

Appendix A — Analysis of Existing Conditions in Antelope Valley

1. Introduction

Los Angeles County Public Works (Public Works) is leading the development of the Antelope Valley Water Plan (AVWP). An initial step to developing the AVWP is reviewing relevant documents, data sources, and concurrent planning and program implementation information related to management of water resilience within the Los Angeles County portion of the Antelope Valley. This Analysis of Existing Conditions in Antelope Valley provides a summary of existing conditions within the AVWP study area and will inform the direction and planning topics of the AVWP. This document also includes a high-level summary of the information and data gaps for the region, based on preliminary research and review of existing planning documents. The AVWP is a supplement to the Los Angeles County Water Plan (CWP), and focuses on the specific needs of the Antelope Valley and highlights how those are being addressed via the CWP processes.

2. AVWP Setting

The Antelope Valley is unique compared to the rest of Los Angeles County due to its different geography, climate, and communities. Because it lies on the eastern side of the San Gabriel mountain range, it does not experience the coastal influences of the rest of Los Angeles County.

a. Geography

The Antelope Valley is a geographic region split between Los Angeles and Kern Counties, which spans a large portion of the southwestern Mojave Desert. The region is a 2,400 square mile valley surrounded by the Tehachapi and San Gabriel Mountains to the north- and southwest. Approximately half of the Antelope Valley (1,220 square miles) is located within Los Angeles County. The Antelope Valley itself ranges in elevation between 2,000 to 3,500 feet above sea level. The region's surface streams are ephemeral and include Big Rock Creek, Little Rock Creek, Amargosa Creek, and Oak Creek.

b. Climate and Hydrology

The Antelope Valley has a high desert climate due to its altitude and normal weather patterns. The region is characterized by hot, dry summers and moderately cool winters. The Antelope Valley receives very little rainfall, typically less than 10 inches of precipitation per year between December and March. The region's agricultural industry relies heavily on irrigation due to limited precipitation and surface flows. The Antelope Valley is enclosed geographically by the surrounding mountains, trapping runoff in the region. Surface flows travel through ephemeral streams and are captured in three ways (reservoirs, dry lakes, or percolation) or evaporates. Water from the San Gabriel Mountains flows into Little Rock Reservoir via Little Rock Creek. Some streams travel eastward into the three dry lakes located at Edwards Air Force Base in Kern County. All other runoff either evaporates or percolates into the Antelope Valley Groundwater Basin (Basin), a large, enclosed groundwater basin made up of thick alluvium and lacustrine aquifers. The Basin includes two primary aquifers - the upper aquifer is an unconfined aquifer thickest in the southern part of the region, while the lower aquifer is a confined aquifer thickest near Edwards Air Force Base. Groundwater comprises the majority of the region's local water supply as discussed further in Section 4.

c. Population Centers

The Antelope Valley region is moderately populated. Within the AVWP study area, the two largest population centers are Palmdale and Lancaster, which each had populations of approximately 170,000 in 2020 (United States Census Bureau 2025a; United States Census Bureau 2025b). The rest of the study area's population is scattered across smaller cities and communities in unincorporated Los Angeles County. These communities include Antelope Acres, Quartz Hill, Littlerock, Sun Village, and Lake Los Angeles.

The Antelope Valley region as a whole has experienced high population growth over the last 40 years. The region's population nearly tripled between 1980 and 2000. Since 2000, the region's population has increased by an average of 4% per year, while Los Angeles County at large has grown less than 1% per year during the same period (Neilsberg, 2023; AVRWMG, 2019). The City of Palmdale is projected to grow to 201,500 people by 2040, while Lancaster's population is projected to increase to 209,900 over the same period (SCAG, 2016).

d. Water Districts

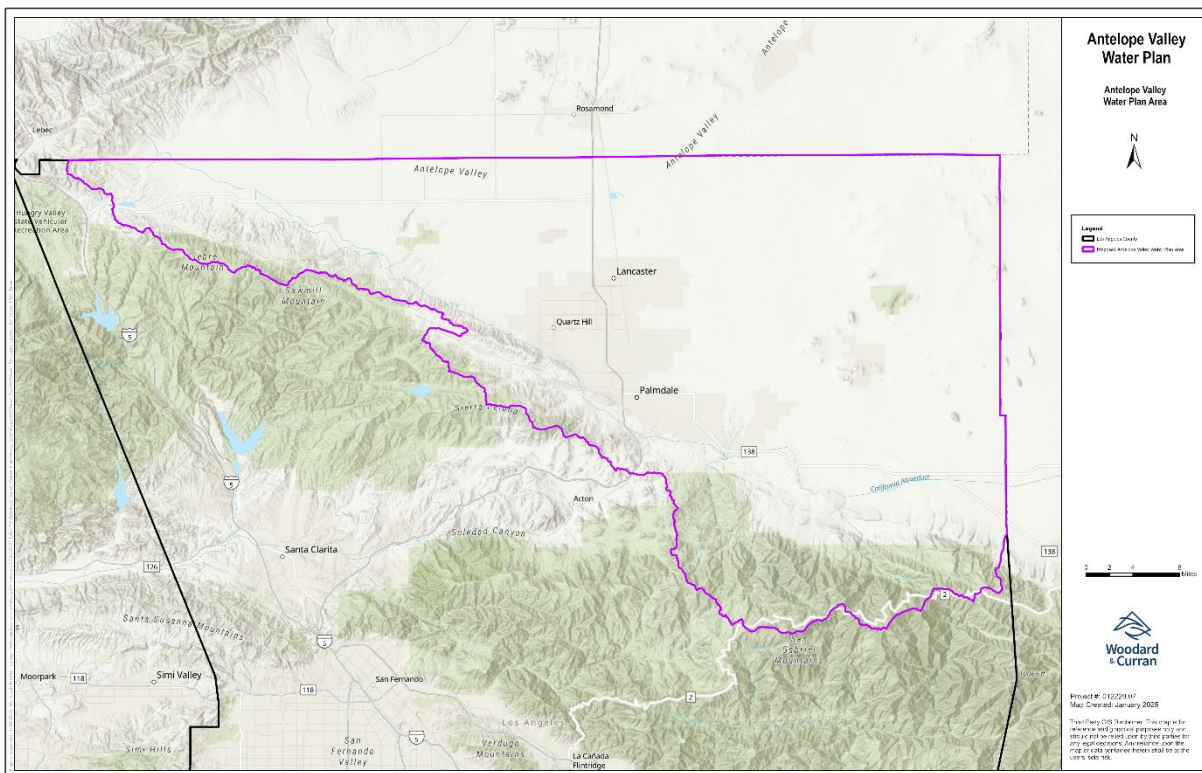
There are four primary water suppliers in the portion of the Antelope Valley within Los Angeles County. Municipal water is provided by Palmdale Water District (PWD), Los Angeles County Waterworks District No. 40 (LACWWD 40), and Quartz Hill Water District (QHWD). Littlerock Creek Irrigation District (LCID) provides irrigation service to many agricultural customers in the region. PWD and LCID jointly manage and distribute surface water from Little Rock Reservoir. Antelope Valley East Kern Water Agency (AVEK) provides imported State Water Project (SWP) water to the region's local suppliers. The remainder of the region's supply is primarily local groundwater, with some surface water and recycled water supplies.

The two largest water suppliers in the Antelope Valley region are PWD and LACWWD 40. PWD and LACWWD 40 deliver water to over 300,000 people in the cities of Lancaster and Palmdale, and unincorporated Los Angeles County. Lancaster and Palmdale are the region's most substantial population centers. PWD delivers approximately 17,000 AFY of water to its 27,000 municipal connections (PWD, 2023). Residential customers make up most of PWD's connections, and about two-thirds of its total demand. Due to the region's projected population growth, it is expected that PWD's water demand will exceed 20,000 AFY by 2050. LACWWD 40 delivers approximately 46,000 AFY to its nearly 60,000 service connections (LA County Waterworks District, 2021). QHWD services approximately 19,300 people across over 5,500 connections, with a total demand of approximately 4,700 AFY in 2020 (QHWD, 2021). LCID provides water to approximately 1,200 connections (AVRWMG, 2019).

e. State Small Water Systems

The State Water Resources Control Board (SWRCB) defines State Small Water Systems (SSWS) as water systems that serve between 5 and 14 service connections and do not regularly provide drinking water to more than 25 customers (SWRCB, 2021). SWRCB requires all SSWS to monitor and report water quality on a regular basis to ensure public health and safety standards are met. There are 6 registered SSWS in the proposed AVWP Area: 40th Street East Mutual Water, Antelope Valley Progressive Club, Baxter Mutual Water Company, Joshua Acres Mutual Water Company, Piute Mutual Water Company, and Punchbowl Canyon Water Association (California Department of Technology, 2022). The SWRCB's Division of Drinking Water manages the SAFER dashboard, which provides public data on the risk status of water systems under

FIGURE 2: AVWP STUDY AREA



3. Existing Collaboration and Communication Mechanisms

There are several existing collaboration and communication mechanisms that could be used to support the planning efforts for the AVWP. It is not the intention of the AVWP to duplicate existing planning and outreach efforts, but instead to build on and leverage them where they align with the AVWP.

a. Regional Partnerships

The Antelope Valley has a well-established history of regional partnerships, which are crucial for fostering collaboration, resource sharing, and addressing common challenges. The partnerships include, but are not limited to, the following:

- The High Desert Water Bank is a partnership between AVEK and the Metropolitan Water District (MWD), allowing MWD to store SWP supplies in the Antelope Valley Groundwater Basin (AVEK 2025a).
- The Willow Springs Water Bank Conjunctive Project is a partnership between AVEK and the Willow Springs Water Bank. The project aims to enhance water storage and management capabilities in the Antelope Valley.

- AVEK, PWD, and LCID have a cost-sharing agreement for the Littlerock Creek Recharge Project. Under this agreement, AVEK and PWD use LCID's SWP Turnout water to recharge their water supplies directly into Littlerock Creek (AVEK 2025b).
- AVEK, PWD, and LCID also have a cost-sharing agreement for SWP Table A allocations.

b. Public Outreach

Two regional groups have been identified as potential means for engaging with the public during the AVWP planning process. The Antelope Valley IRWM Program was leveraged to conduct public outreach during development of the CWP. These meetings could also be used for public outreach for the AVWP. The Antelope Valley IRWM Program hosts quarterly meetings that are open to the public and maintains a comprehensive stakeholder list comprising of agencies and interested individuals. Additionally, the Community Coalition of the Antelope Valley is an organization that brings community members together to foster leadership, launch action campaigns, and amplify the voice of Antelope Valley citizens. Some of its members participate in other planning efforts, including the Antelope Valley IRWM Program, but this organization could also be used as a vehicle for reaching the public or interested parties.

4. Water Supplies and Resiliency

The Antelope Valley is an enclosed basin, meaning there is no outflow and all water is consumed by use, evaporation, or recharge. The primary local water supply in the AVWP study area is groundwater. The remaining supply is generally imported via the SWP, though some surface water and recycled water supplies are used in the AVWP study area. The region's reliance on groundwater and imported water creates potential resiliency concerns. The Basin is adjudicated, with pumping regulated by the Watermaster, which limits groundwater supply development. Imported water is facing increased costs, impacts from climate change, and increased pressures on existing supplies, all of which reduce its reliability. The region's reliance on imported and groundwater drives a need to develop local and sustainable water supplies. The following sections describe water supplies and considerations for enhanced resiliency.

a. Groundwater

Approximately two-thirds of the Basin lies within Los Angeles County, and thus the AVWP study area. The Basin's adjudication was finalized in December 2015. The adjudication process found the Basin was in overdraft and established water rights for pumpers in the Basin. The adjudication reduced pumping to combat overdraft and decrease production to meet the native safe yield of the Basin, established at 82,300 AFY (Antelope Valley Watermaster, 2017). In 2023, there were 139 parties with production rights and an additional estimated 2,380 small pumpers in the Basin, both within and outside the AVWP study area (Antelope Valley Watermaster, 2024). Because groundwater comprises a large portion of the region's water supplies, its long-term reliability is a concern for the region. Groundwater banking and improved treatment technology are key opportunities to strength groundwater reliability.

AVEK operates two groundwater banks in the Basin (Eastside and Westside Water Banks) and is managing the construction of a third (High Desert Water Bank). In wet periods, AVEK injects excess imported water into these water banks to be recovered during dry years (AVRMWG, 2019). When High Desert Water Bank is operational, AVEK's injection capacity is projected at over 120,000 AFY, and the water banks will be able to store over 300,000 AF in total. Additionally, the groundwater in some parts of the Basin exceeds safe

limits for arsenic and nitrates (USGS & SWRCB, 2013). Treatment of these constituents is cost-prohibitive to many users. Increasing groundwater banking, improving treatment technology, and exploring cost-saving measures for treatment may increase groundwater resilience.

b. State Water Project and Imported Water

Water agencies in the AVWP study area use imported supplies from the SWP, either as SWP contractors or via purchases from AVEK. LACWWD 40 is AVEK's largest SWP customer, purchasing over 31,550 AF in 2020. To plan for dry years or years when supplies are otherwise limited, LACWWD 40 purchases additional imported water from AVEK and "banks" it in the groundwater basin for long term storage. As growth continues in the Antelope Valley, demands for imported water are expected to increase. LACWWD 40 has already established an agreement with AVEK to acquire additional imported supplies to meet the demands of new developments (LA County Waterworks Districts, 2021). PWD is a State Water Project (SWP) contractor and has a Table A entitlement of 21,300 AFY (PWD, 2023). The volume of SWP supplies available in a given year is variable, with SWP supplies allocated depending on hydrologic conditions, storage conditions, requests from SWP contractors and regulatory and operational constraints. In general, the Department of Water Resources (DWR) estimates SWP contractors can expect to receive approximately 60% of their allocations, though this amount can vary with recent droughts showing as low as 5% of allocations (DWR, 2025a). As of February 25, 2025, allocations were set at 35% (DWR, 2025b).

c. Surface Water

Surface water supplies are typically runoff from Angeles National Forest that is captured by Littlerock Creek Dam Reservoir, and stored in the reservoir and at Lake Palmdale. Runoff is seasonal, and limited, with surface water supplies shared between PWD and LCID, which have a combined right to 5,500 AFY of surface water diversions. Littlerock Dam Reservoir has a capacity of 3,000 AF, but sediment removal will increase storage capacity to 3,500 AF (PWD, 2021). Surface water supplies can be variable, with availability dependent on how much precipitation occurs in a given year, along with when the precipitation occurs and in what form. The Antelope Valley's high desert climate contributes to high rates of evaporation, and conveyance through unlined canals can cause percolation, leading to additional surface water loss. To combat water losses due to evaporation and percolation, PWD is in the process of converting the historical Palmdale Ditch into an enclosed pipeline (PWD, 2023).

d. Recycled Water

Recycled water is produced at the Lancaster WRP and Palmdale WRP, both owned and operated by LACSD. Recycled water is retailed by the Palmdale Recycled Water Authority and the City of Lancaster to PWD and LACWWD 40. In the Antelope Valley, recycled water is primarily used for landscape irrigation, dust control at construction sites, and recreational impoundment. In 2020, LACWWD 40 and PWD sold 362 and 70 AF of recycled water, respectively (LA County Waterworks Districts, 2021; Palmdale Water District, 2021). Recycled water supplies exceed the current demand in the Antelope Valley, indicating potential for increased use of recycled water in the region (LA County Waterworks Districts, 2021). LACWWD 40 projects an increase in recycled water demand of about 1,000 AFY by 2045. PWD's 2020 UWMP projects a dramatic increase in recycled water demand, from 70 AFY to over 7,000 AFY by 2045.

PWD predicts a large increase in recycled water demand due to the planned development of an indirect potable reuse (IPR) project in PWD's service area. The proposed IPR project is detailed in PWD's Strategic

Water Resources Plan (Palmdale Water District, 2021; Palmdale Water District, 2023). Additionally, regional agencies are considering the development of distribution infrastructure for the conveyance of recycled water between the Lancaster and Palmdale WRPs. This project is referred to as the “Antelope Valley Backbone,” and it will improve the reliability of the region’s recycled water system (Palmdale Water District, 2021). Expanding recycled water production will enhance water supply reliability in the Antelope Valley.

5. Existing Information and Data Gaps

Several existing planning documents and resources for the Antelope Valley region and relevant agencies were reviewed for the AVWP. Additionally, research completed for the CWP was relied on to help identify information and data gaps.

6. Data Review Process

The CWP’s 2022 gap analysis formed the backbone of a review of recent documents on Antelope Valley water resources, and was originally conducted to compile gaps information, actions or management, or water resources that are impacting the ability of agencies and municipalities to manage water resources within Los Angeles County. The types of documents reviewed during the development of the CWP that are relevant to the Antelope Valley include:

- Integrated Regional Water Management Plans (IRWMPs)
- Urban Water Management Plans (UWMPs)
- Sustainability plans
- Strategic plans
- Groundwater management documents
- Integrated resources plans
- Stormwater planning documents (e.g., Stormwater Management Plans and Floodplain Management Plans.)
- Resilience studies (e.g., Building Water Resilience in Los Angeles County.)
- Other water management planning documents and studies that help describe the current water resource management in Antelope Valley

Expert interviews were also conducted during the development of the CWP. Fifteen interviews were conducted in July and August 2020 to document various agency perspectives on water management challenges, initiatives, local planning efforts, and participation in the development of the CWP. Water management agencies and organizations were selected to reflect a diverse array of professional perspectives, priorities, and roles throughout Los Angeles County.

In addition to the research completed for the CWP, recent planning documents and reports, including current master plans, UWMPs, capital improvement plans, and stormwater-related plans, were reviewed from the following agencies in the Antelope Valley:

- Los Angeles County Waterworks District 40 (LACWWD 40)
- Palmdale Water District (PWD)
- Quartz Hill Water District (QHWD)

- Antelope Valley East Kern Water Agency (AVEK)
- Los Angeles County Sanitation Districts 14 and 20 (LACSD)
- Antelope Valley Watermaster
- City of Lancaster
- City of Palmdale

The information gathered through the research process was reviewed to identify common needs, issues, and challenges that are relevant to Antelope Valley. **Attachment A** summarizes the list of documents that were reviewed. The documents reviewed in the research are not intended to represent a comprehensive listing of all documents in the Antelope Valley. Rather, they provide sufficient context for existing conditions in Antelope Valley.

7. Data Gaps

Information reviewed as part of the data gaps analysis was synthesized to identify common needs and issues in the Antelope Valley. **Table 1** provides a summary of the gaps identified in this TM.

Table 1: Summary of Gaps

Gap
Water demand of small, mutual water companies
Long-term annual and seasonal agricultural water demand
Groundwater basin inflows and outflows
Surface water volume available for capture
Emergency State Water Project disruption contingency plan
Updated groundwater modeling
Inclusion of small water companies in water resources planning
Inability to meet demand in the long-term
Lack of interconnections
Reduced groundwater levels or unsustainable pumping

Water demands of small water systems

In the Antelope Valley, numerous small water systems, including mutual water companies and mobile home parks, provide water to local communities. Due to their small size, these small water systems are not required to submit UWMPs. As a result, the lack of water use data from customers served by these small mutual companies has been identified as a data gap (AVRWMG, 2019; SWRCB 2020).

Long-term annual and seasonal agricultural water demand

The Antelope Valley has identified long-term annual and seasonal agricultural water demands as significant data gaps in its IRWM Plan (AVRWMG, 2019).

Groundwater basin inflows and outflows

Numerous data needs have been identified in the Antelope Valley to improve the understanding of groundwater inflows and outflows, including:

- Pumping by private well owners and agricultural pumpers

- Groundwater basin recharge reduction due to septic removal
- Subsurface flow in the groundwater basin
- Complete groundwater quality data (incomplete constituent data for some subbasins-TDS/nitrate/chloride/arsenic etc.) TDS and nitrates have been identified as concerns in the Antelope Valley Groundwater Basin (AVEK, 2021). Arsenic has also emerged as a concern, but it is still under the Maximum Contaminant Level (AVEK, 2021).
- Future land use data
- More complete well monitoring data.

Surface water volume available for capture

The Antelope Valley has identified the need to evaluate the potential for recovering water from surface runoff, particularly from Amargosa Creek (AVRWMG, 2019). In 2019, the City of Palmdale, in partnership with PWD, AVEK, and LACWWD 40's, constructed the Upper Amargosa Creek Recharge Project (PWD 2023).

Emergency state water project disruption contingency plan

The Antelope Valley IRWM Plan identified the necessity of establishing a contingency plan to address water supply needs in the event of a disruption to SWP deliveries (AVRWMG, 2019).

Updated groundwater modeling

Updated groundwater modeling has been identified as a need for the Antelope Valley Basin in past plans and documents. During 2024, the Antelope Valley Watermaster Engineer continued updating the numerical Basin-wide groundwater model. When completed, the updated model will assist with Watermaster duties, including monitoring safe yield, conducting Basin-wide injury analyses, supporting water budgets for Annual Reports, and evaluating groundwater storage and conditions (Todd Groundwater, 2023).

Inclusion of small water companies in water resources planning

Interviews conducted as part of the CWP efforts highlighted the need to consider small mutual and private-water companies. Many of these smaller systems rely on a single water source and lack of interconnections, which affects their reliability and access to sufficient water quality data. Financing and planning water resource efforts for these systems pose significant challenges and may be more effectively addressed through regional planning efforts (AVEK, 2021).

Inability to meet long-term demand due to climate change

Drought is a common occurrence in California, historically affecting both imported and local water supplies, and is addressed in water shortage contingency plans. Generally, Antelope Valley water agencies have sufficient supplies in place to meet demands during dry years through demand management and their supply mix. However, there is potential for long-term supply shortages in the Antelope Valley due to a growing population and climate change.

Lack of interconnections

The need to meet water demand during an emergency outage has been identified in the Antelope Valley (AVRWVG, 2019). Some water systems are vulnerable to emergency outages, specifically small, isolated water systems that do not have interconnections or agreements with neighboring systems, agencies without sufficient emergency storage at a local level, and water systems that are highly reliant on direct, treated imported water.

Reduced groundwater levels or unsustainable pumping

The Antelope Valley Groundwater Basin was adjudicated in December 2015 due to declining groundwater levels. The adjudication determined that the basin was in state of overdraft and defined the basin boundaries, established a safe yield, quantified groundwater production, and implemented a ramp-down production schedule for pumpers (Todd Groundwater, 2019; PWD, 2023). The Antelope Valley Watermaster has been sustainably managing the basin since the adjudication. However, it is projected that there will be an increase to groundwater pumping due to population growth in the Antelope Valley (AVEK, 2021).

8. Projects

There are multiple ongoing water resources projects in the Antelope Valley, some of which are reported here. This overview is not comprehensive as other projects may be planned that were not mentioned in the reviewed documents. Several storage and banking projects were reported in the Antelope Valley Watermaster 2023 Annual Report. The Upper Amargosa Creek Project was completed in 2019 as noted in the 2023 Palmdale Water District Strategic Water Resources Plan. Additionally, PWD has planned several water supply projects such as Pure Water Antelope Valley, rehabilitation or replacement of existing wells, recycled water injection wells, and enhancing the Palmdale Ditch (PWD 2023). There are no current plans to divert stormwater for beneficial use in the documents that were reviewed as part of this TM's analysis (AVEK, 2021).

9. Conclusions

The information gathered through the gap analysis provides a summary of the existing conditions within the Los Angeles County portion of the Antelope Valley. The review of documents identified several key needs and issues in the Antelope Valley, such as data gaps in small water systems, long-term agricultural water demands, and groundwater inflows/outflows. Critical needs include surface water capture, emergency contingency plans, updated groundwater modeling, and better inclusion of small water systems. Long-term supply shortages, improved interconnections, and managing reduced groundwater levels are essential for sustainable water management in the Antelope Valley. These gaps and needs should be explored further by the planned AVWP Workgroup to identify planning topics and potential actions to support the water-related needs of the AVWP study area.

REFERENCES

- Antelope Valley-East Kern Water Agency (AVEK). 2021. 2020 Urban Water Management Plan. Available: https://www.avek.org/files/2a8e325f5/AVEK+2020+UWMP_Public+Draft_210525.pdf
- Antelope Valley-East Kern Water Agency (AVEK). 2025a. "High Desert Water Bank." Available: www.avek.org/high-desert-water-bank.
- Antelope Valley-East Kern Water Agency (AVEK). 2025b. "Local Water Suppliers Sign MOU to Continue Collaboration on Recharge." Available: <https://www.avek.org/local-water-suppliers-sign-mou-to-continue-collaboration-on-recharge>
- Antelope Valley Regional Water Management Group (AVRWMG). 2019. Antelope Valley IRWM Plan. Prepared for Antelope Valley Regional Water Management Group. Available online at: <https://pw.lacounty.gov/wwd/avirwmp/index.cfm?fuseaction=finalPlan1>
- Antelope Valley Watermaster. 2024. *2023 Annual Report*. July 26. <https://avwatermaster.net/wp-content/uploads/2024/07/FINAL-2023-AVWM-Annual-Report-All-1.pdf>
- Antelope Valley Watermaster. 2017. "History". Accessed 25 February 2025. Available: <https://avwatermaster.net/about-us/history/>
- California Department of Water Resources (DWR). 2025a. *State Water Project Historical Table A Allocations Water Years 1996-2025*. January 28. Available: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Management/SWP-Water-Contractors/Files/Historical-SWP-allocations-1996---2025-w-NOD-tables-012825.pdf>
- California Department of Water Resources (DWR). 2025b. *Notice to State Water Project Contractors – Increase of State Water Project 2025 Allocation to 35 Percent*. February 25. Available: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/State-Water-Project/Management/SWP-Water-Contractors/Files/25-03.pdf>
- California Department of Technology 2022. *California State Geoportal: State Small Water Systems 2022 (DDW)*. Available: <https://gis.data.ca.gov/datasets/waterboards::state-small-water-systems-2022-ddw/explore>
- Los Angeles County Waterworks Districts. 2021. *2020 Urban Water Management Plan for Los Angeles County Waterworks District No. 40 Antelope Valley*. Available: <https://ladpw.org/wwd/web/Documents/LACWD%202020%20WSCP%20FINAL.pdf>
- Neilsberg. 2023. Los Angeles County, CA Population by Year. Available: <https://www.neilsberg.com/insights/los-angeles-ca-population-by-year/>

- Palmdale Water District (PWD). 2021. *2020 Urban Water Management Plan*. Available: https://www.palmdalewater.org/wp-content/uploads/2021/05/PWD-2020-UWMP-Public-Review-Draft_05.14.21_MainText.pdf
- Palmdale Water District (PWD). 2023. *Strategic Water Resources Plan*. Available : chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.palmdalewater.org/wp-content/uploads/2024/09/PWD-SWRP_2023-06-30.pdf
- Quartz Hill Water District (QHWD). 2021. Quartz Hill Water District 2020 Urban Water Management Plan. June. Available: <https://qhwd.org/wp-content/uploads/2021/06/UWMP-WSCP-MKN-Final-sent-6.11.21-11a11m.pdf>
- State Water Resources Control Board (SWRCB). 2020. *California Drinking Water System Area Boundaries*. Available: <https://gis.data.ca.gov/datasets/waterboards::california-drinking-water-system-area-boundaries?geometry=-146.994%2C31.064%2C-91.491%2C43.271>. Accessed on August 24, 2020.
- State Water Resources Control Board (SWRCB). 2021. *State Small Water System and Domestic Well Water Quality Data Submission Guidance for Counties*. Available: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/ssws_dw_data_submittal_guidance.pdf
- State Water Resources Control Board (SWRCB). 2024. *SAFER Dashboard*. Available: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/saferdashboard.html
- Southern California Association of Governments (SCAG). 2016. *2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction*. Available: https://scag.ca.gov/sites/main/files/file-attachments/2016_2040rtpscs_finalgrowthforecastbyjurisdiction.pdf?1605576071
- Todd Groundwater. 2019. *Antelope Valley Watermaster 2018 Annual Report (Draft)*. Prepared for Antelope Valley Watermaster. Available: <https://avwatermaster.net/wp-content/uploads/2019/07/190610-Draft-2018-Annual-Report-Reduced.pdf>
- Todd Groundwater. 2023. *2023 Annual Report*. Prepared for Antelope Valley Watermaster. Available: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/<https://avwatermaster.net/wp-content/uploads/2024/07/FINAL-2023-AVWM-Annual-Report-All-1.pdf>
- United States Census Bureau. 2025a. *QuickFacts: Lancaster city, California*. Available: <https://www.census.gov/quickfacts/fact/table/lancastercitycalifornia/PST045224>
- United States Census Bureau. 2025b. *QuickFacts: Palmdale city, California*. Available: <https://www.census.gov/quickfacts/fact/table/palmdalecitycalifornia/PST045224>
- United States Geological Survey and the California State Water Resources Control Board. 2013, January. *Groundwater Quality in the Antelope Valley, California*. Fact Sheet 2012-3033. United States Department of

the Interior: United States Geological Survey. Available:
<https://pubs.usgs.gov/fs/2012/3033/pdf/fs20123033.pdf>

**ATTACHMENT A: LIST OF DOCUMENTS REVIEWED FOR DATA GAPS
ANALYSIS**

Summary of Documents Reviewed for Data Gaps Analysis

Document	Agency	Year	Purpose
Antelope Valley IRWM Plan	Antelope Valley Regional Water Management Group	2019	Encourages local agencies to work cooperatively to manage local and imported water supplies to improve water quality, quantity and reliability.
Antelope Valley Salt and Nutrient Management Plan	District 40	2014	Ensures that all water quality objectives are met and sustained, and beneficial uses of groundwater are protected.
Strategic Plan	Antelope Valley-East Kern Water Agency	2015	Outlines AVEK's vision, mission and goals as a public agency and establishes approaches for the effective stewardship of the facilities and people to support this service.
Urban Water Management Plan	Antelope Valley-East Kern Water Agency	2015 and 2020	Compliance document to fulfill the UWMP Act that requires urban water suppliers to develop a Plan. Examines existing and future supplies and demands, water supply reliability, water supply programs, conservation goals and programs, and water shortage contingency.
Los Angeles County Comprehensive Floodplain Management Plan	Los Angeles County Department of Public Works - Watershed Management Division	2016	Describes the flood hazard in unincorporated areas of Los Angeles County and presents measures to mitigate those hazards/
Sediment Management Strategic Plan	Los Angeles County Flood Control District	2013	Provides an overview of sediment management issues, evaluates various alternatives to help identify optimal solutions for sediment management, and identifies general steps that should be pursued to meet the Los Angeles County Flood Control District's mission.
Building Water Resilience in Los Angeles County: A Report (Draft)	Los Angeles County Department of Public Works	2017	Serves as the foundation for discussion and will be disseminated widely to encourage broad stakeholder engagement in developing a vision for the region's reliable and resilient water future.

Document	Agency	Year	Purpose
Metropolitan Water District Integrated Resource Plan	Metropolitan Water District of California	2015	Plan to assess and adapt to changing conditions in Southern California
OurCounty (Countywide Sustainability Plan)	County of Los Angeles	2019	Regional sustainability plan for Los Angeles that outlines what local governments and stakeholders can do to enhance the wellbeing of every community in the County.
Strategic Water Resources Plan	Palmdale Water District	2016	Document that can be used as guidance for the planning of PWD's potable water system. The document has a planning horizon of year 2030 and for build-out conditions which is expected to occur beyond the year 2040.
2019 Sustainable LA Grand Challenge Report Card for Los Angeles County Water	University of California, Los Angeles	2019	Provides an in-depth look at the region's efforts in moving toward a more resilient local water supply, which requires maximizing high-quality local water supplies, improving water conveyance and treatment infrastructure, reducing water consumption, and implementing innovative technology and policy solutions.
Urban Water Management Plan	Palmdale Water District	2020	Compliance document to fulfill the UWMP Act that requires urban water suppliers to develop a Plan. Examines existing and future supplies & demands, water supply reliability, water supply programs, conservation goals and programs, and water shortage contingency.
Water System Master Plan	Palmdale Water District	2016	Evaluate the existing water distribution system and determine system improvements
Strategic Water Resources Plan	Palmdale Water District	2023	Updates the 2015 Strategic Water Resources Plan to develop a sound water supply strategy to meet current and future demands of customers through 2050.

Document	Agency	Year	Purpose
Urban Water Management Plan and Water Shortage Contingency Plan	Quartz Hill Water District	2020	Compliance document to fulfill the UWMP Act that requires urban water suppliers to develop a Plan. Examines existing and future supplies & demands, water supply reliability, water supply programs, conservation goals and programs, and water shortage contingency.
Financial Planning, Revenue Requirements, Cost of Service, and Rate Setting Analysis	Quartz Hill Water District	2020	Financial plan to determine the revenue requirements for the next five years and comprehensive review of the QHWD's current rates based on cost of service principles
Urban Water Management Plan	Antelope Valley-East Kern Water Agency	2020	Compliance document to fulfill the UWMP Act that requires urban water suppliers to develop a Plan. Examines existing and future supplies & demands, water supply reliability, water supply programs, conservation goals and programs, and water shortage contingency.
2023 Annual Report	Antelope Valley Watermaster	2023	Documents the progress and details regarding implementation of the Judgement including a review of Watermaster activities
2022 to 2027 Capital Improvement Plan	City of Palmdale	2022	Guides the development, implementation and management of the City of Palmdale's ongoing Five-Year Capital Improvement Program for improvement projects throughout the City of Palmdale.
Stormwater Management Plan	City of Palmdale	2022	Reduce the discharge of pollutants to Small MS4 to the MEP and to protect Water Quality.
Sewer System Master Plan	City of Palmdale	2009	Provides a comprehensive framework for managing and improving the City of Palmdale's sewer system.
Urban Water Management Plan for Los Angeles County Waterworks District No. 40	Los Angeles County Public Works - Waterworks Division	2020	Compliance document to fulfill the UWMP Act that requires urban water suppliers to develop a Plan. Examines existing and future supplies & demands, water supply reliability, water supply programs, conservation goals and programs, and water shortage contingency.

Document	Agency	Year	Purpose
Stormwater Management Plan	City of Lancaster	2003	Establishes ordinances, policies, procedures, and practices to manage and control the quality of stormwater runoff in Lancaster.
Water Shortage Contingency Plan	Los Angeles County Waterworks District	2020	Details how Los Angeles County Waterworks Districts respond in the event of declared water emergency or water shortage conditions.