater basins in the County are not considered critically overdrafted.
Chronic Declining Water Levels (RC2g)	Groundwater level declines have been reported in East Los Angeles, Southeast Los Angeles, San Gabriel Valley (El Monte/Baldwin Park), Santa Clarita, Lancaster/Quartz Hill, Sun Village, and Crystalline/Largo Vista. Consistently declining groundwater levels cause several interconnected challenges and consequences, exacerbating the vulnerability of the groundwater system.
Surrounding Land Use (RC2j)	There is minimal farming in the Lancaster/Redman/Palmdale area. Presence of agricultural activities increases demand for groundwater suppliers and may cause water quality concerns for domestic wells and SWSs.

Physical Vulnerability Indicator		¹ Observed Conditions
Infrastructure Susceptibility		
Dry Domestic Well Susceptibility in basins (RC3a) – Alluvial Basin	This indicator analyzes locations where there are many susceptible wells that may go dry if the current groundwater trends in the County continue. Areas with high dry well susceptibility are Antelope Valley, Juniper Hills/Cima Mesa, Leona Valley, and the Sierra Pelona Mountains region. Additionally in the Antelope Valley, local leaders have relayed that Acton and Agua Dulce have both experienced dry domestic wells in a previous drought.	
Domestic Well Density in Fractured Rock Areas (RC3c)	Because it’s difficult to measure water supply in fractured rock areas, domestic well density was evaluated as a proxy to represent competing demands in this type of geology. Higher density of domestic wells increases susceptibility for outages and groundwater demands, especially in a dry period. There is generally low competing demand in fractured rock areas, except for concentrated areas in the Santa Clarita Valley region through Agua Dulce Canyon and Pelona Valley, the Juniper Hills/Pearblossom area, and portions of Southeast Los Angeles.	
Record of Shortage		
Reported Household Outage on Domestic Well (RC5a)	Areas that have already experienced outages are more likely to experience similar conditions during future dry years due to combinations of aquifer sensitivity/fluctuations and shallow wells. Outages have been reported in the Santa Clarita/Bouquet Canyon region and the City of Los Angeles.	

Note:

¹ Abbreviations are included next to Indicator Name (i.e., "RC1a") for clarity to underlying methodology

Key:

°F = degrees Fahrenheit

SSWS = state small water system

3.5 Risk Assessment Findings

The risk assessment findings identified areas most vulnerable to water shortage, driving physical vulnerability indicators, and social vulnerability (Table 3-5). Regions with high vulnerability are drawn in yellow in Figure 3-11. The County and DRP WG used information from the table and figure were used to develop short-term actions and long-term strategies for domestic wells and SSWSs (see Chapters 4 and 5). Additional information about each vulnerable area is provided below.

Table 3-5. Summary of Risk Assessment Findings in Los Angeles County

Area with Water Shortage Vulnerability and Domestic Wells/SSWSs	Physical Vulnerability Indicators	Social Vulnerability Score	Location in Figure
Antelope Valley	Dry Well Susceptibility in Fractured Rock Basins Multiple Dry Years High Wildfire Risk High Water Quality Risk	Medium-High	A
Santa Clarita/Agua Dulce/Acton	Dry Well Susceptibility in Fractured Rock Basins Multiple Dry Years High Wildfire Risk High Water Quality Risk	Medium-Low	B
Foothills of Santa Susana/Western San Gabriel Valley Mountains	Multiple Dry Years Very High Wildfire Risk High Water Quality Risk	Medium-Low and Medium	C
Santa Monica Mountains	Dry Well Susceptibility in Fractured Rock Basins Very High Wildfire Risk High Water Quality Risk	Low	D
Southeast LA County	Dry Well Susceptibility in Fractured Rock Basins Multiple Dry Years Moderate-High Wildfire Risk High Water Quality Risk	Medium High and High	E
Northwest LA County	Multiple Dry Years Very High Wildfire Risk High Water Quality Risk	Medium-Low	F

Key:

SSWS = state small water system

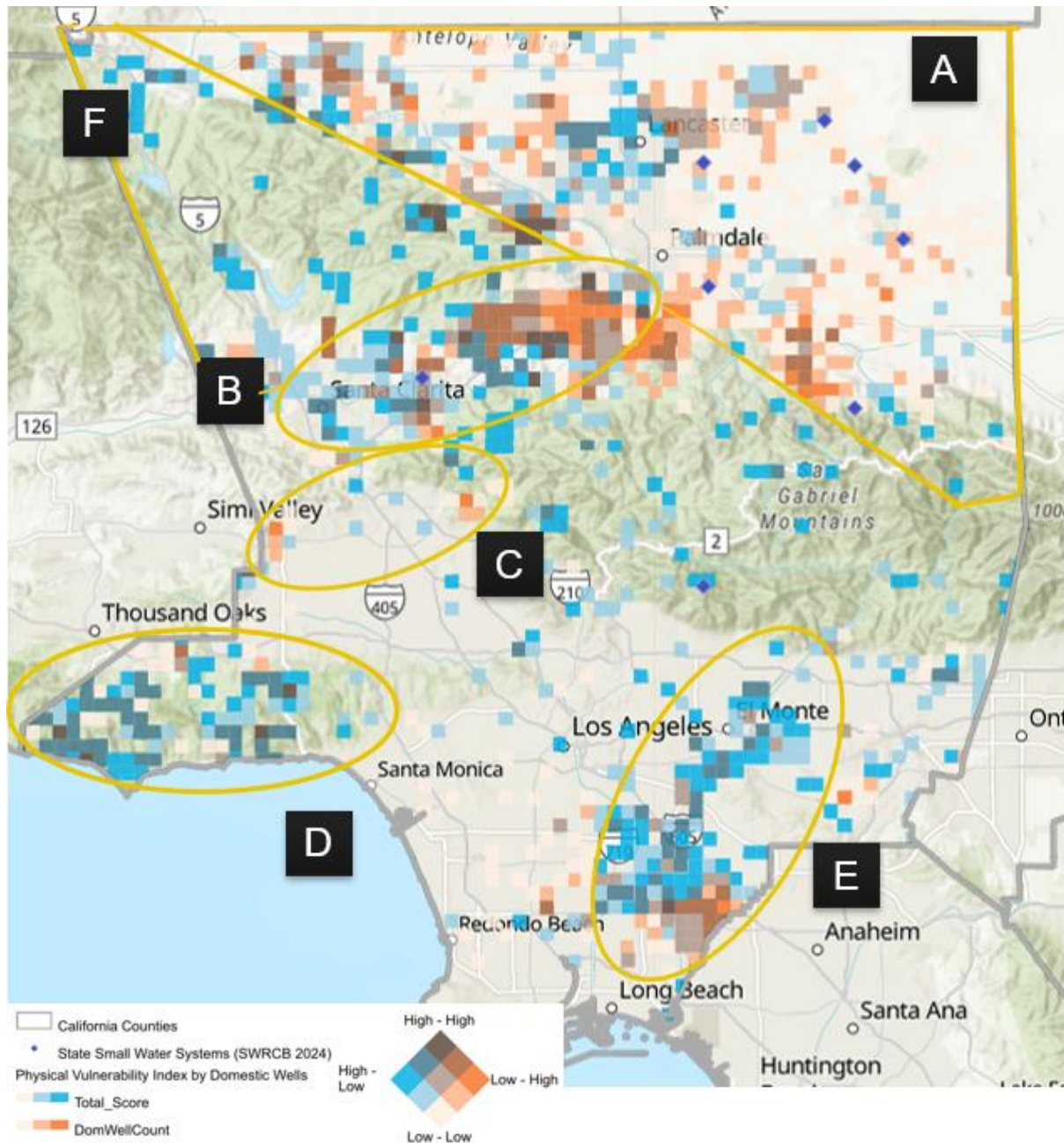


Figure 3-11. Summary of Risk Assessment Findings Showing Areas with Water Shortage Vulnerability and Domestic Wells/State Small Water Systems in Los Angeles County

A description for each of the high vulnerability regions is included below for greater context of each area.

Region A (Antelope Valley) encompasses the southern portion of the Antelope Valley, a landscape that transitions from rural desert communities to the suburban and urban centers of Palmdale and Lancaster. The area is served by a patchwork of small public water systems, SSWS, and domestic wells, many of which rely on the adjudicated Antelope Valley Groundwater Basin for supply. This basin has a history of overdraft, groundwater level decline, and complex water-rights administration, resulting in ongoing management through the court-appointed Watermaster (Antelope Valley Watermaster n.d.).

Although drinking water wells are said to not be impacted, groundwater quality concerns persist due to legacy aerospace and military land uses, such as Edwards Air Force Base (a superfund site) and related industrial facilities, which have contributed to contamination plumes and long-term cleanup operations (EPA n.d.). This region's groundwater-dependent communities are vulnerable to drought, multiple dry years, and wildfire-driven landscape changes.

Region B (Santa Clarita/Agua Dulce /Acton) is shaped by steep, highly erodible mountain slopes that flank the Santa Clara River watershed, producing high sediment loads. Within this region, the Santa Clara River is the primary surface water drainage in the Santa Clara River Valley East Groundwater Subbasin, which is comprised of two aquifers, the Alluvial Aquifer and Saugus Formation (Santa Clarita Valley Groundwater Sustainability Agency 2022). Water levels in groundwater wells from the Alluvial Aquifer are primarily influenced by climatic conditions and have exhibited gradual declines when there are below normal periods of rainfall, followed by rapid recoveries during wet periods (Santa Clarita Valley Groundwater Sustainability Agency 2022). This area has evolved through significant increase in development over the past century, producing a mix of rural homesteads, suburban neighborhoods, and scattered small systems largely in unincorporated Los Angeles County. To the west, the City of Santa Clarita draws on managed municipal supplies; to the east, communities like Agua Dulce and Acton rely heavily on domestic wells and small water systems. The physical landscape, which includes steep terrain, wildfire-prone foothills, and sediment-rich canyons, underscores the area's heightened drought and water-shortage vulnerability.

Region C (Foothills of the Santa Susana/Western San Gabriel Valley Mountains) includes the northern San Fernando Valley foothills and adjacent mountain areas, which have been heavily urbanized over the last several decades, largely within the City of Los Angeles. Most of this area overlies the Upper Los Angeles River Area groundwater basins (San Fernando, Sylmar, Verdugo, and Eagle Rock), each of which is adjudicated and administered through a detailed Watermaster framework. Because the City of Los Angeles holds Pueblo Water Rights, it has senior priority to all water originating within its boundaries, resulting in very limited permitted pumping by others. As a result, any domestic wells that appear in historical completion reports are likely inactive, decommissioned, or remnants of pre-adjudication conditions. Although urban in character, the region's interface with steep foothills and open-space preserves means wildfire, sedimentation, and storm-driven erosion continue to shape water resource vulnerabilities, while limited groundwater access leaves most residents dependent on municipal supplies (Los Angeles County Public Works 2014).

Region D (Santa Monica Mountains) spans the mountainous coastal corridor of the Santa Monica Mountains, where steep terrain rises quickly from the shoreline into rugged canyons (Los Angeles County Public Works 2014). The eastern portion of this region was burned in the January 2025 Palisades Fire, heightening concerns about erosion, debris flows, and post-fire water quality impacts. Communities in this area are generally rural and affluent, relying heavily on domestic wells and on-site wastewater systems due to longstanding community resistance to centralized water or sewer infrastructure. This resistance, combined with the physical difficulty of extending utilities across fractured terrain, leaves residents dependent on shallow, localized groundwater sources of variable quality. The coastal watersheds draining this region are part of the North Santa Monica Bay Integrated Water Resources Management Program subregion, where groundwater is naturally poor in quality and the majority of potable supply is imported (Los Angeles County Public Works 2014). Limited local

storage, wildfire exposure, and challenging topography collectively elevate drought and water-shortage risks for these decentralized water users.

Region E (Southeast Los Angeles County) covers the dense mosaic of small, historic cities that occupy the San Gabriel Valley and the lower coastal plain, including communities within the Main San Gabriel Basin, Central Basin, and West Coast Basin. Although domestic well logs indicate a large number of potential wells, these areas have been adjudicated for decades, and groundwater pumping is tightly controlled by basin Watermasters with short lists of permitted producers. Most legacy domestic wells have likely been destroyed, abandoned, or rendered inactive due to urbanization, contamination, or lack of water rights. Still, numerous small systems, special districts, mutual water companies, and municipal agencies continue to depend on groundwater in this region, often facing aging infrastructure and water quality challenges associated with dense industrial, commercial, and transportation land uses. As one of the oldest developed parts of the County, this area also experiences some of the most constrained open space, most impaired surface waters, and complex multi-agency water management conditions.

Region F (Northwest Los Angeles County) includes the rural-to-suburban transition areas of northwest Los Angeles County, spanning the Ventura County borderlands and the westernmost extensions of the Upper Los Angeles River watershed. Much of this region consists of open space, parkland, and foothill communities surrounded by steep, fire-prone terrain (Los Angeles County Public Works 2014). Development is scattered, with some neighborhoods connected to municipal systems but many relying on small water systems or domestic wells located in fractured-rock aquifers that are difficult to monitor and prone to highly localized water-level variation. These communities sit at the periphery of major groundwater basins and therefore have limited access to adjudicated basin supplies. The region's vulnerability is shaped by its geography, high wildfire risk, variable groundwater conditions, and long distances from centralized infrastructure, making short-term outages and long-term water-supply reliability ongoing concerns during multi-year droughts.

4 Short-Term Response Actions

Based on the risk assessment results, Los Angeles County Public Works, Public Health, Chief Sustainability Office, and Office of Emergency Management identified STRAs to address water shortage emergencies for vulnerable regions of the County (Figure 3-11). The identified STRAs are not exhaustive and may be modified in the future. In the context of this County DRP, STRAs are defined as actions implemented in advance of, and during, water shortage emergencies caused by drought and water shortage events, often addressing immediate and basic public safety needs.

This section describes the STRAs included in the County DRP and the Drought and Water Shortage Emergency Response Process developed as part of the County DRP to assist with implementing STRAs.

4.1 Legislative Direction

SB 552 requires each county to develop a drought and water shortage plan that includes proposed interim solutions for SSWs and domestic wells, per CWC Section 10609.70 (**bold face** added for emphasis as related to STRAs and this section of the County DRP):

(b) A county shall develop a plan that includes potential drought and water shortage risk and proposed interim and long-term solutions for state small water systems and domestic wells within the county's jurisdiction. The plan may be a stand-alone document or may be included as an element in an existing county plan, such as a local hazard mitigation plan, emergency operations plan, climate action plan, or general plan. A county shall consult with its drought task force or alternative coordinating process as established by this section in developing its plan. A county shall consider, at a minimum, all of the following in its plan:

- (1) Consolidations for existing water systems and domestic wells.*
- (2) Domestic well drinking water mitigation programs.*
- (3) Provision of emergency and interim drinking water solutions.***
- (4) An analysis of the steps necessary to implement the plan.*
- (5) An analysis of local, state, and federal funding sources available to implement the plan*

4.2 Short-Term Response Actions Included in the Los Angeles County Drought Resilience Plan

STRAs included in the County DRP are summarized in Table 4-1 and described in this section. Additional information on the timing and County roles/responsibilities for these efforts is presented in Section 6.2.2.

Table 4-1. List of Short-Term Response Actions Included in Los Angeles County Drought Resilience Plan

ID	Short-Term Response Action Type	Short-Term Response Action Name	Short-Term Response Action Description	Responsible Entity	Supporting Entities
STRA 01	Emergency And Interim Drinking Water Supplies	Voluntary Water Conservation Program	County, in coordination with non-government organizations, GSAs, and other entities, to establish a communication and engagement program through the County Water Plan Water Communications Task Force to support voluntary water conservation measures among domestic well and SSWS users in the event of a water shortage event.	County PW	N/A
STRA 02	Emergency And Interim Drinking Water Supplies	Dedicated Water Filling Stations	County to identify and establish a network of emergency potable water supply stations/suppliers in the event of a water shortage emergency. County will ensure network of water filling stations have sufficient water supplies while a water shortage is occurring.	County OEM	County PW
STRA 03	Emergency And Interim Drinking Water Supplies	Water Hauling, Bulk Water for Existing Tanks	The County will continue existing coordination with public water systems that allow for water hauling and bulk water delivery to domestic well and SSWS communities with existing bulk water storage tanks.	County PW	County PH County OEM
STRA 04	Emergency And Interim Drinking Water Supplies	Water Hauling, Bulk Water for Temporary Tanks	The County will continue existing coordination with public water systems to provide temporary, mobile bulk water shortage tanks for SSWSs. This includes ensuring agreements are in place in advance of the emergency for coordination with public water systems to provide temporary water supplies.	County PW	County PH County OEM
STRA 05	Emergency And Interim Drinking Water Supplies	Packaged and Bottled Water Supplies	County to coordinate and establish a program to acquire and distribute packaged or bottled water to domestic well and SSWS users in the event of an emergency.	County OEM	N/A

Key:

County = Los Angeles County

NA = not applicable

PH = Department of Public Health

SSWS = State Small Water Systems

GSA = groundwater sustainability agency

OEM = Office of Emergency Management

PW = Department of Public Works

STRA = Short-Term Response Action

4.2.1 Emergency and Interim Drinking Water Supplies

Emergency and interim drinking water supplies involve providing temporary water supplies until longer-term water supplies are secured or the water shortage emergency ends. Emergency and interim drinking water supplies are used during water shortage emergencies to meet basic health and safety needs.

4.2.1.1 *Voluntary Water Conservation Program (STRA 01)*

During a water shortage emergency, the County, in coordination with non-government organizations, GSAs, and other entities, would implement a communication and engagement program to support voluntary water conservation measures among domestic well and SSWS users. The County Water Plan's Water Communications Task Force is currently supporting the development of this program. This program is included as STRA 01 in the County DRP and is led by County Public Works.

4.2.1.2 *Dedicated Water Filling Stations (STRA 02)*

During a water shortage emergency, domestic well or SSWS users could take water from dedicated water filling stations owned and operated by large water purveyors. These water filling stations could be at established locations that would provide potable water to the affected users. Domestic well or SSWS users would need to provide their own water storage containers. Identifying and establishing a network of dedicated water filling stations is included in the County DRP as STRA 02.

County Office of Emergency Management is the lead entity for this STRA, with support from County Public Works. Mutual aid agreements are required for this STRA, which are described in Section 4.3.

4.2.1.3 *Water Hauling or Bulk Water Delivery (STRA 03 and STRA 04)*

Water hauling or bulk water delivery involves using licensed water haulers or tankers to deliver emergency water supplies to those in need at either (1) a central distribution point for residents to bring a container to be filled, or (2) a hospital or other critical infrastructure the water hauler or tanker can be connected to.

Within the County, water hauling or bulk water delivery would primarily be used to provide emergency water supplies at temporary distribution points. Fulfillment of bulk water delivery would be provided by licensed commercial water haulers under contract to the County Public Works. As of December 2025, there are nine licensed haulers registered in Los Angeles County. County Public Works is the lead for STRA 03 and STRA 04, with support from County Public Health and Office of Emergency Management.

Table 4-2. California Department of Public Health Food and Drug Branch Licensed Water Haulers in Los Angeles County

Business Name	Facility Address	City	Zip Code
ACTON WATER COMPANY	3375 COUNTRY WAY	ACTON	93510
ARMOUR CONTRACTING LLC	10545 DALE ROAD	AGUA DULCA	91390
ITT FOODTRANS LLC - INTERMODAL TANK TRANSPORT	20250 ALAMEDA STREET	RANCHO DOMINGUEZ	90221
LOS ANGELES DEPARTMENT OF WATER AND POWER	7610 TYRONE AVE	VAN NUYS	91405
LUNDE WATER, LLC	3370 COUNTRY WAY	ACTON	93510

Business Name	Facility Address	City	Zip Code
PARADISE RANCH LLC	36200 PARADISE RANCH ROAD	CASTAIC	91384
RMR EQUIPMENT RENTAL, INC. - RMR WATER TRUCKS	32016 CASTAIC ROAD	CASTAIC	91384
SOONER TRUCKING LLC	15559 SIERRA HIGHWAY	SANTA CLARITA	91351
WENDY'S WATER TRUCK COMPANY, LLC	11817 FORT TEJON ROAD	PEARBLOSSOM	93553

Source: California Department of Public Health, 12.2025

4.2.1.4 *Packaged or Bottled Water (STRA 05)*

In areas where the other emergency and interim drinking water supplies are unavailable, the County would provide packaged or bottled water (i.e., 1- to 5-gallon jugs and individual bottled waters) to affected domestic well and SSWS users. Packaged or bottled water delivery is included in the County DRP as STRA 05.

The California Department of Public Health's Food and Drug Branch maintains a list of approved commercial bottled water vendors in the state. In the event of a State or Federal disaster declaration, the County will coordinate with those entities to acquire packaged or bottled water.

County departments currently coordinate to offer bottled water during emergencies. The County will continue coordination and establish a bottled water program. County Office of Emergency Management is the lead entity for this STRA.

4.3 Pre-Negotiated Contracts and Mutual Aid Agreements

Efficient implementation of STRAs requires coordination and cooperation with other entities beyond those within the County government. These can include pre-negotiated contracts and mutual aid agreements.

The acquisition of materials to implement this County DRP may be subject to local and State policies and regulations that govern their purchase. In the event of an emergency, counties can acquire materials necessary for the protection of public health, welfare, or safety via existing emergency procurement policies that are faster than traditional procurement. Exercise of this authority requires declaration of a local emergency and is time-limited, obligating counties to follow traditional procurement practices at the earliest practicable opportunity.

The County may seek to establish pre-negotiated contracts and other related agreements for STRA 02, STRA 03, STRA 04, and other STRAs as identified, that can be exercised during a recognized water shortage event. This would allow the County to act quickly and maintain consistent resources during emergencies and interim water shortage events. Such pre-negotiated contracts may involve private companies or other local public agencies, such as public water systems, to secure needed resources. The establishment, renewal, and ongoing management of these pre-negotiated contracts will comply with traditional procurement practices as required by local and State policies, except when emergency procurement authorities are temporarily invoked during a declared emergency.

A mutual aid agreement is an arrangement established before an emergency through which another entity(ies) provides personnel, equipment, materials, and/or associated services during an emergency. A

mutual aid agreement clearly describes how the involved entities would engage with the County and each other during a water shortage emergency, along with their roles and responsibilities.

Mutual aid agreements recommended for efficient activation of STRAs are outlined in Table 4-3, including the entities that should have a mutual aid agreement, the nature of the mutual aid, and the status of any agreement as of February 2026.

Table 4-3. Pre-Negotiated Contracts and Mutual Aid Agreements Recommended for Activation of Short-Term Response Actions Included in Los Angeles County Drought Resilience Plan (as of February 2026)

STRA	Contract or Mutual Aid Agreement Need	Lead	Status
STRA 02 / Dedicated Water Filling Stations	County to develop mutual aid agreements with water providers to use as dedicated water filling stations.	County OEM	Pending
STRA 03 / Water Hauling, Existing Water Tanks	County to develop pre-negotiated contracts with water haulers and continue existing coordination with public water systems with existing storage tanks.	County PW	Ongoing
STRA 04 / Water Hauling, Temporary Tanks	County to continue existing coordination with public water systems to provide temporary, mobile bulk water shortage tanks for SSWs.	County PW	Ongoing
STRA 05 / Packaged and Bottled Water Supplies	County to procure pre-negotiated contracts for packaged and bottled water vendors.	County OEM	Pending

Key:

OEM = Office of Emergency Management

PW = Department of Public Works

SSWS = state small water system

STRA = short-term response action

4.4 Drought and Water Shortage Emergency Response Process

The Drought and Water Shortage Emergency Response Process describes (1) how County Staff would evaluate drought and water shortage conditions in the County and declare a water shortage, and (2) its Emergency and Interim Drinking Water Distribution (EIDWD) Plan to activate emergency and interim drinking water supplies and communicate with affected domestic well and SSWs communities.

4.4.1 Drought or Water Shortage Triggers

Declaring a drought or water shortage is important, as it communicates a potential or ongoing emergency, activates mutual aid agreements, and is the first step in accessing State and Federal resources that may be available to assist the County in implementing STRAs.

This DRP outlines a process for classifying water shortage stages, as detailed in Appendix A. This process utilizes indicators of water supply with defined criteria that categorize the County into one of three water shortage stages: information, alert, and response, as described below.

- In the **Water Shortage Information Stage**, there is no major drought or potential for water shortage. In this stage, County Staff completes its County DRP adaptive management planning described in Section 6.4.
- In the **Water Shortage Alert Stage**, drought or the potential for water shortage exists, but there is no active water shortage emergency. In this stage, County Staff increase communication and outreach activities and initiate coordination with other entities. County Staff may consider recommending activation of the County's water conservation policy to the DRP WG and/or the County Board of Supervisors.
- If a water shortage emergency is imminent or actively occurring, the County is in the **Water Shortage Emergency Response Stage**. In this stage, County Staff, in coordination with the DRP WG and County Board of Supervisors, would declare a water shortage emergency and activate the EIDWD Plan described in Section 4.4.2.

If a State drought or water shortage emergency declaration includes areas within the County, the County would go into the Water Shortage Emergency Response Stage and activate the EIDWD Plan described in Section 4.4.2. In the event of a Federal disaster declaration, County Staff would evaluate if the disaster could require emergency and interim drinking water supplies, and if so, would activate the EIDWD Plan. State and/or Federal disaster declarations may make additional resources available to provide emergency and interim drinking water supplies. County Staff would evaluate how these declarations may influence the implementation of the STRAs identified in this County DRP and the activation of the EIDWD Plan.

4.4.2 Emergency and Interim Drinking Water Distribution Plan

The EIDWD Plan outlines the process for County Staff to follow when distributing emergency and interim drinking water supplies to affected domestic well and SSWS communities. Table 4-4 shows the process County Staff would follow in the event distribution of emergency or interim drinking water supplies is required due to a short-term water shortage. These activities are anticipated for events lasting up to four weeks. Unless otherwise noted, implementation of these activities is subject to declaration of an emergency consistent with the County DRP or by direction of the County Board of Supervisors.

Table 4-4. Emergency and Interim Drinking Water Distribution Plan Summary

EIDWD Plan Component	Description
Lead Agency	County OEM leads the EIDWD Plan in coordination with County PW and County Public Health.
Activation	Activation of the EIDWD Plan is subject to recommendation by County PW to County OEM. Activation is informed by an assessment conducted by County PW that includes: • Trigger or cause of water shortage emergency. See Appendix A for drought and water shortage triggers to be considered in the assessment • Affected geographic area and demographics of the affected population • Emergency and interim water supply type(s) (see Table 4-1) • Estimated duration of need County OEM, following review of the assessment, may authorize activation administratively through the County Board of Supervisors or other applicable authorities.
Notification	County OEM will serve as the lead agency managing notification to the affected community on how and where to get emergency water supplies. The notification method may vary

EIDWD Plan Component	Description
	depending on the cause of the water shortage emergency (climate-influenced, wildfire, power interruption, etc.) Anticipated notification methods include: • Emergency Management – Los Angeles County • Email • U.S. Mail • Broadcast media (radio/television) • Door hangers, fliers, information kiosks. • Public outreach meetings, and other existing meetings • Hotline (211, other) Conduct of notifications may include coordination/collaboration with other partner agencies and organizations, such as: • Neighborhood Associations • Non-Profit Organizations • Schools, Churches, and Community Groups Depending on the demographics of the affected community, information, materials, and other notifications may be required for non-English speaking communities. County OEM to determine whether bilingual services are needed in support of water distribution activities.
Information Collection	The County OEM will collect specific information to support applicable cost recovery and inform future emergency and interim drinking water distribution efforts. Such data collection would not include personal information and generally include: • Number of people served by emergency supply, including age and household income • General geographic location of household • Occupancy status (homeowner or tenant) • Duration for which emergency supplies would maintain water needs • Distance traveled to receive emergency supplies and mode of transportation • Known condition of well; prior experiences with water supply shortages • Others as identified as needed

Key:

EIDWD = Emergency and Interim Drinking Water Distribution

OEM = Office of Emergency Management

PW = Department of Public Works

5 Long-Term Mitigation Strategies and Actions

Findings revealed through the risk assessment presented in Chapter 3 show localized and regional water supply concerns, including the dry well susceptibility in fractured rock areas, multiple dry years, high wildfire risk, and water quality risks. While risks that impact the basic public health and safety of residents can be addressed through STRAs, LTMSAs mitigate and potentially prevent the conditions that lead to water shortage emergencies. This County DRP identified 16 LTMSAs, organized into four categories: drinking water well mitigation programs, system consolidation, regional water infrastructure investment, and data gaps. These LTMSAs are not exhaustive and may be modified in the future.

In the context of this County DRP, LTMSAs serve to reduce drought and water shortage vulnerabilities for domestic well and SWS communities. When implemented, LTMSAs can reduce the extent and cost of emergency response actions but cannot eliminate the need for emergency response actions.

5.1 Legislative Direction

SB 552 requires each county develop a drought and water shortage plan that covers long-term solutions for SWSs and domestic wells, per CWC Section 10609.70 (**bold face** added for emphasis as related to LTMSAs and this section of the County DRP):

(b) A county shall develop a plan that includes potential drought and water shortage risk and proposed interim and long-term solutions for state small water systems and domestic wells within the county's jurisdiction. The plan may be a stand-alone document or may be included as an element in an existing county plan, such as a local hazard mitigation plan, emergency operations plan, climate action plan, or general plan. A county shall consult with its drought task force or alternative coordinating process as established by this section in developing its plan. A county shall consider, at a minimum, all of the following in its plan:

- (1) Consolidations for existing water systems and domestic wells.*
- (2) Domestic well drinking water mitigation programs.*
- (3) Provision of emergency and interim drinking water solutions.*
- (4) An analysis of the steps necessary to implement the plan.*
- (5) An analysis of local, state, and federal funding sources available to implement the plan*

5.2 Long-Term Mitigation Strategies and Actions Included in the Los Angeles County Drought Resilience Plan

LTMSAs included in the County DRP are summarized in Table 5-1. LTMSAs related to drinking water well mitigation programs are described in Section 5.3. The system consolidation opportunity within the County is described in Section 5.4. The ability of regional water infrastructure investments to help address domestic well and SWS vulnerabilities is detailed in Section 5.5. LTMSAs that address data gaps are discussed in Section 5.6. Future efforts related to LTMSA implementation, challenges, timing, and

County roles/responsibilities for these efforts are described in Section 6.2. The LTMSAs shown in this table may be updated or replaced as part of future County DRP updates.

Table 5-1. List of Long-Term Mitigation Strategies and Actions Included in Los Angeles County Drought Resilience Plan

ID	Long-Term Mitigation Strategy or Action Category and Type	Long-Term Mitigation Strategy and Action Name	Long-Term Mitigation Strategy or Action Description	Responsible Entity	Supporting Entities
LTMSA 01	Drinking Water Well Mitigation Programs: Drought and Water Shortage Risk Assessment	Drought and Water Shortage Risk Assessment	County to update the risk assessment completed for this County DRP to incorporate updated information and revisions to the WSVE Tool.	County PH, County PW	N/A
LTMSA 02	Drinking Water Well Mitigation Programs: Drought and Water Shortage Risk Assessment	Non-Drought Hazard Assessment	County to assess the potential risk for non-drought hazards (e.g., wildfires, earthquakes, landslide[s]) that could interrupt domestic well or SSWS supplies and provide findings to appropriate planning efforts.	County CSO, County OEM	County PW, County PH
LTMSA 03	Drinking Water Well Mitigation Programs: Water Shortage Prevention	Regional Groundwater Level Monitoring and Communication	County to monitor and communicate (via social media, website, etc.) regional groundwater levels in coordination and collaboration with groups and entities (e.g., GSAs, DWR) that have established charges and practices for well monitoring.	County PW, Groundwater Masters	N/A
LTMSA 04	Drinking Water Well Mitigation Program: Water Shortage Prevention	Water Meter Installation for SSWS	In areas subject to SGMA regulations, County to coordinate and collaborate with GSAs for the installation of water meters at SSWSs.	County PW	County CSO
LTMSA 05	Drinking Water Well Mitigation Program: Water Shortage Prevention	Bulk Water Tank Installation	County to coordinate and collaborate with DWR and other entities to assist domestic well and SSWS operators with sizing and installing bulk water storage tanks at existing wells. This could include coordination and technical assistance but could also include financial assistance with purchasing a tank.	County PW	County PH

ID	Long-Term Mitigation Strategy or Action Category and Type	Long-Term Mitigation Strategy and Action Name	Long-Term Mitigation Strategy or Action Description	Responsible Entity	Supporting Entities
LTMSA 06	Drinking Water Well Mitigation Program: Water Shortage Prevention	Assistance with Domestic Well Monitoring	County to assist domestic well operators with well monitoring by providing laboratory contacts for well sampling, testing, and result interpretation, GSA resources, and well monitoring guidance. County Staff could coordinate with the Santa Clarita Valley GSA to provide annual testing of certain domestic wells located in areas with data gaps, at no cost to the communities within the Santa Clara River East Subbasin, and provide financial assistance to domestic well communities outside the Santa Clara River East Subbasin for an annual groundwater test. Data could be used in connection with other STRAs/LTMSAs to improve overall groundwater conditions monitoring.	County PH	N/A
LTMSA 07	Drinking Water Well Mitigation Program: Water Shortage Prevention when Permitting New or Replacement Wells	Well Permitting Considering Future Growth	County to update policy such that the Planning Department evaluates specific plans, vacant land in unincorporated regions zoned for residential use, and other long-term development initiatives for groundwater basin/subbasin water demands at full build-out.	County PH	County Planning, Water Agencies
LTMSA 08	Drinking Water Well Mitigation Programs: Well Rehabilitation	Point-of-Use Water Treatment Installation Outreach	County Staff to implement outreach to end-users of domestic well and SSWS point-of-use or point-of-entry water treatment options (e.g., undersink reverse osmosis, whole-house filter packs) to address bacterial and arsenic water quality issues.	County PH	County PW
LTMSA 09	Drinking Water Well Mitigation Programs: Well Rehabilitation	Establish Network of Vendors and County Contacts	County to continue providing links to State-licensed water haulers and labs. County to also provide domestic well and SSWS users with a resource list of other entities that could help evaluate well condition, rehabilitation efforts, and replacement efforts, as needed.	County PH	County PH

ID	Long-Term Mitigation Strategy or Action Category and Type	Long-Term Mitigation Strategy and Action Name	Long-Term Mitigation Strategy or Action Description	Responsible Entity	Supporting Entities
LTMSA 10	Drinking Water Well Mitigation Programs: Other Management Actions	Technical Assistance	County to develop a program that provides technical and/or financial assistance to domestic well and SSWS users to replace shallow wells or rehabilitate/replace aging infrastructure that have in the past, or may in the future, run dry. County could also help domestic well and SSWS users identify potential grant sources.	County PW	N/A
LTMSA 11	Drinking Water Well Mitigation Programs: Other Management Actions	Create single online location for relevant resources to assist domestic wells and SSWS	County to create and maintain a web portal with County information, permits, and forms in one place; develop an online mapping and data tool. Ensure portals and tools are simple, accessible, and easy to navigate to remove avoidable associated barriers. This portal will need to be regularly updated.	County PW	County PH, Water Agencies
LTMSA 12	System Consolidation	Systems Consolidation Planning	County Staff will support domestic well and SSWS communities and community water systems by assisting in the pursuit of funding and additional resources for exploration, development, and implementation of a plan for physical consolidation	County PW	County PH, Water Agencies
LTMSA 13	Regional Water Infrastructure Investment	Regional Planning Integration	County to update its All-Hazards Mitigation Plan, Emergency Operations Plan, and/or related documents to confirm interagency roles, responsibilities, and actions associated with implementation of the DRP.	County OEM	County PW, County PH, County CSO
LTMSA 14	Regional Water Infrastructure Investment	Regional Water Project Identification	County, in coordination and collaboration with existing regional efforts, to identify regional water projects that could contribute to water supply resilience for domestic wells and SSWSs.	County OEM, County PW	

ID	Long-Term Mitigation Strategy or Action Category and Type	Long-Term Mitigation Strategy and Action Name	Long-Term Mitigation Strategy or Action Description	Responsible Entity	Supporting Entities
LTMSA 15	Data Gaps	Dry Well Reporting and Well Completion Reports	County to continue referring well owners to report dry wells to DWR's Dry Well Reporting System for proper information. County to review dry well decommissioning processes. County to coordinate with DWR to reconcile well completion report inaccuracies.	County PH	DWR, SWRCB
LTMSA 16	Data Gaps	High-Risk Groundwater Contamination Identification	County to continue coordination with DWR to maintain a map highlighting the area on groundwater contamination.	County PH	N/A

Key:

County = Los Angeles County

CSO = Chief Sustainability Office

DRP = Drought Resilience Plan

DWR = California Department of Water Resources

GSA = Groundwater Sustainability Agency

LTMSA = Long-term Mitigation Strategy and Action

N/A = not applicable

OEM = Office of Emergency Management

PH = Department of Public Health

PW = Department of Public Works

Regional Planning = Department of Regional Planning

SSWS = State Small Water System

SWRCB = State Water Resources Control Board

5.3 Drinking Water Well Mitigation Programs

This County DRP considered the utility of domestic well Drinking Water Well Mitigation (DWWM) Programs within the County DRP as directed under CWC Section 10609.70 (b)(2). The DWWM Program describes actions that assist domestic well and SSWS communities with groundwater wells that are relatively shallower than those in the area or are located in specific areas where wells are at a higher risk of running dry more frequently. This section first identifies the DWWM Program(s) within the County, organized by Bulletin 118 groundwater basins and fractured rock areas. This section then details the LTMSA components that are included in the DWWM Programs. The DWWM programs and LTMSA components described herein are not exhaustive and may be modified in the future.

When identifying and defining DWWM Programs, the County DRP considered the factors listed below.

- Domestic wells and SSWS vulnerable to water supply shortages (see Chapter 3)
- If a DWWM Program had already been defined as part of a GSP
- The SGMA priority for Bulletin 118 basins
- The occurrence of potentially shallow wells that could be at enhanced risk of drying up
- History of dry well reports and/or new well permits for replacement or deepened wells

Table 5-2 details the identified DWWMPs within the County.

Table 5-2. Drinking Water Well Mitigation Programs within the County

Location	Vulnerable Domestic Wells and State Small Water Systems Included	Drinking Water Well Mitigation Program Description
Santa Clara River Valley East Groundwater Subbasin	Areas within the Santa Clara River Valley East Subbasin near (vulnerable areas B and F in Section 3.5)	The Santa Clara River Valley East Subbasin GSP does not include a DWWM Program. The County DRP DWWM Program for this location will focus on communication and outreach, as well as water shortage prevention.
Santa Monica Groundwater Subbasin	Areas within the Santa Monica Subbasin (small portion of vulnerable area D in Section 3.5))	The Santa Monica Groundwater Subbasin GSP does not include a DWWM Program. The County DRP DWWM Program for this location will focus on communication and outreach, as well as water shortage prevention, which consist of LTMSAs 2, 5, 6, 7, 8, 9, 10, 11, 12, and 13.
Communities in Fractured Rock Basins	Domestic wells in Santa Clarita/Agua Dulce/Acton, Santa Monica Mountains, and Northwest Los Angeles County (vulnerable areas B, D, and F in Section 3.5) and other isolated domestic wells	There has not been a systematic and/or concentrated history of well dry-ups within fractured rock areas in the County. Due to the difficulty in monitoring groundwater conditions in these areas, the County DRP DWWM Program for this location will focus on communication and outreach, as well as water shortage prevention to domestic well communities, which consist of LTMSAs 2, 5, 6, 7, 8, 9, 10, 11, 12, and 13.

Key:

County = Los Angeles County

DWWM = Drinking Water Well Mitigation

LTMSA = long-term mitigation strategies and action

DRP = Drought Resilience Plan

GSP = Groundwater Sustainability Plan

5.3.1 Drought and Water Shortage Risk Assessment (LTMSA 01 and 02)

The drought and water shortage risk assessment documented in Chapter 3 is a key component of a drinking water mitigation program. It helps define the areas and populations with domestic wells and SSWs with higher vulnerabilities to water shortage. It also characterizes what conditions may be driving water shortage vulnerabilities. Both can help inform the components of a drinking water well mitigation program.

The risk assessment completed and documented in Chapter 3 was used to help select the components of the drinking water well mitigation program documented in this County DRP. The County will update the risk assessment to incorporate more accurate data and capture any updates made in the WSVE Tool following completion of this DRP (LTMSA 01). The risk assessment can also be expanded by including additional details for non-drought hazards (e.g., wildfires, earthquakes, landslides) that could interrupt domestic well or SSW supplies (LTMSA 02).

5.3.2 Water Shortage Prevention (LTMSA 03, 04, 05, 06)

These actions and strategies address water supply vulnerabilities by improving the understanding of groundwater conditions and enhancing the resilience of domestic well and SSW groundwater assets.

Regional Groundwater Level Monitoring and Communication (LTMSA 03)

County Staff, in collaboration with Groundwater Masters and other groups and entities (e.g., GSAs and DWR), will monitor and communicate regional groundwater levels with domestic well and SSW communities. Groundwater levels will be communicated through various channels, such as via social media and County websites ([LA County Water Plan](#) and [Water for LA](#)).

Water Meter Installation for SSWs (LTMSA 04)

The County Water Plan and OurCounty Sustainability Plan identified conservation strategies as an effective mechanism to improve water supply reliability in the County. The installation of water meters and SSWs will support the implementation of the State Water Board's Urban Water Use Objectives. County Staff will complete coordinated messaging to SSWs and, subject to available funding, incentive programs for the installation of these water meters at SSWs.

Bulk Water Tank Installation (LTMSA 05)

Bulk water tank installation at domestic wells and SSWs could improve water supply reliability. County Staff will coordinate and collaborate with entities to assist domestic well and SSW operators with sizing and installing bulk water storage tanks at existing wells. In the near term, County Staff will only provide outreach to these areas regarding the value of bulk water or power generator installation and resources for installation. With additional resources, County Staff could provide financial assistance with installing tanks or power generators, either through connections to financial resources or through direct financial support.

Assistance with Domestic Well Monitoring (LTMSA 06)

The vulnerable domestic wells within the County are in the Santa Clara River East Subbasin or fractured rock areas in the Santa Monica Mountains, and Santa Clarita/Agua Dulce/Acton. The Santa Clarita Valley GSA monitors groundwater conditions within the Santa Clara River East Subbasin but does not aid with sampling or gauging groundwater elevations at individual domestic wells.

As of this County DRP (March 2026), County Staff will assist domestic well communities with monitoring their wells by providing contact information for laboratories that perform well sampling and testing, and who can assist with interpreting results. With additional resources, County Staff could coordinate with the Santa Clarita Valley GSA to provide annual testing of certain domestic wells located in areas with data gaps, at no cost to the communities within the Santa Clara River East Subbasin, and provide financial assistance to domestic well communities outside the Santa Clara River East Subbasin for an annual groundwater test. Data collected through these annual tests could then assist with broader groundwater monitoring.

5.3.3 Water Shortage Prevention when Permitting New or Replacement Wells (LTMSA 07)

Adding new wells, including those replacing an existing well, in areas where existing domestic wells and SSWSs have water supply vulnerabilities, can exacerbate those vulnerabilities. These LTMSAs help County Staff consider how new wells may affect water supply vulnerability.

Well Permitting Considering Future Growth (LTMSA 07)

When permitting new or replacement wells, evaluating these permits through the lens of future water use and land development can help improve overall water supply reliability. County Public Health Staff will update a policy such that the Planning Department will evaluate specific plans, vacant land in unincorporated regions zoned for residential use, and other long-term development initiatives for groundwater basin/subbasin water demands at full-build outs to better account for future water demand projections.

5.3.4 Well Rehabilitation and Other Management Actions (LTMSA 08, 09, 10, 11)

Well rehabilitation and other management actions address water shortage vulnerabilities that have either occurred in the past or are likely to occur soon. In the past, water shortages were primarily due to shallow wells drying up within fractured rock areas, extended power outages, or water quality issues due to bacterial contamination.

Point-of-Use Water Treatment Installation (LTMSA 08)

Domestic wells and SSWSs in the County are vulnerable to water supply interruptions due to water quality issues. As of this County DRP (February 2026), assistance will include resources (information) on point-of-use water treatment options and a list of vendors that install such systems. With additional resources, County Staff could connect domestic well and SSWS communities to grants or provide direct financial assistance to cover all or a portion of the costs of implementing these water treatment systems.

Establish Network of Vendors (LTMSA 09)

County Staff have a list of well drillers and laboratories that provide water sampling and testing services. This list is available to domestic well and SSWS communities. County Staff will (1) continue to maintain this list with regular updates, (2) post this list on its website, and (3) remind domestic well and SSWS communities of this list during drought or other events that could cause water shortages.

Technical Assistance (LTMSA 10)

County Staff to provide technical and/or financial assistance to domestic wells and SSWS communities to replace shallow wells or rehabilitate/replace aging infrastructure. The County can provide technical

information needed, upon request, to help domestic well and SSWS communities apply for funding sources or provide direct financial assistance, pending resource availability.

Create a Single Online Location for Relevant Sources (LTMSA 11)

The County will create and maintain a simple, accessible, and easily navigable web portal that will house County information, permits, and forms all in a single place. The website will house relevant information that stem from other strategies such as vendor contacts (LTMSA 09), laboratories and resources for groundwater monitoring (LTMSA 06), and such. The website will be regularly updated and will reduce accessibility barriers.

5.4 System Consolidation

System consolidation is the physical or managerial joining of two or more water systems. In the context of domestic wells and SSWSs, these systems can be consolidated with each other and/or a larger water system. System consolidation can improve water supply reliability by broadening water supply sources and/or the numbers of users. With more users in a singular system, operating and maintaining that system can be cost effective compared to smaller or individual systems. This section identifies potential consolidation opportunities for domestic wells and SSWSs. The County DRP separates system consolidation opportunities into two categories: existing (those that have already been identified and undergone at least an initial assessment) and potential (those identified during development of this County DRP) based on proximity to community water system service area boundaries.

5.4.1 Potential System Consolidation Opportunities

There are system consolidation opportunities for domestic wells and SSWSs that are within the existing service area boundaries of a community water system.⁶ While a community water system is not required to provide water service to domestic well and SSWS communities, their proximity may increase the feasibility of system consolidation. There may be nearby water supply infrastructure from a community water system that could connect to domestic wells and SSWSs. Policy or institutional hurdles may be less onerous if domestic wells and SSWSs are in an existing service area.

Domestic Wells and SSWSs in Community Water System service areas. Table 5-3 presents community water systems that likely have domestic wells and/or SSWSs in their service areas. Due to the uncertainty of the domestic well location data, this table may not reflect all community water systems with domestic wells or SSWSs in their service areas. The information in this table highlights where outreach and additional analysis by County Staff with these community water systems may be most effective.

⁶ As defined in HSC Section 116275(i), a community water system means a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system.

Table 5-3. Community Water Systems with Domestic Wells and/or State Small Water Systems Likely within their Service Area

Community Water Systems with Domestic Wells Likely in Their Service Areas^{1,2}	Number of State Small Water Systems Likely in Their Service Areas²
LOS ANGELES CWWDD 40 REG 4 & 34 LANCASTER	1
PALMDALE WATER DIST.	1
SANTA CLARITA VALLEY W.A.-PINETREE DIV.	1

Notes:

¹ Number of domestic wells within a community water system's service area are not shown as they may be inaccurate due to the locations of some domestic wells not being known.

² Domestic wells and state small water systems within a community water system's service area are based on the established service area boundary and do not reflect the proximity to existing water delivery infrastructure. Additional analysis would be needed to determine the proximity of domestic wells and state small water systems to existing water delivery infrastructure.

Groupings of Domestic Wells and SSWs near Community Water Systems. The proximity of domestic wells and SSWs to service areas of community water systems was also evaluated to identify system consolidation opportunities. Concentrations of SSWs and domestic wells and their proximity to a community water system are presented in Figure 5-1. Areas with a higher concentration of domestic wells and SSWs within 1 mile of a community water system are highlighted in this figure into areas of system consolidation opportunity. Table 5-4 summarizes those areas of consolidation opportunity, including the number of domestic wells and SSWs in each area and the nearby community water systems. Note that some of the areas of system consolidation opportunity highlighted in Figure 5-1 may also overlap with domestic wells and SSWs within a community water system's boundary as described above.

There may also be system consolidation opportunities outside the areas shown and described below. County Staff will remain aware of potential opportunities as they arise.

Evaluating Consolidation Opportunities in the County (LTMSA 12): In this LTMSA, County Staff will support domestic well and SSWS communities and community water systems by assisting in the pursuit of funding and additional resources for exploration, development, and implementation of a plan for physical consolidation. Table 5-4 outlines potential areas of opportunity for consolidation.

With additional resources, County Staff would work with domestic well and SSWS communities and community water systems to further evaluate the opportunity for system consolidation and, if appropriate, develop a plan for system consolidation. This evaluation would include outreach to the domestic well and SSWS communities and community water systems within these areas to better understand the system consolidation opportunities (e.g., interest in and willingness to consolidate, water supply availability and water quality constraints, water delivery infrastructure [distance to, components and capacities, etc.], potential for funding and financing for a system consolidation study and infrastructure, points of contact, other considerations). County Staff could lead the outreach effort or those entities engaged in it.

Table 5-4. Areas with Opportunity for Domestic Wells and State Small Water Systems Consolidation

Area of System Consolidation Opportunity	Approximate Number of Domestic Wells	Number of State Small Water Systems	Community Water Systems that Could Be Involved in Consolidation with Domestic Wells or State Small Water Systems
Area A: Palmdale Area	48	1	Palmdale Water District
Area B: Lancaster Area	26	1	Los Angeles CWWD 40 Reg 4 & 34 Lancaster Reesdale Mutual Tierra Bonita Mutual Water
Area C: Leona Valley	16	0	California Water Service Co-Leona Valley Los Angeles CVWD 40 Reg 4 & 34 Lancaster Lake Elizabeth Mutual Water Company
Area D: Communities East of Santa Clarita (Soledad and Mint Canyon), Along SR-14	15	1	Santa Clarita Valley Water Agency
Area E: Communities Acton and Paris Area, Along SR-14	26	0	Los Angeles CWWD 37-Acton

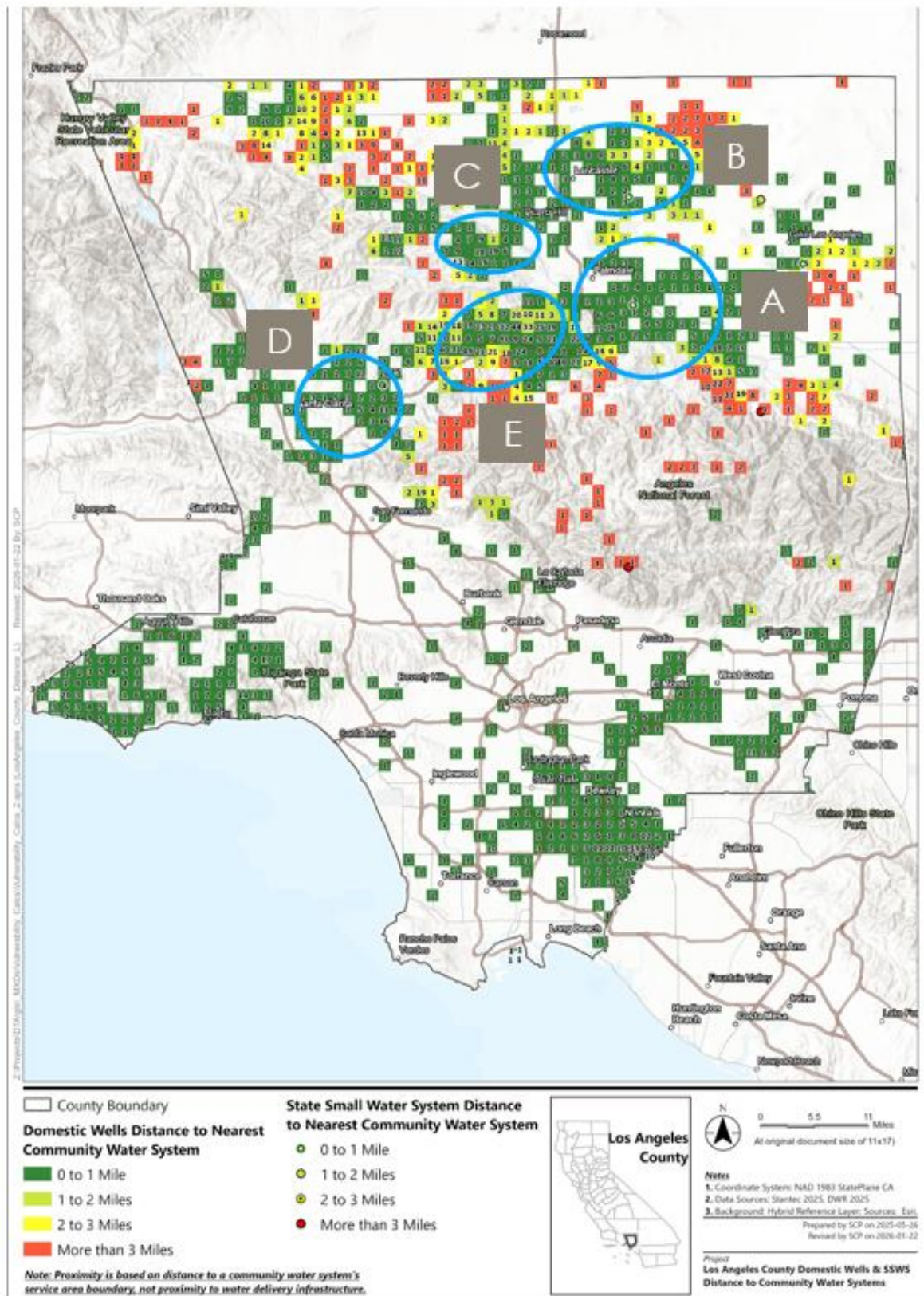


Figure 5-1. Areas with Opportunity for Domestic Wells and State Small Water Systems Consolidation

5.5 Regional Water Infrastructure Investment

Regional water infrastructure projects can enhance the water supply reliability of many communities, including domestic wells and SSWs. The LTMSAs in this section describe how County Staff could integrate into regional planning and regional water infrastructure to help enhance the water supply reliability of domestic well and SSWs communities. Additional information on the near-term integration into regional planning or water infrastructure is included in Section 6.2.2.

5.5.1 Regional Planning Integration (LTMSA 13)

Many regional and County planning efforts intersect with the County DRP. Coordination by County Staff within these other regional and County planning efforts will help ensure these plans consider domestic wells and SSWs. Table 5-5 details the relevant regional planning efforts, current status, and intersection with domestic wells and SSWs. For LTMSA 13, County Staff will participate when the planning effort is occurring and provide the perspective of domestic well and SSWs communities. Additional information on the timing and County roles/responsibilities for these efforts is presented in Section 6.3.

Table 5-5. Summary of Relevant Regional Planning Efforts

Planning Effort	Current Status	Intersection with Domestic Wells and State Small Water Systems
County Water Plan	Adopted 2023	Focuses on achieving countywide water resilience across regional agencies to address water issues as they relate to regional water supply reliability, groundwater management and quality, small water system resilience and drinking water equity, and watershed sediment management.
Antelope Valley Water Plan	Under Development (Anticipated Completion by December 2026)	Complements the County Water Plan by focusing on sustainable water management unique to the Antelope Valley region, which includes areas with domestic wells and SSWs.
OurCounty Sustainability Plan	Adopted 2019, Updated November 2025	Includes actions to ensure safe, clean, and affordable and reliable drinking water to small water systems.
Los Angeles Operational Area Emergency Operations Plan	November 2023	Outlines the County's planned response for County Unincorporated Areas, as well as Operational Area coordination, which includes areas with domestic wells and SSWs.
Greater Los Angeles Integrated Regional Water Management Plan	Adopted 2014, Updated in 2017	Evaluated water supply management and identified projects with regional benefits (e.g., flood management and climate change mitigation) within an area that includes domestic wells and SSWs.
Antelope Valley Integrated Regional Water Management Plan	Adopted 2016, Updated December 2019	Evaluated water supply management and identified projects with regional benefits (e.g., flood management and climate change mitigation) within an area that includes domestic wells and SSWs.
Upper Santa Clara River Integrated Regional Water Management Plan	Adopted 2014, Updated April 2018	Evaluated water supply management and identified projects with regional benefits (e.g., flood management and climate change mitigation) within an area that includes domestic wells.

Planning Effort	Current Status	Intersection with Domestic Wells and State Small Water Systems
Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan	Adopted 2022	The Santa Clara River Valley East Groundwater Subbasin area covered in this plan identifies presence, but not locations, of domestic wells.
County All Hazards Mitigation Plan Update	Updated September 2025	Covers areas with domestic wells and SSWs and includes assessments of drought, in addition to other non-drought hazards in the County. Evaluates conditions, such as drought and wildfire, that would impact the water supply reliability of domestic wells and SSWs.
County General Plan	Adopted 1980, Updated April 2025	Covers areas with domestic wells and SSWs.

5.5.2 Regional Water Project Identification (LTMSA 14)

The County will continue coordination and collaboration with related and existing regional efforts and programs, such as the County Water Plan; the County's Safe, Clean Water Program; Greater Los Angeles County, Antelope Valley, and Upper Santa Clara River Integrated Regional Water Management Programs; and the Santa Clara River Valley East Groundwater Subbasin and Los Angeles-Santa Monica Mountains GSPs. Coordination with these related efforts can help identify appropriate regional water projects that could contribute to water supply resilience for domestic wells and SSWs. County Staff will monitor opportunities to implement appropriate projects that will enhance the reliability of domestic well and SSWS water supplies. This strategy is listed as LTMSA 14 and is led by County Office of Emergency Management and Public Works.

5.6 Data Gaps

The County DRP utilized available data to support (1) evaluation of the vulnerability of domestic wells and SSWs to water shortages, and (2) development and alignment of effective STRAs and LTMSAs. Access to new or more accurate/complete data would help improve this planning process in the future. This section details the LTMSAs identified by the County DRP that would provide new or improved data for use in future planning efforts.

5.6.1 Dry Well Reporting and Well Completion Reports (LTMSA 15)

DWR established an [online dry well reporting system](#) for domestic well communities to report problems with their wells that impact their water supplies. While the State maintains a dry well reporting system for domestic well operators to voluntarily report dry well conditions, awareness and use of the program is limited. County Public Health will continue referring domestic well owners to report dry wells through DWR's reporting system. Additionally, County Public Health will continue to work with DWR to improve the accuracy of dry well reporting and will review its decommissioning and well completion report processes.

In addition to dry well reporting, total domestic wells in the County as reported by County staff differ from the information available from the State. County staff noted that the domestic wells reported online are outdated. County staff may review available well completion reports to identify potential inaccuracies related to geographic location, well status, and other relevant attributes that affect the characterization of domestic wells. Where feasible, County staff could coordinate with DWR to reconcile

discrepancies using paper records and other information maintained by the County and support updates to the state registry. Improving the accuracy of well completion reports would support future drought resilience planning efforts by enhancing the County's understanding of domestic well distribution and vulnerability to water shortages.

5.6.2 High-Risk Groundwater Contamination Identification (LTMSA 16)

County to continue coordination with DWR to maintain a map highlighting the area on groundwater contamination. The Safe and Affordable Funding for Equity and Resilience Program through DWR developed and maintains a [groundwater quality aquifer risk map](#) that showcases potential risk based on raw source groundwater quality data. The map is intended to help prioritize areas where domestic wells and SSWS may be accessing raw source groundwater that does not meet safe drinking water standards.

The County will monitor the water quality aquifer risk map as part of its ongoing DRP implementation activities described in Section 6.2.1 and communicate any potential water quality risks to affected domestic well and SSWS communities upon further investigation of those areas. The County will also continue coordination with DWR on data needs and updates so that information for the County in the aquifer risk map is as updated as possible. County Public Health is the lead of this LTMSA.

6 Implementation Considerations

The STRAs and LTMSAs identified and described in Chapters 4 and 5 represent the range of in-progress and proposed activities. Implementation of these STRAs and LTMSAs often (1) falls under the authorities and jurisdictional responsibilities of separate County departments and other local and State public agencies, and (2) requires the involvement of other interested parties. To implement these STRAs and LTMSAs, and contribute to continued improvement of water supply reliability for domestic well and SSWS communities, this section describes the implementation steps designed to assist the County with:

- Ongoing water supply monitoring and interagency collaboration in support of implementation
- Outlining STRA and LTMSA implementation responsibility, status, and resource needs
- Identifying opportunities to align the County DRP with other County policy and County and regional planning documents
- Adaptive management
- Identifying funding opportunities

6.1 Legislative Direction

SB 552 requires the County develop a drought and water shortage plan that analyzes the steps to implement the plan and funding sources available to support implementation, per CWC Section 10609.70 (**bold face** added for emphasis as related to plan implementation and this section of the County DRP):

*(b) A county shall develop a plan that includes potential drought and water shortage risk and proposed interim and long-term solutions for state small water systems and domestic wells within the county's jurisdiction. The plan may be a stand-alone document or may be included as an element in an existing county plan, such as a local hazard mitigation plan, emergency operations plan, climate action plan, or general plan. A county shall consult with its drought task force or alternative coordinating process as established by this section in developing its plan. A county shall consider, **at a minimum**, all of the following in its plan:*

- (1) Consolidations for existing water systems and domestic wells.*
- (2) Domestic well drinking water mitigation programs.*
- (3) Provision of emergency and interim drinking water solutions.*
- (4) An analysis of the steps necessary to implement the plan.***
- (5) An analysis of local, state, and federal funding sources available to implement the plan***

6.2 Implementation Roadmap

The County DRP describes existing and proposed STRAs and LTMSAs that, when executed, help the County meet its objectives under CWC Section 10609.70 (b) (1), (b) (2), and (b) (3). Implementing these STRAs and LTMSAs will require resources and clear roles and responsibilities. The identified STRAs and

LTMSAs include existing or new activities to be implemented under existing authorities and funding of County departments and those activities that are dependent on appropriation of funds from local, State, or Federal resources. This section presents the implementation roadmap for this County DRP, identification of ongoing monitoring and collaboration with County staff, and conduct of management oversight, prioritization, and resource identification needs.

6.2.1 Monitoring and Collaboration

Supply monitoring and interagency collaboration support County DRP implementation by evaluating water supply reliability and maintaining ongoing coordination and collaboration among County departments, related organizations, and the DRP WG. County Staff will conduct a range of activities as described in Table 6-1. These activities may be superseded by the activities described in Section 4.5 if a drought or water shortage emergency has occurred.

Table 6-1. Los Angeles County Drought Resilience Plan Monitoring and Collaboration Activities

Activity	Description	Activity Lead	Timing
GSA Basin Coordination	County Staff to meet with GSA manager/staff prior to the GSA's release of the basin/subbasin GSP Annual Report (Water Code Section 10728). May include additional coordination based on water supply conditions.	County PW	Annually
Water Supply Monitoring and Coordination	County PW to engage with agencies/ organizations that monitor physical risk factors and water supply conditions associated with domestic well and SSWS communities (see Appendix A). Coordinating agencies to include Santa Clarita Valley Groundwater Sustainability Agency, Santa Monica Basin Groundwater Sustainability Agency, and DWR.	County PW, in coordination with County PH	As-needed April through November
Project Coordination Team and DRP Working Group Meeting	County PW to schedule and facilitate a Project Coordination Team and DRP WG meeting annually. The meetings will follow County PW's update of its annual Water Supply Condition Assessment (see Appendix A). Results of this assessment shall support the Project Coordination Team, in collaboration with its DRP WG, as needed, to identify potential activation of water shortage response measures as described in this plan.	County PW, in coordination with County PH, OEM, and CSO	Annually, following Watermaster annual report
Drought Resilience Plan Website Update	County Staff to update the website content and resource materials as described in the Water Supply Condition Assessment. This includes any contact info, list of resources (vendors, links to external websites, etc.), and other website content.	County PW, in coordination with County PH, OEM, and CSO	Annually

Key:

County = County of Los Angeles

CSO = Chief Sustainability Office

GSA = Groundwater Sustainability Agency

OEM = Office of Emergency Management

PW = Department of Public Works

DRP = Drought Resilience Plan

DWR = California Department of Water Resources

GSP = Groundwater Sustainability Plan

PH = Public Health

WG = Working Group

6.2.2 Oversight, Responsibilities, Priorities, and Resource Needs

Individual STRAs and LTMSAs identified in this County DRP have been assigned to individual County departments and agencies pursuant to each agency’s regulatory and policy authorities. County Public Works, as lead agency of the County DRP, shall provide administrative oversight/collaboration for all implementation actions that fall outside of its regulatory and policy authorities.

Table 6-2 details the type, status, and lead of County DRP STRAs and LTMSAs. Activities described in this table are subject to modification based on climate conditions, engagement with the DRP WG, and other relevant factors. While activities have been assigned a near-, mid-, or long-term priority status, the pace of an activity’s implementation schedule can be changed depending on various drivers, such as new regulations, climate conditions, and funding. “Priority” is classified as:

- Near-term (in the next 2 years)
- Mid-term (within 2 to 5 years)
- Long-term (5 or more years in the future)

“Status” is classified as:

- Available
- In progress (for those currently being implemented)
- Proposed (for those that require additional resources)

The “Resource Requirement” columns specify if the STRA/LTMSA would require additional staff time, additional County budget, and external funds beyond what the County currently has available. These external funds could include grants, financing, Federal funding, and future State funding to support DRP implementation.

Beyond these implementation activities, County Public Works will coordinate with the entities listed in Table 6-2 on mid- and long-term priorities. The status of these mid- and long-term priorities, as well as the information in this table, will be reviewed at least annually in coordination with the DRP WG meeting.

Table 6-2. Los Angeles County Drought Resilience Plan Short-Term Response Action and Long-Term Mitigation Strategy and Action Implementation Summary

Action/Strategy ID and Name	Lead Agency	Coordinating Agency	Priority	Status	Resource Requirement		
					Additional Staff Time	County Budget	External Funds
STRA 01 / Voluntary Water Conservation Program	County PW	-	Near-Term	In-Progress	Yes	No	No
STRA 02 / Dedicated Water Filling Stations	County OEM	County PW	Mid-Term	Proposed	Yes	No	No
STRA 03 / Water Hauling, Bulk Water for Existing Tanks	County PW	County PH, County OEM	Mid-Term	In-Progress	Yes	No	No
STRA 04 / Water Hauling, Bulk Water for Temporary Tanks	County PW	County PH, County OEM	Near-Term	Proposed	Yes	Yes	No
STRA 05 / Packaged and Bottled Water Supplies	County OEM	-	Mid-Term	Proposed	Yes	No	No
LTMSA 01 / Drought and Water Shortage Risk Assessment	County PW, County PH	-	Near-Term	Proposed	Yes	No	No
LTMSA 02 / Non-Drought Hazard Assessment	County CSO, County OEM	County PW, County PH	Near-Term	Proposed	Yes	No	No
LTMSA 03 / Regional Groundwater Level Monitoring and Communication	County PW, Groundwater Masters	-	Mid-Term	Proposed	Yes	Yes	Yes
LTMSA 04 / Water Meter Installation for SSWS	County PW	County CSO	Mid-Term	Proposed	Yes	No	No
LTMSA 05 / Bulk Water Tank Installation	County PW	County PH	Near-Term	Proposed	Yes	Yes	No
LTMSA 06 / Assistance with Domestic Well Monitoring	County PH	-	Near-Term	Proposed	Yes	No	No
LTMSA 07 / Well Permitting Considering Future Growth	County PH	County Planning, Water Agencies	Mid-Term	Proposed	Yes	No	No

Action/Strategy ID and Name	Lead Agency	Coordinating Agency	Priority	Status	Resource Requirement		
					Additional Staff Time	County Budget	External Funds
LTMSA 08 / Point-of-Use Water Treatment Installation Outreach	County PH	County PW	Mid-Term	Proposed	Yes	No	No
LTMSA 09 / Establish Network of Vendors and County Contacts	County PH	-	Near-Term	In-Progress	Yes	No	No
LTMSA 10 / Technical Assistance	County PW	-	Near-Term	Proposed	Yes	No	No
LTMSA 11/ Create Single Online Location for Relevant Resources	County PW	County PH, Water Agencies	Near-Term	Proposed	Yes	No	No
LTMSA 12 / Systems Consolidation Planning	County PW	County PH, Water Agencies	Long-Term	Proposed	Yes	Yes	No
LTMSA 13 / Regional Planning Integration	County OEM	County PW, County PH, County CSO	Near-Term	In-Progress	Yes	No	No
LTMSA 14 / Regional Water Project Identification	County OEM/ County PW	-	Near-Term	In-Progress	Yes	No	No
LTMSA 15 / Dry Well Reporting and Well Completion Reports	County PH	DWR, SWRCB	Near-Term	In-Progress and Proposed	Yes	No	No
LTMSA 16 / High-Risk Groundwater Contamination Identification	County PH	-	Near-Term	In-Progress	Yes	No	No

Key:

CSO = County Chief Sustainability Office

County = Los Angeles County

LTMSA = Long-Term Mitigation Strategy and Actions

OEM = County Office of Emergency Management

PH = County Department of Public Health

PW = Department of Public Works

SSWS = State Small Water System

STRA = Short-Term Response Action

6.3 Policy Alignment and Integration

While this County DRP is a standalone document, the information and actions contained in this document provide mutual benefits towards realizing goals and objectives of other County and regional planning efforts associated with domestic well and SWS communities. Table 6-3 describes recommended policy alignment and/or integration actions that promote delivery of STRA and LTMSA actions identified in this County DRP through coordinated efforts with other related County and regional planning efforts.

Table 6-3. Los Angeles County Drought Resilience Plan Policy Alignment and Integration

Related Planning Effort	Release Date	County Lead	Integration Activity
County Water Plan	Adopted 2023	County PW	Consider STRA/LTMSA alignment during future plan updates.
Antelope Valley Water Plan	Anticipated December 2026	County PW	Consider STRA/LTMSA alignment.
OurCounty Sustainability Plan	Adopted 2019, Updated November 2025	County CSO	Includes actions to ensure safe, clean, and affordable and reliable drinking water to small water systems.
Greater Los Angeles Integrated Regional Water Management Plan	Adopted 2014, Updated in 2017	County PW	Evaluated water supply management and identified projects with regional benefits (e.g., flood management and climate change mitigation) within an area that includes domestic wells and SWSs.
Antelope Valley Integrated Regional Water Management Plan	Adopted 2016, Updated December 2019	County PW	Consider STRA/LTMSA alignment.
Upper Santa Clara River Integrated Regional Water Management Plan	Adopted 2014, Updated April 2018	County PW	Consider STRA/LTMSA alignment.
Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan	Adopted 2022	County PW	Coordinate STRA/LTMSA with GSA.
County All Hazards Mitigation Plan Update	Updated September 2025	County OEM	Review Risk Assessment, STRA and LTMSA to integrate items into future plan updates.
County General Plan	Adopted 1980, Updated April 2025	County Planning	Review Risk Assessment, STRA and LTMSA to integrate items into future plan updates.

Key:

County = Los Angeles County
 GSA = Groundwater Sustainability Agency
 OEM = Office of Emergency Management
 PW = Department of Public Works

CSO = Chief Sustainability Office
 LTMSA = long-term mitigation strategies and action
 Planning = Planning Department
 STRA = short-term response action

6.4 Adaptive Management

The County DRP will be reviewed and updated periodically or in response to new information or changing conditions to ensure findings, STRAs, and LTMSAs are appropriate and relevant. At a minimum, this County DRP will be reviewed and updated by County Staff every 5 years. The County DRP may also be revisited after major droughts, water shortage events, changes in GSA status, and when new data, strategies, policies, or requests from the DRP WG arise. County Public Works is responsible for initiating and coordinating the County DRP update.

Updates to the County DRP will include (1) reviewing the Risk Assessment findings in light of new and improved information that characterizes water supply vulnerability, (2) evaluating progress on STRA and LTMSA implementation, (3) updating any communications and outreach materials and information, (4) updating DRP WG details, and (5) revising the County DRP content to incorporate any changes. During this update, County Public Works will report on these updates to the DRP WG to ensure transparent communication and coordination.

6.5 Funding Opportunities and Assistance Programs

Although access to reliable funding is a hurdle faced by agencies and entities when implementing any program or project, domestic well and SSWS owners/operators are the most acutely impacted due to limited staff, reserves, and requirements of the implementing agencies. Implementing the activities (see Table 6-2) of this DRP will require securing additional funds, either as new appropriations by the County Board of Supervisors or through other State or Federal sources. Using these additional funds would support a variety of activities, both for County Staff and domestic well and SSWS owners/operators, including plan administration, management, and updates; submitting funding applications and administering agreements; outreach and communications; coordinating with other agencies and entities; managing assistance programs; developing and constructing infrastructure and associated operations, maintenance, repair, rehabilitation, and eventual replacement; and other efforts. Those activities require funding, both short-term for projects with a finite schedule (e.g., designing and constructing a new domestic well) and long-term for ongoing activities (e.g., using and maintaining the new well). As SB 552 does not provide funding for implementation activities, this DRP analyzed local, State, and Federal funding sources available to implement the plan.

A combination of funding sources could be used to support County DRP implementation—such as generated revenue (e.g., rates and assessments), grants, loans, agency staff time, services provided by others (e.g., in-kind work, technical or training assistance through a state or federal agency)—with various agencies and entities involved in securing and administering each source. The availability of these internal and external funding sources will impact the success and timeliness of DRP implementation.

Agencies and entities may find (1) it is cost- and resource-prohibitive to implement short-term response actions and long-term mitigation strategies and actions by themselves, (2) solutions frequently require participation or involvement of other entities, and (3) it is challenging to prepare for, navigate, apply for, and administer the various local, State, and Federal funding mechanisms that could be available at any given time. These system owners/operators will need assistance and support from the County and other agencies and entities.

Funding for the STRAs and LTMSAs has not been concretely identified at the time of this DRP, and there are not County-level funding sources that have been identified as being able to be easily leveraged to

support domestic well reliant households and state small water systems. Through efforts related to the County Water Plan, County Public Works is working to identify funding sources that can be used to support small public water systems, and this analysis will also extend to the STRAs and LTMSAs identified in this DRP to support domestic well reliant households and SSWs. While some County-level funding sources may be identified to support specific STRAs and LTMSAs, DRP implementation would be most effective with dedicated funding sources for domestic wells and SSWs.

Using the STRAs and LTMSAs developed for the County (Sections 4.3 and 5.2, respectively), this DRP investigated and analyzed potential funding sources for implementation, as shown in Table 6-4. The analysis presented in this table will be used as basis for developing future funding strategies, in addition to funding sources identified as part of the County Water Plan, and is not a complete/exhaustive list. Note that available funding sources are constantly changing, and funding needs, timing, and potential opportunities should be periodically reassessed.

Table 6-4. Funding Opportunities and Assistance Programs for Drought Resilience Plan Implementation

Resource	Funding Agency	Description
General Fund	County	The County General Fund includes revenues such as sales and property tax. Use of these funds is discretionary and subject to approval by the Board of Supervisors.
Proposition 4: Safe Drinking Water, Wildfire Prevention, Drought Preparedness, and Clean Air Bond Act of 2024	Multiple State agencies	Major categories with potential support for domestic and SSWS communities include: • Safe Drinking Water, Drought, Flood, and Water Resilience • Wildfire and Forest Resilience • Coastal Resilience
Sustainable Groundwater Management Grant Program ¹	DWR	Provides GSAs with assistance and engagement support for preparation and implementation of GSPs.
Countywide and Regional Funding Program ²	SWRCB	Direct funding to support SSWSs and domestic wells serving disadvantaged communities and low-income households. Community outreach, domestic well testing, and interim and long-term solutions are eligible to receive funds. ³
Drinking Water State Revolving Fund ⁴	SWRCB	Fund provides low-cost loans for planning, designing, and constructing drinking water improvements to water systems and can be used to support system consolidation.
Technical Assistance Funding Program ⁵	SWRCB	Provides technical assistance for small, disadvantaged communities to develop, fund, and implement eligible drinking water needs, including system consolidation support.
Water and Environmental Program ⁶	USDA	Through the Rural Utilities Service Water and Environmental Programs, communities with populations of 10,000 or less can submit for funding support to construct water and wastewater facilities. Such programs could support annexation of SSWS and domestic well communities as part of a multi-benefit project led by a WEP-eligible public water system.

Notes:

¹ DWR, 2025. Assistance and Management. <https://water.ca.gov/Programs/Groundwater-Management/Assistance-and-Engagement>² State Water Resources Control Board (SWRCB), 2025. Countywide and Regional Funding Programs. https://www.waterboards.ca.gov/safer/funding_solicitation.html³ DWR, 2020. DAC Mapping Tool. <https://gis.water.ca.gov/app/dacs/>⁴ SWRCB, 2025. Drinking Water State Revolving Fund. https://www.waterboards.ca.gov/drinking_water/services/funding/SRF.html⁵ SWRCB, 2025. Countywide and Regional Funding Programs https://www.waterboards.ca.gov/safer/funding_solicitation.html⁶ United States Department of Agriculture, Rural Development, 2025. Water and Environmental Programs. <https://water.ca.gov/Programs/Groundwater-Management/Assistance-and-Engagement>

Key:

County = Los Angeles County

GSA = groundwater sustainability agency

SSWS = state small water system

USDA = United States Department of Agriculture

DWR = California Department of Water Resources

GSP = Groundwater Sustainability Plan

SWRCB = State Water Resources Control Board

WEP = Water and Environmental Program

7 References

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Appendix A

Drought and Water Shortage Emergency Response Plan

Introduction

This Water Shortage Emergency Response Process (Water Shortage ERP) documents how Los Angeles County will monitor water supply conditions to set an appropriate water shortage stage with corresponding short-term response actions to mitigate the impacts or potential impacts of a water shortage.

Water Shortage Stages—Indicators and Triggers

The Water Shortage ERP is organized around three water shortage stages: Information, Alert, and Response. The water shortage stage is informed using Table 1, which shows the indicators (water supply-related features) and associated triggers (conditions of indicators associated with a water supply status) to determine the current water shortage shown. These indicators and triggers can be used to support a water shortage stage recommendation and actions to the DRP WG and public, as well as an emergency declaration for State and Federal resources. The information in this table is not exhaustive and is intended to show how the indicators and triggers could be considered. Other indicators and triggers (not shown) may also be developed by the County. Public Works will evaluate its triggers and make a corresponding water shortage stage recommendation to the Project Coordination Team at its annual meeting. The stage determination should be re-assessed after winter snowfall and precipitation have occurred (often April). However, if conditions change considerably during the winter or at any time, the County can re-assess as necessary.

Responding to a Water Shortage Stage

The County has aligned specific short-term response actions (STRAs) to each water shortage stage, as shown in Table 2. Additional information about these STRAs is discussed in Chapter 4. New STRAs that are not listed in Table 2 may be identified and implemented based on actual shortage conditions. In addition, not all STRAs listed may be implemented during a shortage event. The County should consider the nature of the shortage when determining which STRAs are most appropriate.

In the Information Stage, Public Works will complete an annual review of the County DRP Implementation Plan, evaluate the water supply system health, organize a meeting with the Project Coordination Team, update County resources (i.e., website, vendor lists), and continue proactive outreach to domestic well and SSWS communities.

In the Alert Stage, the County will focus on raising awareness of potential water shortage issues, providing the steps to follow if a water shortage occurs, encouraging temporary mitigation measures that may avoid a shortage, and coordinating with other organizations that may be involved in the event a shortage occurs (such as GSAs, public water systems, and other County departments).

In the “Response Stage,” the County will activate its process to distribute water supplies, coordinate with other organizations, and update the Project Coordination Team and DRP WG as deemed appropriate.

Responsibility and Coordination

Table 2 lists the responsible entity(ies) for STRAs that could be implemented in each water shortage stage and indicates other entities that may be involved or with which coordination will be needed.

Table 1. Indicators and Trigger Considerations for Determining Active Water Shortage Stages for Domestic Wells and SSWS in Los Angeles County

Indicator Name	Indicator Description	Trigger Consideration When Going into the Alert Stage	Trigger Consideration When Going into the Response Stage
US Drought Monitor	The US Drought Monitor is a map updated every Thursday that classifies drought conditions across the United States into none, Abnormally Dry, Moderate, Severe, Extreme, and Exceptional. The County can use this resource to understand the prevalence and severity of drought within the County and surrounding areas when determining if it should be in the Alert Stage.	The County should use experience during previous droughts to determine what US Drought Monitor classification warrants going into the Alert Stage. Some counties may be more resilient against Abnormally Dry or Moderate drought conditions and may only need to go into the Alert Stage in Severe, Extreme, or Exceptional Drought. Also consider if groundwater in the County is reliant on conditions outside the County such as in mountain watersheds or locations where water is imported from.	An Extreme or Exceptional drought classification may not solely indicate a water shortage emergency is occurring or imminent. The County should heighten its monitoring of other indicators if Extreme or Exceptional drought exist in the County.
Public Water System Water Shortage Stage	A Public Water System is required to maintain a Water Shortage Contingency Plan (or have one within an Urban Water Management Plan) that specifies stages of water shortage tied to projected water supply shortfalls. The Drought Stages that Public Water Systems use may be a proxy for overall drought conditions within the County.	The County should use historical experience to determine if a Public Water System’s drought stage warrants going into the Alert Stage. Public Water Systems that use the same groundwater supplies are a better direct proxy than those relying on different types of water supplies.	A Water Shortage Contingency Plan must include an Emergency Response Stage that is only used when water supply shortages are imminent. If a Public Water System in the County is in an Emergency Response Stage, the County may need to consider going into an Emergency Response Stage, especially if these systems use the same groundwater supplies.
Water Quality	Areas with known water quality issues are likely monitored. The presence of potential water quality issues that may result in water supplies being unusable can be used to establish a water shortage stage. Note that other hazards, such as droughts or wildfires, can exacerbate poor water quality conditions and should also be considered in combination with this indicator.	Water quality observations that are noted as being of concern (for unregulated chemicals or those without an established water quality level) or the measured water quality is outside of established standards (maximum contaminant levels, primary or secondary standards, etc.). However, a boil water notice or other intervention limiting use is not in place.	Observed water quality is outside public health standards (maximum contaminant levels, primary or secondary standards, etc.) and/or a boil water notice or intervention limiting use is in place.
Applications for New Well Permits	Some counties have observed an increase in new well permit applications (both domestic and others) to replace existing wells that are not providing sufficient water supply, even if there are no associated Dry Well Reports. The County can evaluate if these new applications are to replace an existing as a proxy for water shortage.	If the County is in a drought condition (US Drought Monitor, Public Water System, or others) and there is an increase in new well permit applications, then the County should consider going into the Alert Stage while evaluating if the new applications are due to water shortages for domestic wells or SSWSs.	If the County determines an increase in new well permits is because of water shortages at domestic wells or SSWSs, then it may indicate water shortages at other domestic wells or SSWSs. This may require going into the Emergency Response Stage.
Dry Well Reports	California has a dry well reporting system that well owners or operators can use to report a dry well. The County can use this to identify where a water shortage is occurring.	Any dry well reports submitted within the County should trigger evaluating the cause of the water shortage. If the cause is due to an isolated issue (i.e., very shallow well, aging infrastructure) that was exacerbated by drought, the County could go into the Alert Stage and monitor for other dry well reports.	If, after evaluating the dry well reports, it is found the features of the dry well (i.e., depth, age) are consistent with other wells in the area, that may indicate the potential for widespread water shortages. This may require going into the Response Stage.
GSA Monitoring	GSAs in SGMA priority basins are required to do regular monitoring (typically in October and April) of groundwater conditions as part of their reporting. The County can use these monitoring programs to inform a water shortage stage.	If monitoring or analysis by a GSA indicates a decline in groundwater levels below an established threshold (such as a Minimum Threshold or Measurable Objective as defined in the GSP) that could cause water supply issues, the County could consider going into the Alert Stage.	If monitoring or analysis by a GSA results in the GSA implementing response actions to avoid water shortages and SSWS or domestic well supplies could be impacted in that area, the County could consider going into the Emergency Response Stage.
Non-Drought Hazards	There are other hazards that could result in a water shortage, including wildfires, earthquakes, floods, and power outages (either planned or unplanned), and the County should monitor conditions following a hazard event. Water supply impacts of some of these hazards can be worsened by drought conditions, and such events can also influence other indicators, such as water quality.	Hazards that temporarily interrupt domestic well or SSWS supplies for up to two days could trigger the Alert Stage.	Hazards that interrupt domestic well or SSWS supplies for an extended period (3 or more days), including public safety power shutoffs, could trigger the Emergency Response Stage.

Key:
County = Los Angeles County
GSA = groundwater sustainability agency
GSP = Groundwater Sustainability Plan
SSWS = state small water system

Table 2. Short-Term Response Actions Aligned to Water Shortage Stage with Responsible Organization(s) for Los Angeles County

Water Shortage Stage	Description	Short-Term Response Actions ¹	Responsible Organization(s)	Comment
Information	No major drought or potential for water shortage	Annual DRP Implementation Check In	County PW	County PW will review the status of the DRP Implementation Plan, determine if any modifications are required, and assign responsibilities for making DRP modifications.
		Annual Water Supply Assessment	County PW Other entities	County PW, in partnership with others, will evaluate the water supply system health to support a water shortage stage recommendation for the DRP WG.
		Annual Project Coordination Team Meeting	County PW (Lead) County PH County OEM County CSO	Annual PCT meetings will occur after the water supply health is evaluated each year.
		Annual website update	County PW	Website will be updated to reflect current conditions.
		Proactive long-term mitigation strategy communications and outreach	County PW (Lead) Santa Clarita Valley GSA Santa Monica Basin GSA County PH	County PW will coordinate communications and outreach as defined in the DRP. Santa Clarita Valley GSA will conduct communications within the Santa Clara River Valley East Subbasin through the GSA website and the Santa Monica Basin GSA will conduct communications within Santa Monica Mountains Groundwater Basin. County PH will perform outreach to domestic wells and SSWS outside the groundwater basins.
Alert	Drought or other hazard occurring that could cause a water shortage	As-Needed Project Coordination Team and DRP WG Meetings	County PW (Lead) County PH County OEM County CSO	County PW will schedule additional meetings with the PCT as needed, and with the DRP WG as PCT deems appropriate
		Implement communication to domestic well and SSWS communities on what to do if they experience a water shortage	County PW (Lead) Santa Clarita Valley GSA Santa Monica Basin GSA Other entities	County PW will implement the DRP Communications and Outreach Plan, but other organizations will conduct certain communications (water shortage alerts and resources for water shortage via GSA websites). The Santa Clarita Valley GSA will conduct all outreach within the Santa Clara River Valley East Subbasin and the Santa Monica Basin GSA will conduct communications within Santa Monica Mountains Groundwater Basin.
		Outreach on voluntary water conservation strategies	County PW	County PW, in coordination with other entities, will implement voluntary water conservation measures among domestic well and SSWS users in the event of a water shortage event.
		As-needed coordination with relevant organizations - GSAs, power companies, NGOs, other county departments	County PW (Lead) Other entities	County PW will initiate coordination, but other organizations may be required to lead or participate, depending on conditions.
Response	Water shortage is occurring or is imminent	Regular Project Coordination Team and DRP WG meetings	County PW	County PW will schedule additional meetings with the PCT and DRP WG, as deemed appropriate.
		Activate emergency and interim drinking water distribution process for area(s) experiencing shortage	County OEM (Lead) Other entities	County OEM will activate the checklist, but other organizations will implement specific activities.
		Standing coordination with relevant organization	County PW Other entities	County PW will organize regular coordination meetings and will delegate to other organizations as required.

Note:
¹ Not all Short-Term Response Actions identified by the County are explicitly listed in this table as some may be grouped together. All short-term response actions are described in Chapter 4.

Key:
County = Los Angeles County
GSA = groundwater sustainability agency
PCT = Project Coordination Team
WG = Working Group
CSO = Chief Sustainability Office
NGO = Non-governmental organization
PH = Department of Public Health
DRP = Drought Resilience Plan
OEM = Office of Emergency Management
PW = Department of Public Works



Los Angeles County Drought Resilience Plan
Administrative Final

Prepared for:
Los Angeles County

Prepared by:
Stantec Consulting Services Inc.

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