

ANTELOPE VALLEY
WATER PLAN

**ANTELOPE VALLEY
WATER PLAN**

2026 | Water Supply Resilience

equity
sustainability
opportunity
local
water
resources
collaboration
relationships
regional
resilience

The County of Los Angeles recognizes that we occupy land originally and still inhabited and cared for by the Tongva, Tataviam, Serrano, Kizh, and Chumash Peoples. We honor and pay respect to their elders and descendants – past, present, and emerging – as they continue their stewardship of these lands and waters. We acknowledge that settler colonization resulted in land seizure, disease, subjugation, slavery, relocation, broken promises, genocide, and multigenerational trauma. This acknowledgment demonstrates our responsibility and commitment to truth, healing, and reconciliation and to elevating the stories, culture, and community of the original inhabitants of Los Angeles County. We are grateful to have the opportunity to live and work on these ancestral lands. We are dedicated to growing and sustaining relationships with Native peoples and local tribal governments, including (in no particular order) the

Fernandeño Tataviam Band of Mission Indians
Gabrielino Tongva Indians of California Tribal Council
Gabrieleno/Tongva San Gabriel Band of Mission Indians
Gabrieleño Band of Mission Indians - Kizh Nation
San Manuel Band of Mission Indians
San Fernando Band of Mission Indians

To learn more about the First Peoples of Los Angeles County, please visit the Los Angeles City/County Native American Indian Commission website at anaic.lacounty.gov.

EXECUTIVE SUMMARY

The Antelope Valley Water Plan (AVWP) was developed as a stakeholder-driven framework to address the region's unique water resource challenges. Building on the foundation of the Los Angeles County Water Plan (LACWP), the AVWP translates countywide goals into strategies that reflect the specific needs and opportunities of the Antelope Valley (AV). The AVWP identifies a set of recommended actions designed to address existing challenges, build on ongoing efforts, and advance long-term water management goals across the AV. These actions complement the existing implementation framework established through the LACWP while addressing needs that are unique to the region. Successful implementation will rely on continued collaboration through the LACWP Task Force structure.

The AVWP focal areas were developed through an evaluation of regional water challenges, stakeholder priorities, and existing planning efforts across the AV.

Strengthening Coordination

Collaboration: Improved coordination and collaboration with County of Los Angeles departments, agencies within the Antelope Valley, and the Antelope Valley community.

Coordinated Flood Reduction: Flooding issues have been challenging to address because the jurisdictions and responsibilities of agencies within the Antelope Valley may not be as clear as in other areas of the County, and requires a coordinated response.

Water & Economic Growth

New Infrastructure: New infrastructure that supports maximizing existing water rights and supports investment in new development and reduce water-related barriers to development through clearer coordination and timely processing.

Reliable Affordable Regional Supply: Regional supplies that can support existing and future demands must be reliable and affordable.

Small Water Systems

Water Supply Reliability and Infrastructure Maintenance: Limited resources impede ability to maintain aging infrastructure, continue to access groundwater and supply water to meet the demand, including emergency response, and address regulatory compliance.

Streamlined Regulatory Compliance: Compliance requirements can be labor- and cost-intensive.

Effective Emergency Response and System Resilience: Backup systems & emergency infrastructure that supports demands during emergencies is lacking for small systems.

Centralized and Accessible Data: Data are available in multiple systems and it may be challenging to get a full understanding of current and historical conditions.

Groundwater Basin Water Quality

Protection of Existing Groundwater Supplies and Access: Groundwater pumping is managed by the Watermaster, but protection against impacts of illegal dumping, theft, and damage is needed. Groundwater banking efforts could bolster groundwater supplies and support Basin health.

Management of Groundwater Quality Issues: Emerging contaminants like PFAs and salt loading from imported and recycled water, on top of naturally occurring constituents is increasing the cost to treat groundwater. Source control and regional treatments can help.

Public Perceptions Related to Potable Water Taste and Odor: Public perception of the quality and safety of domestic well water is inconsistent, even when water meets quality standards.

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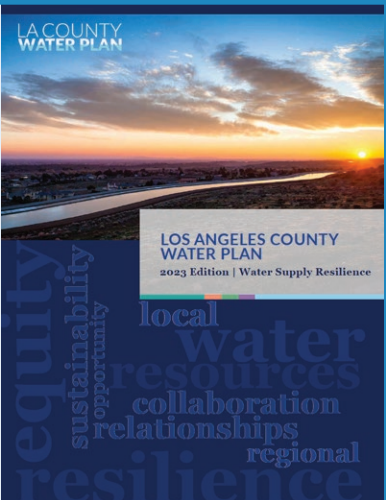
Bringing the Antelope Valley into Focus
within the LA County Water Plan

Los Angeles County Water Plan

The Los Angeles County Water Plan (LACWP) focuses on achieving countywide resilience through collaborative strategies and articulates a shared, inclusive, regional path forward to sustainably and equitably achieve safe clean, and reliable water resources for the entire Los Angeles County (County).

Adopted by the LA County Board of Supervisors in 2023, the LACWP reflects the work of nearly 100 water management agencies and interested parties throughout Los Angeles County to identify shared needs and opportunities for regional collaboration.

Implementation of the LACWP is currently being conducted through 4 task forces and affiliated working groups comprised of agencies, non-governmental organizations (NGOs) and regulators. Work is centered around specific action plans that are updated every two years.

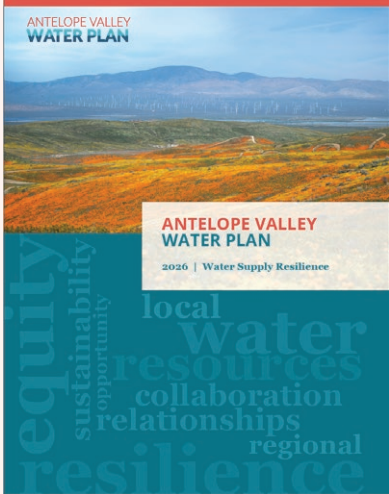


The Antelope Valley Water Plan

The Antelope Valley Water Plan (AVWP) supplements the LACWP to specifically focus on the unique setting, needs and opportunities that lie within the Antelope Valley portion of Los Angeles County. Completed in 2026, the AVWP is a snapshot in time, reflecting current water resilience-related needs and opportunities for regional collaboration.

The AVWP is intended to encourage and strengthen continued LACWP engagement focused on Antelope Valley’s priorities. Specifically, the AVWP identifies additional steps that can be incorporated directly into the 2027-2028 LACWP action plans. With this initial foundation, it is anticipated that future Antelope Valley needs and corresponding actions will be identified and implemented in the ongoing LACWP planning and implementation process. Once steps are added to the LACWP, they can be modified or prioritized to reflect the current interests, needs and resources of task forces and working groups. As such, some steps may be postponed for implementation in future action plans.

By establishing this focused framework, the AVWP supports more effective planning, coordination, and engagement, helping to align Antelope Valley specific actions with overall County water planning efforts.



LA County Water Plan Task Forces

WATER COMMUNICATIONS TASK FORCE

REGIONAL WATER RELIABILITY TASK FORCE

Regional Water Supply & Storage Working Group
Regional Water Quality Working Group
Wildfire Working Group

SMALL WATER SYSTEMS TASK FORCE

Small Water Systems Working Group

NATURE-BASED SOLUTIONS TASK FORCE

Nature-Based Solutions Blue Ribbon Panel

Why is the Antelope Valley Water Plan Needed?

The County Board of Supervisors sought to develop the AVWP to strengthen accountability and visibility for Antelope Valley priorities, and to ensure that these priorities are considered and addressed through the LACWP process.

Given its unique setting, both the distinctions and the interconnections between the Antelope Valley and other parts of the County warranted a focused evaluation process. The AVWP provides the extra attention needed to integrate conditions and needs in the Antelope Valley to the larger regional story. It underscores the County’s commitment to sustainability and climate resilience, and provides a backdrop for all water reliability pursuits within the AV.



The AVWP shares the same **16 targets, 14 strategies** and **54 actions** of the LA County Water Plan.

Implementation of the AVWP will take place through a combination of the work conducted by LACWP Task Forces and affiliated working groups as well as other local and regional efforts.

Equation for a Resilient Water Future

LACWP Strategies & Actions + Other Local and Regional Efforts = LACWP Targets

Antelope Valley: A Unique Region within LA County

The Antelope Valley is a distinct geographic region with its own combination of climate, hydrology, demographic, and governance factors that contribute to a unique water supply and management setting. Spanning an area of 2,200 square miles of the southwestern portion of the Mojave Desert, the Antelope Valley is nestled in between the San Gabriel Mountains to the south and the Tehachapi Mountains and lower Sierra Nevada mountains to the north. Because the Valley encompasses areas of both Los Angeles County to the west and Kern County to the east, the AVWP is only focused on the southern portion within Los Angeles County.

State Water Project Contractors

The Antelope Valley receives imported water from the State Water Project (SWP) via Antelope Valley-East Kern Water Agency (AVEK), Palmdale Water District, and Little Rock Creek Irrigation District. The remainder of LA County is served water imported from both the SWP and the Colorado River through the Metropolitan Water District of Southern California.

Ephemeral Surface Water

Although the Valley has incredibly porous geology that facilitates the rapid infiltration of surface water flows, the intensity of storm events often results in temporary but severe flooding that impacts communities and transportation corridors.

Recycled Water Beneficial Use

The majority of wastewater effluent in Antelope Valley is already captured and stays within the Valley. Without large end users proximate to treatment plants, cost-effective non-potable projects are limited in the region.

Enclosed Basin Hydrology

Because of the unique topography and climate of the Antelope Valley, all precipitation that falls within the surrounding watersheds runs to the interior where it is either retained in local groundwater basins, captured in surface water storage, or is lost through evaporation.

As a result, constituents that are carried with surface flows, treatment discharges and irrigation applications also accumulate within the basin. All of the other watersheds in LA County drain to the Pacific Ocean which can reduce constituent loading but requires ocean discharge related regulations.

Groundwater Storage Potential

The California Aqueduct brings State Water Project water from northern California into the LA Basin through Antelope Valley. Coupled with the huge amount of storage potential within the Antelope Valley Basin, partnerships between LA Basin purveyors like MWD and LADWP and AVEK have led to the development of water banking opportunities in the AV where imported water can be stored in wet years and served in dry years using existing regional infrastructure.

Naturally Occurring Contaminants

The unique geology of the Antelope Valley Groundwater Basin creates naturally occurring arsenic and Chromium 6 in groundwater that must be treated prior to potable use.

Local Districts and Governance

A portion of the AV is unincorporated which can create gaps in or complexities in governance. One of the main water-related examples is that unlike the rest of LA County, the majority of the Antelope Valley is not served by the LA County Flood Control District, whose boundaries extend only as far north as Avenue S. As a result, the Antelope Valley does not support nor benefit from the County's Safe Clean Water Program and does not have a Stormwater Resources Plan. All areas outside of the cities are supported by the County of Los Angeles' unincorporated area support services.

High Growth Potential

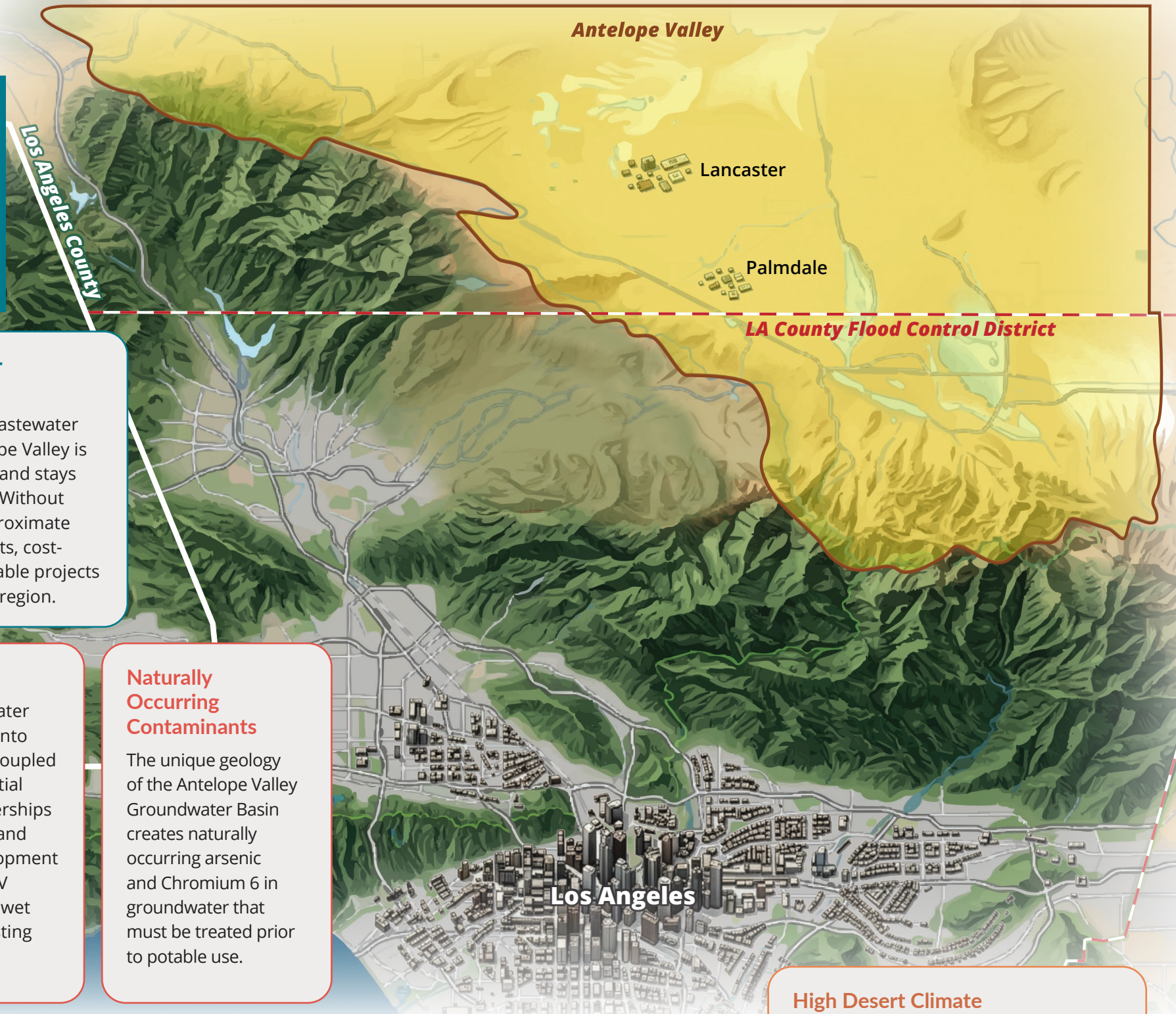
Since 2000, the region's population has increased by an average of 4% per year – which is four times the pace of growth in other areas of the County. It is expected that additional water supplies and systems will be needed to supply both communities and industries.

Rural Service Areas

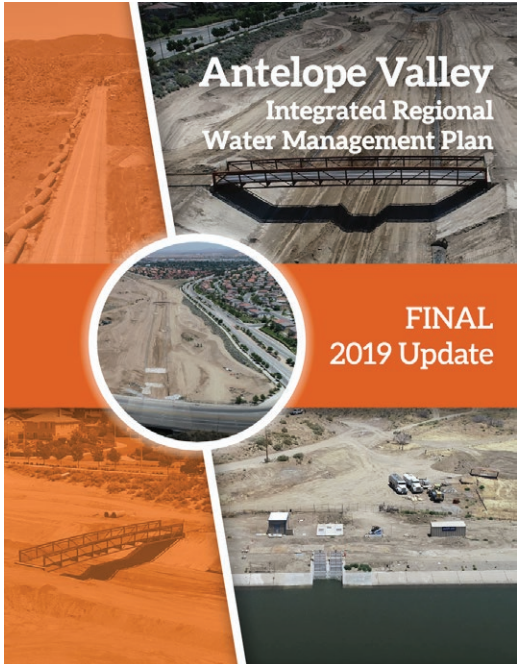
The Antelope Valley is significantly less dense and more rural than other (non-forested) areas of LA County. Although most of the Antelope Valley's population lives within the cities of Lancaster and Palmdale, which are served by Los Angeles County Waterworks District No. 40 (District 40) and local water purveyors, the remaining population is spread across the Valley in rural communities. These communities are served by private wells or by one of 48 small water systems purveyors that have between 5 and 1,000 connections.

High Desert Climate

The San Gabriel mountains effectively limit the influence of coastal climatic patterns on Antelope Valley. As a result, the climate is much warmer, windier and drier than the rest of Los Angeles County. The Antelope Valley is characterized by a high desert climate with hot, dry summers and moderately cool winters when the majority of the precipitation falls in the Valley.



COMPLEMENTING AND SUPPORTING
REGIONAL AND LOCAL PLANNING



**ANTELOPE VALLEY
INTEGRATED REGIONAL
WATER MANAGEMENT PLAN**

PURPOSE
Regional planning to access
earmarked IRWMP funding from
CA Department of Water
Resource projects

CONTENT
Regional understanding
and needs, relationship to
California water planning, and a
list of IRWM-eligible projects

OUTCOMES
Implementation of
grant-funded projects

The AVWP helps to bridge the gap between the Antelope Valley IRWM Program and the LACWP, and identifies opportunities to support the region that may not yet be happening under either program.

ANTELOPE VALLEY
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Provides regional collaboration necessary
to help develop projects that can be
implemented & funded through the
Antelope Valley IRWM

Complements the LACWP
by focusing on the sustainable water
management unique to Antelope Valley

**LA COUNTY
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PURPOSE
Regional collaboration by local
agencies to support knowledge
sharing to improve regional
water resilience

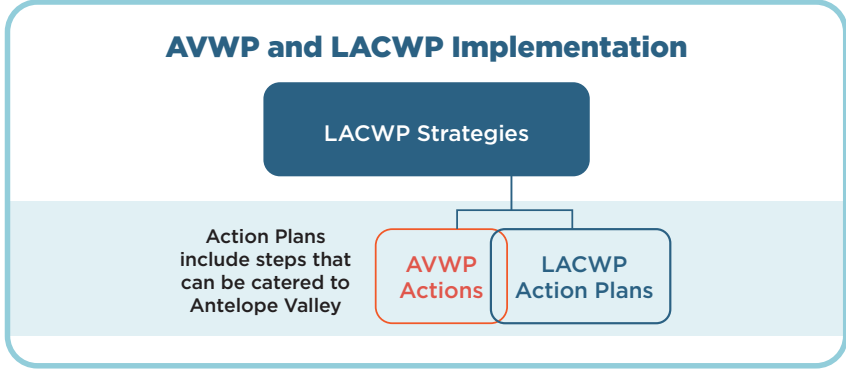
CONTENT
Regional planning filling critical
gaps in regional water planning
through development of
Strategies and Actions

OUTCOMES
Implemental 2-Year Action Plan
and on-going information
sharing and management by
Task Forces

The 2019 **Antelope Valley Integrated Regional Water Management Plan** (AV IRWMP) focuses on the identification of local and regional multi-benefit projects that meet water-related needs throughout both the Los Angeles and Kern county portions of the Antelope Valley. The AV IRWMP regularly convenes a group of local water agencies, stakeholders, and community partners that determine which projects will be submitted on behalf of the Region for State IRWM funding (when available). This group is also responsible for ensuring that project proponents receiving funding are implementing the projects to achieve the stated benefits.

The regional description, priorities and existing efforts presented in the AV IRWMP were used as the foundation for AVWP development. As the State has not provided planning funding for further IRWMP updates, it is intended the LACWP will be used to conduct regional planning and collaboration through existing LACWP Task Forces.

It is anticipated that regional project concepts identified through LACWP and AVWP will pursue implementation and funding support through AV IRWMP and other funding programs.



Local Planning Documents

Water purveyors (serving over 3,000 connections) complete Urban Water Management Plans (UWMPs) every 5 years that forecast water demands and supplies for the next 25 years. Since Antelope Valley-East Kern Water Agency (AVEK), Palmdale Water District (PWD), Quartz Hill Water District (QHWD), and Los Angeles County Waterworks District No. 40 (District 40) were completing 2025 UWMPs during AVWP development, this plan was not

able to reflect any challenges or opportunities identified as part of agency UWMPs. In addition to UWMPs, many water agencies have water master plans that list projects that will benefit supply and system resilience and an implementation strategy for those system improvements over the next two decades. Other City and County planning documents, such as Sewer Master Plans, sediment management plans, and sustainability plans, are used to manage sewer systems and land uses, which could potentially affect water resources in Antelope Valley. The 1978 Antelope Valley Drainage Comprehensive Plan provides a regional framework for drainage and flood management to support development. See Appendix A for a description of additional related planning efforts in Antelope Valley. The Antelope Valley Water Plan aims to align with these additional planning efforts.

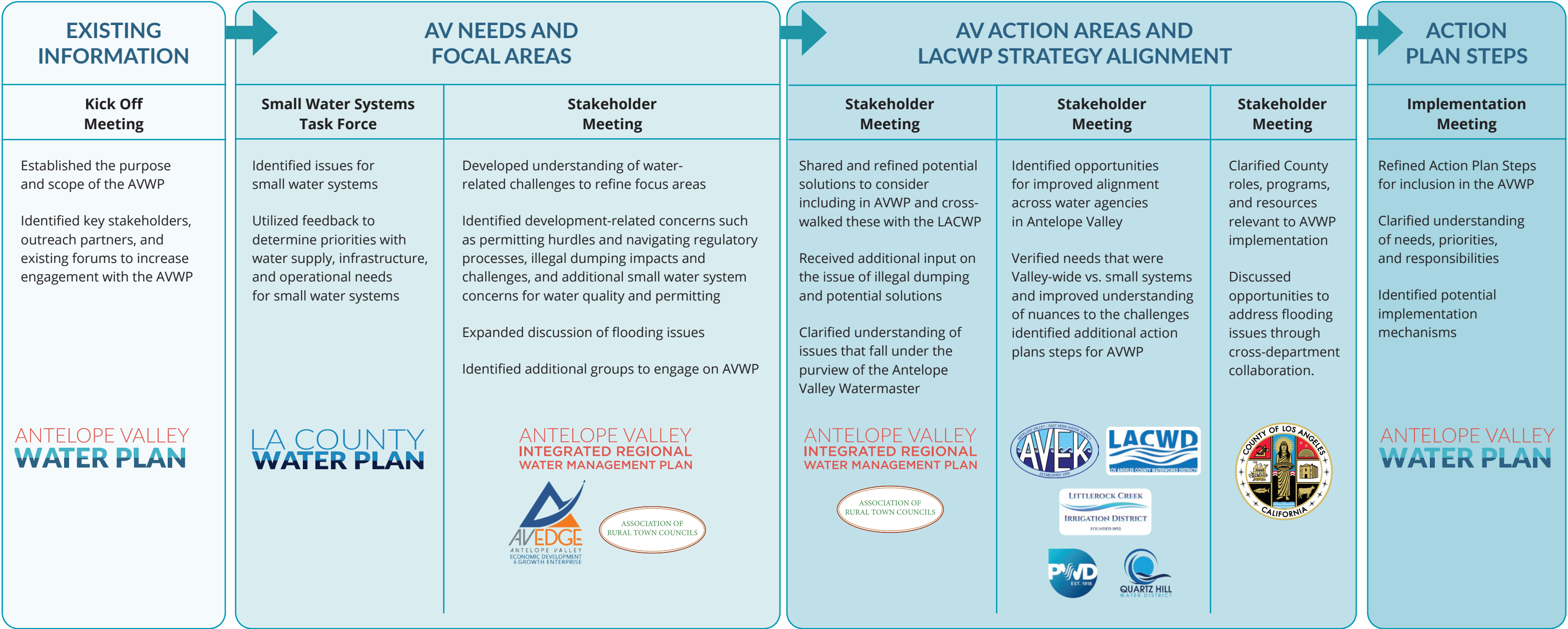
This AVWP was completed in 2026 through a comprehensive process beginning with the compilation of existing relevant planning information into a starting foundation. Plans reviewed for the AVWP are listed in Appendix A.

Throughout 2025, dialogue between water management agencies, special interest organizations, and community members was used to identify water-related needs and challenges specific to the Antelope Valley. These needs were packaged into the four focal areas used to guide subsequent conversations in 2025 and 2026 on potential actions to help address these needs.

Like the LACWP, the AVWP is intended to complement existing efforts and fill in gaps where regional collaboration through the LACWP would be beneficial. Where a need is better addressed or is already being addressed elsewhere, the AVWP will indicate support for those efforts.

The AVWP leveraged relationships between agencies, existing organizations, and community groups to promote collaboration and ensure the AVWP represents the priorities of those who live and work in the region. As such, the needs included in the AVWP represent the perspectives of these participants, and may not capture all of the water-related needs of the region.

Ten outreach and engagement meetings provided a forum for Antelope Valley residents, local organizations, agencies, and community groups to share their perspectives, confirm priorities and shape how those priorities should be addressed. Feedback was incorporated to refine and identify steps to address priorities, ensuring the AVWP reflected input from local Antelope Valley groups. Public input will be solicited through a public review period, and input from LACWP participants solicited through the LACWP Implementation Workshop in August 2026. Appendix B provides additional details on the stakeholder outreach and engagement process.



ANTELOPE VALLEY WATER PLAN FOCAL AREAS

The unique nature of Antelope Valley specific water-related needs have been organized into four focal areas. This table highlights how the AVWP focal areas support each of the 16 LACWP targets grouped by the original four overarching LACWP focal areas.

		STRENGTHENING COORDINATION	WATER AND ECONOMIC GROWTH	SMALL WATER SYSTEMS	GROUNDWATER BASIN & WATER QUALITY
		Community engagement, understanding and support can be enhanced through additional coordination between local water management and related agencies.	Realizing the Antelope Valley's economic growth potential is dependent upon resilient water supply resources and system infrastructure.	Supporting small water systems in the Antelope Valley requires solutions that can be implemented within a rural, arid environment.	A healthy and well managed Antelope Valley Groundwater Basin is the key to providing supply resilience locally as well for the entire County as a region.
Regional Water Supply Reliability	A. Achieve 100% compliance with State Urban Water Use Objective (UWUO)	Coordinated conservation messaging improves effectiveness	New development is more water efficient	Reduction in water loss and improved efficiency	
	B. Increase local supply sources by 580,000 AFY		More local water is available for growth	Increase supply diversity	Protect and enhance groundwater supplies
	C. Meet 100% of water demands even in times of drought	Regional drought response	Consistent reliable supply supports industrial growth	Support emergency resilience	Basin storage available in dry years
	D. Maximize ability to meet health and safety needs following an emergency by maintaining access to six months of emergency supply	Water agency coordination for emergency supplies		Support emergency resilience	
Groundwater management and Quality	E. Optimize production of groundwater by maintaining at least 700,000 AFY baseline groundwater production		Ensure supplies support regional growth	SWS support to produce existing GW rights	Groundwater storage increases GW levels and production capacity
	F. Optimize production of groundwater by increasing production in areas overlying impaired groundwater by 18,000 AFY			Reduction in treatment costs	Improved basin health and well siting
	G. Increase groundwater recharge and storage by enhancing regional facility recharge by 250,000 AFY	Regional partnerships on banking and recharge	Improved future reliability for growth		Higher beneficial use of RW through GWR
	H. Increase groundwater recharge and storage by increasing decentralized infiltration by 80,000 AFY	Diverted stormwater flows reduce flooding potential			
Small At-Risk System Resilience & Drinking Water Equity	I. Reduce at-risk systems by 100%	Partnerships with County and local water agencies for support		Reduced potential for failures	
	J. 100% of water agencies, including those in severely disadvantaged communities, have affordable cost of water to meet health and safety		Water affordability aligns with planned development goals	Improved cost of water services	
	K. Reduce color, taste, and odor drinking water quality issues by 50%			Improved distribution lines and treatment	Preserve groundwater basin quality
	L. Maximize ability to meet health and safety needs following an emergency by confirming 100% of small community water systems have access to alternative sources of supply			Increased infrastructure diversity	
Watershed Sediment Management	M. Reduce fire-contributing species in riparian areas by 2,900 acres				
	N. Reduce human-caused ignitions by 50%	Address illegal dumping	Improved development conditions	Improved fire abatement	
	O. Maintain a minimum of 75% average available capacity in debris basins and 80% average available capacity in reservoirs	Coordination on illegal dumping and flood management			
	P. Confirm 100% of water management agencies within the wildland-urban interface are implementing a wildfire resilience or mitigation plan	Regional coordination across agencies			



Strengthening Coordination

The Antelope Valley is served collectively by a group of public and private utilities, municipal departments, special districts, state agencies and County departments. Depending on where you live or work in the AV, there could be any number of combinations of providers of water supply, wastewater collection and treatment, flood control, solid waste management, road maintenance, land use planning and regulation enforcement.

Potable water is provided to most (but not all) residents in the city of Lancaster by District 40 (which is one of several districts within LA County Public Works). District 40 also provides non-potable water to some customers. Customers within the City of Palmdale receive water from Palmdale Water District (which is a special district that is not part of the city). Customers outside of the cities of Palmdale or Lancaster are considered to be within the unincorporated areas of Los Angeles County. Unincorporated areas are served by PWD, LACWWD, Quartz Hill WD, Little Rock Creek Irrigation District or by either one of 48 small private water systems or individual landowner wells that operate within the Valley. Wastewater is either collected by city sewer systems which then route flows to one of two LA County Sanitation Districts treatment plants or it is managed by onsite septic systems permitted by LA County Department of Public Health.

Multiple jurisdictions with varying responsibilities complicates the region’s ability to address pressing needs. The LA County Flood Control District does not have jurisdiction north of Avenue S in the Antelope Valley portion of the County; therefore flood control outside of City public works department service areas is managed by state and county transportation agencies or general unincorporated LA County Public Works services. As a result, there is limited flood and stormwater planning within these unincorporated areas.

Another example of this complication is seen around the issues of illegal dumping, water theft, and infrastructure vandalism. While these issues affect many areas, enforcement is difficult despite efforts to curb these behaviors. The size of the region and limited resources can result in slower response times than denser urban areas. Further, despite the illegal nature and community-wide impacts of dumping, enforcement options are limited when it occurs on private property or property not owned by the agency reporting it. Responding to illegal activities requires coordination across agencies (water and land management), law enforcement, the County, and municipalities.

This mix of public and private services, with varying service areas and responsibilities, has resulted in understandable confusion by residents and business owners over who is responsible for addressing any specific water-related issue or question. As a result, the public will often view the County of Los Angeles as the default agency that should be able to address any water or land management related need regardless of the jurisdiction or internal department. In reality the County of Los Angeles is made up of several very large departments that operate independently of each other and within those departments are special districts that are operated independently of each other.

OPPORTUNITIES TO ADDRESS REGIONAL NEEDS

Clarity and responsiveness for residents and business owners in Antelope Valley can be improved through increased coordination between the water-management entities operating in the Valley as well as coordinated public messaging and resources.



COLLABORATION

Improved coordination and collaboration with County of Los Angeles departments, agencies within the Antelope Valley, and the Antelope Valley community.

Benefits

- Clear lines of communication
- Address community needs efficiently
- Consistent expectations and understanding
- Reduced staff burdens

COORDINATED FLOOD REDUCTION

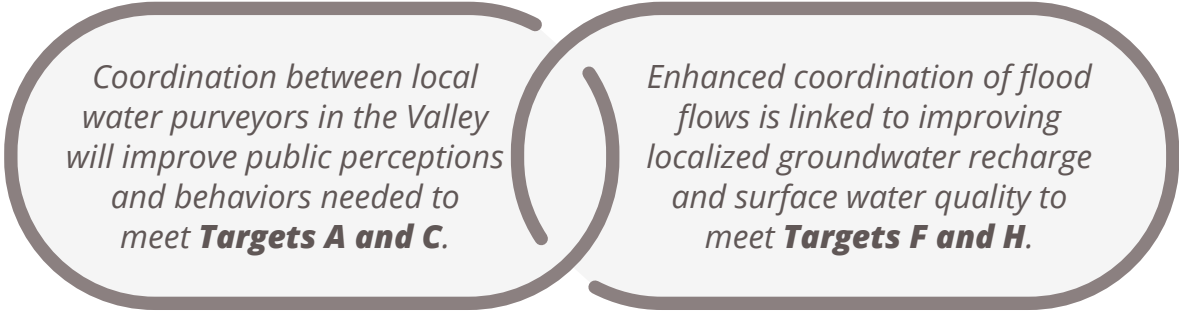
Flooding issues have been challenging to address because the jurisdictions and responsibilities of agencies within the Antelope Valley may not be as clear as in other areas of the County, and requires a coordinated response.

Benefits

- Clear lines of communication
- Clear understanding of responsibilities
- Win-win solutions for addressing flooding
- Comprehensive flood response coverage



LINKS TO LACWP TARGETS





Antelope Valley is a quickly growing region within Los Angeles County, growing at a rate four times faster than the rest of the County. While the Antelope Valley has a large number of residents who commute to other parts of the County for employment, it is being eyed as a region with potential for commercial and industrial development, in addition to continued residential development and the businesses and amenities that grow to support the increase in residents. The ability to support the planned growth in the region is critical to also maintaining economic growth in the area.

Key to this growth is an adequate supply of water to meet existing needs and rights while supporting demands from new development. Agriculture remains active in the Valley, and existing agricultural users have water rights from the adjudicated groundwater basin. Some agriculture lands are being converted to new development, which could make those water rights available for other uses for example, changes in agricultural land use may create opportunities for the transfer or use of associated groundwater production rights, subject to the Antelope Valley Groundwater Cases Judgement, Watermaster approval requirements, and material injury findings. Although some of the water supplies that have been used to meet light agriculture demands can be converted for new residential, commercial and industrial use, the overall projected growth for the Antelope Valley will increase overall water demands. Water supplies are a mix of imported water and groundwater, with groundwater adjudicated and pumping managed by the Antelope Valley Watermaster. Groups like AV Edge are working with developers to realize the growth potential in the Valley. AV Edge formed the Development-Agency Working Group (DAWG) specifically to improve barriers to development processes. This includes collaborating with water purveyors in the Valley to advocate for needed water supply development and infrastructure as well as to improve permitting processes to access those supplies.

The four major water supply purveyors in the Antelope Valley (District 40, Palmdale Water District, Quartz Hill and Little Rock Creek Irrigation District) in concert with AVEK work together to manage separate but interconnected systems of supply. Individual systems may locally treat and store imported supplies coming from the State Water Project, capture and treat local surface flows when available, and together manage the vast Antelope Valley groundwater basin (via the Watermaster).

The LA County Sanitation Districts operates two facilities (Palmdale Water Reclamation Plant and Lancaster Water Reclamation Plant) that treat wastewater flows from the cities of Palmdale and Lancaster for potential non-potable use. With limited large end users for non-potable supplies (light field agriculture) and increasing needs for potable supplies (industries and residences), the interest in advance treating recycled water to supplement potable demand through indirect recharge of the AV Basin is gaining traction. The new Pure Water Antelope Valley project will be a major step toward increasing the beneficial use of the Valley’s recycled water supplies while also leveraging the Antelope Valley Basin’s storage potential. While currently focused on treating flows from the Palmdale WRP, it could be expanded to do the same for the Lancaster WRP.

OPPORTUNITIES TO ADDRESS REGIONAL NEEDS

Supporting growth while continuing to meet existing needs requires coordination between agencies, communities, and developers. In addition, investments in the water system infrastructure needed to pump, treat and distribute supplies to areas where there is demand growth are critical.



NEW INFRASTRUCTURE

New infrastructure that supports maximizing existing water rights and supports investment in new development and reduce water-related barriers to development through clearer coordination and timely processing

Benefits

- Reduce barrier to development
- Leverage existing supplies
- Clear pathways to (new) development approvals
- Strengthen economy

RELIABLE AFFORDABLE REGIONAL SUPPLY

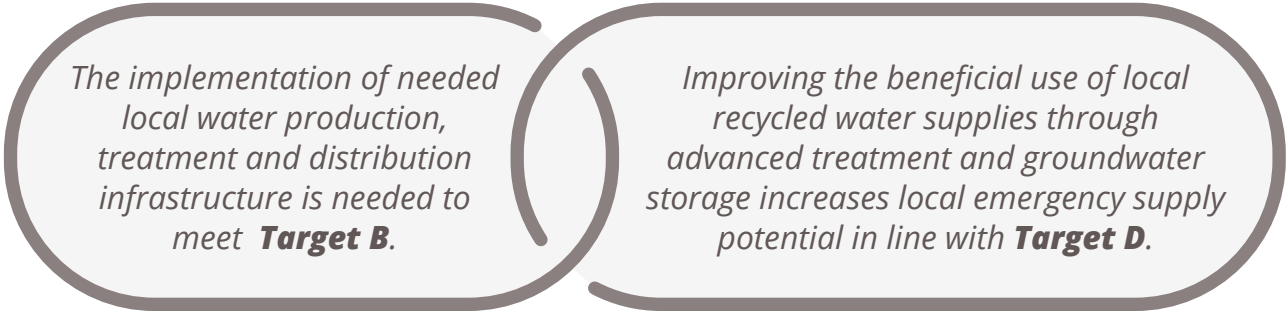
Regional supplies that can support existing and future demands must be reliable and affordable

Benefits

- Protect existing users while allowing for growth
- Alignment between water regulations and housing goals
- Leverage existing resources
- Fix aging infrastructure



Links to LACWP Targets



Small Water Systems



Small water systems face different challenges than larger systems because they have fewer rate payers to shoulder the burden of system costs, and are unable to take advantage of cost efficiencies that are found when managing larger systems. Some small water systems are managed by volunteers, and most have limited staff, time,

and funds. Additionally, small water systems often lack resources to build system resilience, and failures can be extremely costly and time consuming to repair.

Small systems in the Antelope Valley are dependent upon groundwater as the only source of supply. The quality and depth of groundwater is inconsistent and can often vary across a basin – meaning that small systems are vulnerable to outages if they are not able to quickly respond to changing geohydrology and water quality.

State regulations on drinking water are enforced through requirements that purveyors collect and report data. As new constituents of concern (like PFAS) are identified, new collection testing and reporting protocols are introduced. These more automated, but data intensive systems require more advanced technological capabilities often unattainable for smaller systems. As a result, permitting compliance is becoming an increasingly challenging issue for smaller systems.

OPPORTUNITIES TO ADDRESS REGIONAL NEEDS

Water purveyors are not able to use their rate payer funds to service the needs of non-rate payers. This limits what they can do to support neighboring at-risk systems. The State Water Resources Control Board has funding and programs for addressing small at-risk systems across California. The initial program option of supporting the consolidation of small systems into larger systems is often infeasible in the Antelope Valley given how remote many of these systems are relative to any larger purveyors. Additionally, consolidation can increase costs for larger agencies and be counter to the desires of small water system customers who may not wish to consolidate.

Recognizing that consolidation may be the right solution for some small systems but not for others, the LACWP is advancing a broader suite of support tools through its Small Water Systems Task Force to strengthen these systems through regional collaboration and tailored assistance.



WATER SUPPLY RELIABILITY AND INFRASTRUCTURE MAINTENANCE

Limited resources impede ability to maintain aging infrastructure, continue to access groundwater and supply water to meet the demand, including emergency response, and address regulatory compliance

Benefits

- System reliability
- Reduced financial burden on small system rate payers
- Regulatory compliance



STREAMLINED REGULATORY COMPLIANCE

Compliance requirements can be labor- and cost-intensive

Benefits

- Safer, more resilient systems
- Reduced compliance costs

EFFECTIVE EMERGENCY RESPONSE AND SYSTEM RESILIENCE

Backup systems and emergency infrastructure that supports demands during emergencies is lacking for small systems

Benefits

- System reliability
- Public health and safety



CENTRALIZED AND ACCESSIBLE DATA

Data are available in multiple systems and it may be challenging to get a full understanding of current and historical conditions

Benefits

- Well-informed systems and users
- Reduced burden on agency staff
- Clear understanding of Basin status

Links to LACWP Targets

Programs that support small water systems will help to improve water reliability and quality decreasing the potential for being designated as “at-risk” in keeping with **Target I**.

Investments that improve resilience of small systems to avoid emergency interruptions while maintaining affordability will support progress on **Targets J and L**.



Groundwater Basin Water Quality

The Antelope Valley Groundwater Basin is adjudicated, meaning that groundwater levels and pumping rights are governed by a court judgement and managed regionally by the Antelope Valley Watermaster. The Watermaster is responsible for the management of water rights and long-term Basin health through the accounting of groundwater recharge and production. This accounting is meant to maintain groundwater levels and therefore protect supply availability for all permitted groundwater production wells in the Valley.

As an enclosed basin with no underflow to neighboring basins or surface drainage to oceans,

all constituents and contaminants that are generated locally or imported into the Basin stay in the Basin. Groundwater quality is impacted by these constituents including both natural occurring arsenic and Chromium 6 as well as from constituents that have infiltrated into the Basin through highly permeable soils like PFAS from industrial use and salts and nutrients from wastewater disposal methods and fertilizer application.

Implementing and operating the infrastructure needed to access and produce the water rights to meet end use quality requirements is the responsibility of each rights holder. Even for larger purveyors, the costs associated with treating groundwater supplies to meet primary MCLs (State water quality standards for drinking water) in certain areas of the Basin has limited water production in those areas regardless of where demand is located.

OPPORTUNITIES TO ADDRESS REGIONAL NEEDS

The Antelope Valley has enormous groundwater recharge and storage potential. This potential is being tapped both locally and regionally through the implementation of water banks that have been specifically designed to divert and store excess state water project water purchased during wet years for pumping and conveyance during dry years. These programs not only increase supply reliability across LA County, put also help to maintain groundwater levels in the Basin and can in some ways improve overall water quality – but salt loading is a growing issue to be addressed.



PROTECTION OF EXISTING GROUNDWATER SUPPLIES AND ACCESS

Groundwater pumping is managed by the Watermaster, but protection against impacts of illegal dumping, theft, and damage is needed. Groundwater banking efforts could bolster groundwater supplies and support Basin health.

Benefits

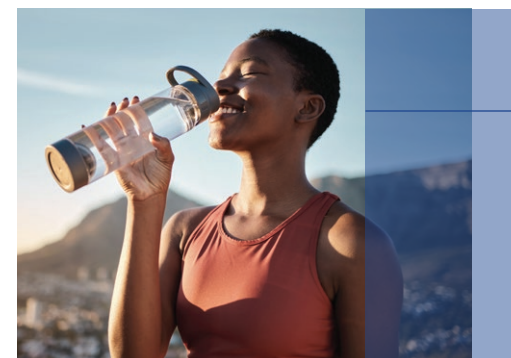
- Continued Basin health
- Supply reliability for all users
- Sustainable development

MANAGEMENT OF GROUNDWATER QUALITY ISSUES

Emerging contaminants like PFAs and salt loading from imported and recycled water, on top of naturally occurring constituents is increasing the cost to treat groundwater. Source control and regional treatments can help.

Benefits

- Higher groundwater Basin quality
- Decreases treatment costs.
- Maximized production of GW rights
- Increased GW levels Supply reliability for all users



PUBLIC PERCEPTIONS RELATED TO POTABLE WATER TASTE AND ODOR

Public perception of the quality and safety of domestic well water is inconsistent, even when water meets quality standards.

Benefits

- Continued trust in water supply safety
- Cost savings to customers

Links to LACWP Targets

*Maximizing basin recharge and production through water banking and treatment will help the region achieve **Targets E and G.***

*The improvement in basin water quality and treatment coupled with public outreach and education can increase customer satisfaction with water supplies for **Target K.***

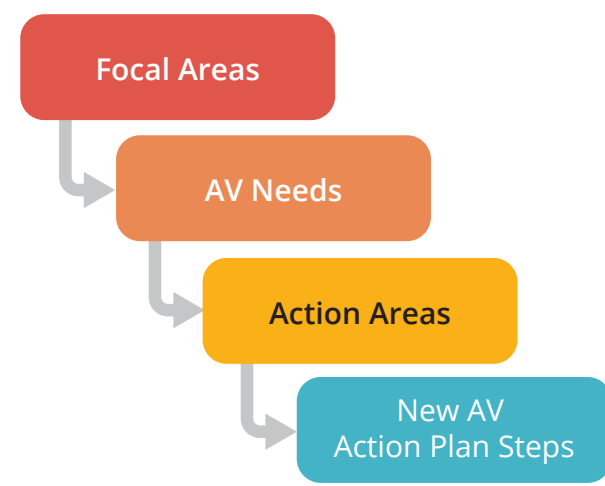
LACWP STRATEGIES THAT SUPPORT THE ANTELOPE VALLEY

To facilitate the integration of the AVWP into the LACWP, an alignment was created that allowed each planning process different focal areas, while maintaining the same set of targets, strategies and actions. Each of the LACWP's 16 strategies has an associated Action Plan with specific achievable steps to implement them. To address the needs within the four AVWP focal areas, several areas of action were identified by Antelope Valley stakeholders. These AV action areas were then used as lens to review LACWP actions and identify existing steps that are meaningful to Antelope Valley.

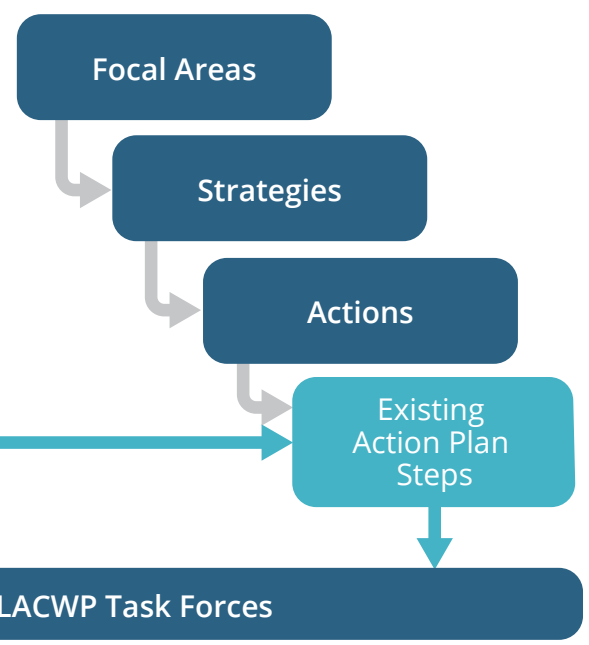
Strategy 3 Coupling local supply development with regional conveyance, *Action 3.1 Beneficial reuse of recycled water in AV* and **LACWP Strategy 5 Leveraging regional groundwater storage potential**, *Action 5.2 Expand regional AV groundwater banking partnerships* both are solely focused on the Antelope Valley. Conversely, **Strategy 8 Protecting coastal groundwater basins from seawater intrusion** is not relevant to the Antelope Valley due to being inland. After meeting with Antelope Valley stakeholders, **Strategy 4 Managing salt and concentrate regionally** did not have any action plan steps identified because the basin is managed by the Watermaster for groundwater levels and quality. Stakeholders did not identify challenges related to **Strategy 13 Managing invasive species in riparian areas**, and **Strategy 14 Facilitating sediment management and debris removal from flood control facilities**, though illegal dumping and flooding are concerns.

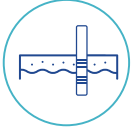
To fill any gaps and leverage opportunities within focal and action areas, stakeholders then developed new, additional AV specific action planning steps. These steps are related to both the AV Focal and Action areas and indicate where specifically they could fit within the LACWP.

ANTELOPE VALLEY
WATER PLAN



LA COUNTY
WATER PLAN



	Relevant LACWP Actions	Relationship to AVWP
	Strategy 1. Achieving the most efficient water use possible countywide	1.1 Support agency and small water system access to clear, consolidated groundwater data
	Strategy 2. Collaborating on consistent drought preparedness and response messaging	2.1 Support collaborative and common communications related to water and water resources in Antelope Valley; provide clearer paths for finding information and data
	Strategy 3. Coupling local supply development with regional conveyance	3.1 Support opportunities for leveraging flood control to provide multiple benefits including groundwater supplies; clarify permitting and approval processes to support sustainable development; explore new supply development opportunities
	Strategy 5. Leveraging regional groundwater storage potential	5.1 Support reliable groundwater supplies for existing users and future development
	Strategy 6. Collaborating on water quality needs and treatment technologies	6.1 Support improved regulatory compliance and approval processes for Antelope Valley users; seek opportunities for providing funding and technical support for small water systems

	Relevant LACWP Actions	Relationship to AVWP
	Strategy 7. Enhancing cost-effectiveness of pumping and treating impaired groundwater production	7.1 Support opportunities and partnerships for providing funding and technical support for small water systems; improve understanding of groundwater quality concerns; share information and data in a more accessible manner
	Strategy 9. Facilitating regional groundwater recharge understanding and initiatives	9.3 Leverage previous flood planning efforts to identify future opportunities to address on-going issues; coordinate regionally on flood issues
	Strategy 10. Facilitating natural infiltration of precipitation	10.1 Support on-going coordination and collaboration on opportunities to address flooding and provide additional groundwater recharge; address potential risks to groundwater supplies from illegal dumping, theft, and infrastructure damage
	Strategy 11. Providing regional support for small, at-risk water systems	11.1 Supports efforts to reduce the risk of emergencies as well as provide support in the event of an emergency, improving supply reliability for small systems and supporting public trust
	Strategy 12. Mitigating wildfire effects on water supply and quality	12.1 Supports efforts to reduce the risk and impacts of hazards on small water system reliability

Antelope Valley Action Area - PROVIDING DATA ACCESSIBILITY

- Existing steps within the LACWP Action Plan for Action 1.1 support the Antelope Valley’s need for clear, accessible data.
- Antelope Valley-specific data should be incorporated into existing efforts to improve data accessibility.
- Technical and analytical support for agencies with fewer resources should extend to small water systems in the Antelope Valley.

Antelope Valley Action Area - COMMUNICATING CONSISTENT MESSAGING

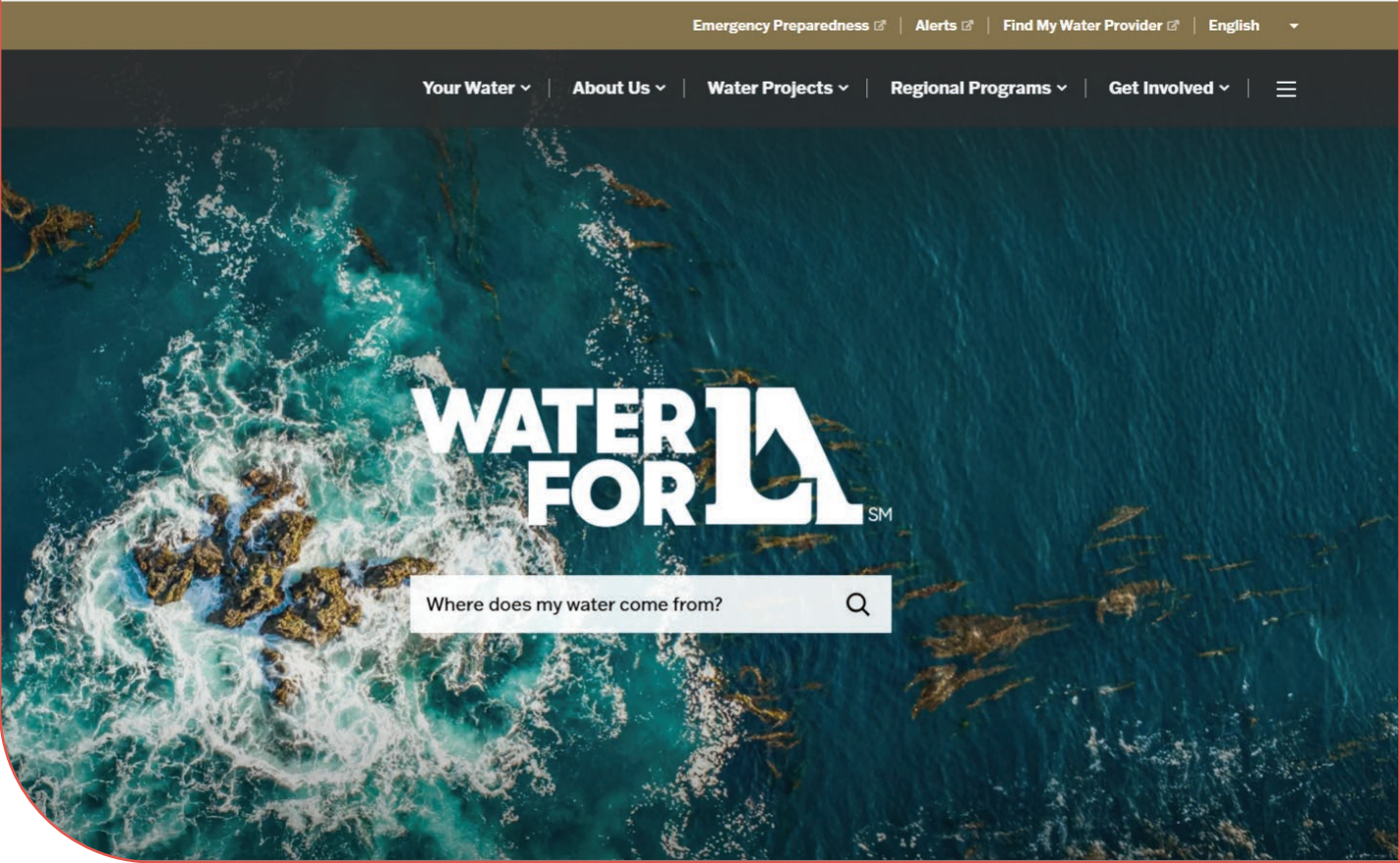
- Coordinate across Antelope Valley water related entities to expand messaging beyond drought and develop consistent, collaborative communication on shared regional concerns such as supply reliability, water quality, and other key issues.
- Action 2.2’s consistent messaging on development of drought-resistant supplies, and existing step of mentioning existing efforts during LACWP meetings and outreach, supports regional understanding and acceptance of development of these supplies.
- Antelope Valley residents need access to consolidated, accessible, and updated water information, which can be provided via messaging on water supplies and development efforts.
- Consistent messaging helps create common understanding of the current status of supplies and allow for coordinated management of the shared resource that is the Antelope Valley Groundwater Basin.

2027-2028 Action Plan Steps



Action 1.1 Steps

- Use the Water for LA website to link the public to information about their local water purveyors.



2027-2028 Action Plan Steps



Action 2.1 Steps

- Create AVWP page on LACWP portal that clearly describes regional and local planning interactions, including agency roles, planning processes, and coordination points.
- Provide standing agenda item during AVIRWM meetings to hear current challenges and opportunities for County to bring back to LACWP.
- Provide a regular forum for Antelope Valley water purveyor coordination with County.
- Designate a county staff member or consultant in Antelope Valley who can act as a liaison between Small Water Systems, water purveyors, and local groups, to direct them to existing resources.
- Articulate coordination between AVIRWM and the LACWP/AVWP by defining AVIRWM’s role in grants and IRWM governance and LACWP’s in regional planning.



Action 2.2 Steps

- Include Antelope Valley data, information sharing initiatives, and messaging templates to support consistent and accessible regional Antelope Valley messaging on drought and conservation efforts.

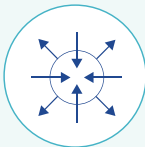
Antelope Valley Action Area - **IMPLEMENTING BENEFICIAL REUSE**

- Existing steps within the LACWP Action Plan for Action 1.1 support the Antelope Valley’s need for clear, accessible data.
- Antelope Valley-specific data should be incorporated into existing efforts to improve data accessibility.
- Technical and analytical support for agencies with fewer resources should extend to small water systems in the Antelope Valley.

Antelope Valley Action Area - **FOSTERING ECONOMIC GROWTH**

- This action includes ensuring a clear understanding of where local supply development can occur.
- The existing step of creating a map of poor water quality zones overlaid with production enhancement plan areas as well as inoperable units, distribution pipelines, recharge banking areas, and treatment plants supports understanding local supply opportunities.
- The existing step of determining opportunities for regional collaboration to support implementation on key program.
- Collaborative approaches to facilitated permitting and groundwater recharge will address Antelope Valley community challenges to clearing regulatory hurdles and proceeding more quickly through the approvals process, including for opportunities to recharge using stormwater.

2027-2028 Action Plan Steps

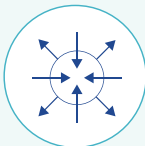


Action 3.1 Steps

- If the beneficial reuse feasibility study identifies opportunity for beneficial reuse in Antelope Valley, facilitate a meeting between LA County agencies, AVEK, and Palmdale Water District to identify strategic opportunities for integrating recycled water infrastructure in Antelope Valley, and consider ways to integrate it into new development planning.



2027-2028 Action Plan Steps



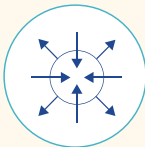
Action 3.4 Steps

- Support creation of a permit process flowchart from Water Purveyors and other agencies, and provide links to the flowcharts on the LACWP/AVWP web portal.
- Identify liaison between AV Edge DAWG meeting and LACWP Regional Water Reliability Task Force to track progress on regional efforts to address permitting-related confusion and improve clarity around permitting processes.
- Provide a list of permitting and/or regulatory contacts on the LACWP/AVWP web portal to support coordination and navigation of permitting processes.
- Include support of Palmdale Water District’s Pure Water Antelope Valley project in regional planning efforts.
- Explore opportunities to build on existing regional drain mapping to identify potential floodplain and recharge areas that may help reduce roadway flooding, as part of the Stormwater Resource Plan or other appropriate mechanism.

Antelope Valley Action Area - **INTEGRATING FLOOD AND STORMWATER MANAGEMENT**

- Further steps for Antelope Valley would support using stormwater as a resource while addressing flood issues, improving permitting processes, and exploring additional sources of supply.
- Include projects that address flooding, water supply, and water quality if a Stormwater Resource Plan is developed for the region.
- Flooding issues are challenging to address in Antelope Valley due to jurisdictional limitations, intermittent and localized impacts that creates barrier to regional support, and lack of funding mechanisms.
- A coordinated approach to managing flooding in Antelope Valley can provide opportunities for enhancing groundwater recharge in a meaningful and safe manner.

2027-2028 Action Plan Steps



Action 3.4 Steps

- Develop Stormwater Resources Plan (SWRP) for the Antelope Valley, evaluating the appropriate geographic scope, lead entity, participating agencies, authorities, and funding mechanism.
- Coordinate flood-related planning and solutions with LACFCD in alignment with 2025 Comprehensive Floodplain Management Plan.



Action 9.3 Steps

- Assess previous efforts to identify where flood waters could be diverted and support projects for groundwater recharge in Antelope Valley.
- Leverage existing meetings, like AVIRWM, to coordinate on flooding issues.
- Explore development of a flood control district for Antelope Valley.

Antelope Valley Action Area - **MAXIMIZING GROUNDWATER BASIN STORAGE**

- Action 5.1 helps address Antelope Valley’s need for reliable groundwater that can address current and future demands.
- The existing action to develop a water accounting platform that supports regional groundwater banking and extraction can be used to support the Antelope Valley Watermaster’s role of managing the basin. It could also provide additional transparency in how groundwater is being allocated and used, supporting new development in a sustainable manner while protecting the groundwater rights of existing users.
- No additional steps are recommended for this Action specific to Antelope Valley.
- Action 5.2 supports Antelope Valley’s need for reliable groundwater that can address current and future demands.
- The existing action to examine the forecasted aqueduct capacity constraints, and state water contractor constraints, and identify opportunities to leverage underutilized conveyance will allow the Antelope Valley to explore opportunities to further enhance its use of the groundwater basin and provide additional supplies in support of existing and future development. It will also provide for improved groundwater banking critical to protecting supply availability.



Antelope Valley Action Area - SECURING WATER RIGHTS

- Antelope Valley users expressed concern over competing demands for existing supplies, water theft from creeks and aqueducts, and concerns about future projects that could export supplies out of the Basin.
- Action 5.3’s existing step to identify options for potential agreements and/or policy changes that address water rights concerns and basin adjudication-based exporting restrictions remains an important step for addressing the concerns of Antelope Valley communities.

Antelope Valley Action Area - FACILITATING REGULATORY COMPLIANCE

- Regulatory compliance for new infrastructure or to replace infrastructure damaged in emergencies, can be cost- and labor-intensive for both small systems and larger agencies in Antelope Valley, delaying their ability to implement needed projects.
- Existing steps in Action 11.3 that address small system needs related to resilience and funding and technical capacity should be retained. These include proactive outreach to encourage systems to participate in the Small At-Risk System Support Program, creation of a mentoring/education program framework for Board members, and incentivizing collaboration between agencies to accelerate project readiness for funding opportunities.
- A coordinated approach to regulatory requirements can help identify ways to meet safety requirements while still being a reasonable solution for systems to implement.
- Regulatory compliance for new infrastructure or to replace infrastructure damaged in emergencies, can be cost- and labor-intensive for both small systems and larger agencies in Antelope Valley, delaying their ability to implement needed projects.

2027-2028 Action Plan Steps



Action 11.3 Steps

- Include permitting consortium focused on small water systems permitting under the Small Water Systems Task Force.
- Include water system regulatory compliance support program by incorporating helpful links and guidance documents for Small Water Systems on the LACWP website.

INDIVIDUAL MATERIALS/TOOLS/RESOURCES:

- If Proof of Ownership or Proof of Identity are not provided in the initial application submission, all required documents must be submitted prior to Waterworks processing application.
- If plan check of water plans designed by a Licensed Professional Engineer is required for an extension of the water main and/or addition of off-site water system improvements.
- If the proposed water service size is not already within the Waterworks District, the association process may significantly delay processing of the application. For association into the Waterworks District, please contact the Local Agency Foundation Office for the County of Los Angeles (LAFCO).
- LAFCO for Los Angeles County
80 South La Brea Avenue, Suite 870
Pasadena, CA 91105
(626) 204-6000 Phone
(626) 204-6007 Fax
<http://www.lafco.org>
- If easements need to be processed to be conveyed to the Waterworks District, easement processing may delay processing of the application.
- If any private easements need to be recorded for future lines crossing other properties.
- If the property is going to be connected to an existing water main system installed within the last 10 years, a Contract Interconnection Letter will be required per WWD Rules and Regulations 1-A-46.

REV 11/2022

SMALL WATER AGENCIES:

Antelope Valley East Kern Water Agency (AVKE)
6420 W Avenue 7
Palm Springs, CA 92251
(951) 945-2201 Phone
(951) 945-2204 Fax
<http://www.avewc.org>

Santa Clarita Valley Water Agency (SCV Water)
2224 Bonquet Canyon Road
Santa Clarita, CA 91350-2173
(661) 297-1600 Phone
(661) 297-0611 Fax
<http://www.scvwater.com>

THE DEPARTMENT LOCAL OFFICES:

Central Region (Antelope Valley & So. Cal. Valley)
2797 Valencia Blvd.
Van Nuys, CA 91411
(818) 880-0141 Phone
(818) 880-0145 Fax

San Jose Region (Antelope Valley)
North Region Lander
255-A East Avenue N-4
Lancaster, CA 93535
(661) 940-0119 Phone
(661) 723-0905 Fax

San Jose Region (Antelope Valley)
255-A East Avenue N-4
Lancaster, CA 93535
(661) 940-0119 Phone
(661) 723-0905 Fax

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255-A East Avenue N-4
Lancaster, CA 93535
(661) 940-0119 Phone
(661) 723-0905 Fax

LACWD

HOW TO PROCESS AN APPLICATION FOR NEW METERED WATER SERVICE

ALHAMBRA MAIN OFFICE:
2000 S Fremont Ave.
Bldg 4B East, 4th Floor
Alhambra, CA 91803
(626) 300-3353 Phone
(626) 300-3385 Fax

LANCASTER FIELD OFFICE:
280 E. Avenue M.B.
Lancaster, CA 93535
(661) 940-0270 Phone
(661) 726-5478 Fax

MAJIBU FIELD OFFICE:
23523 W. Chic Center Way
Malibu, CA 90265
(310) 211-1289 Phone
(310) 211-4874 Fax

Antelope Valley Action Area - **MANAGING WATER QUALITY**

- Action 6.1 and 7.1 focus on the continued ability to provide safe, clean drinking water including in the face of emerging contaminants such as PFOS/PFOA. Antelope Valley communities have questioned the impacts of aging infrastructure on water quality, and want to ensure their groundwater supplies continue to be safe.
- Existing steps support Antelope Valley concerns regarding understanding the safety of water supplies and addressing emerging contaminants by collaborating on addressing emerging contaminants, exploring feasibility studies for addressing emerging contaminants, education on Division of Drinking Water permitting processes, and data and information sharing.
- Public trust and collaboration fostered by the existing steps also support actions that may be required in the future should groundwater quality monitoring indicate additional treatment is needed.
- Antelope Valley agencies are concerned about PFAS and other emerging contaminants.
- The Antelope Valley Groundwater Basin serves as a sink, so contaminants that enter the Basin require treatment to be removed, rather than flowing out of the Basin naturally.
- Action 6.3’s existing steps to increase understanding of treatment residuals and define regional protections for treatment agencies, as well as writing draft language for PFAS/PFOA source control policy and PFAS-free procurement policy for adoption will support regulations that align with regional needs and understanding.
- Antelope Valley agencies share concerns about PFAS, Chromium-6, and emerging contaminants that could impact basin water quality.
- Existing Antelope Valley water sources should be beneficially and sustainably managed to support existing future users.
- The existing step of creating a map of poor water quality zones overlaid with production enhancement plan areas will support the Antelope Valley’s local groundwater production efforts and improve regional understanding of the location and extent of potential emerging contaminants, PFAS, and Chromium-6.
- The Antelope Valley Groundwater Basin functions as a "sink" where contaminants that enter the Basin stay in the Basin.
- The Basin also serves as the primary supply for many communities in the region, and agencies, small water systems, and private well owners are concerned about the impacts of PFAS on the Basin and drinking water supplies.
- Action 12.8 and its existing step to better understand the timing and location of fire-retardant application as a potential for PFAS runoff into streams and spreading grounds would inform regional understanding of the impacts of wildfire suppression and could inform future fire-fighting practices and wildfire prevention measures, keeping basin water quality top of mind.

2027-2028 Action Plan Steps



Actions 6.1 & 7.1 Steps

- Develop guidance documents to help users navigate existing State resources on groundwater data and metrics, with materials posted on the LACWP/AVWP web portal and/or included in the Small Water Systems toolbox.
- Provide links to existing groundwater databases on the LACWP/AVWP web portal.



Action 6.3 Steps

- Antelope Valley water purveyors and District 40 should collaborate and advocate jointly on Chromium-6 issues affecting the region.
- Organize a water quality permitting consortium via the LACWP Task Force to address Antelope Valley needs, including representatives from Lahontan Regional Board, State Drinking Water Division, and Antelope Valley water and wastewater agencies.

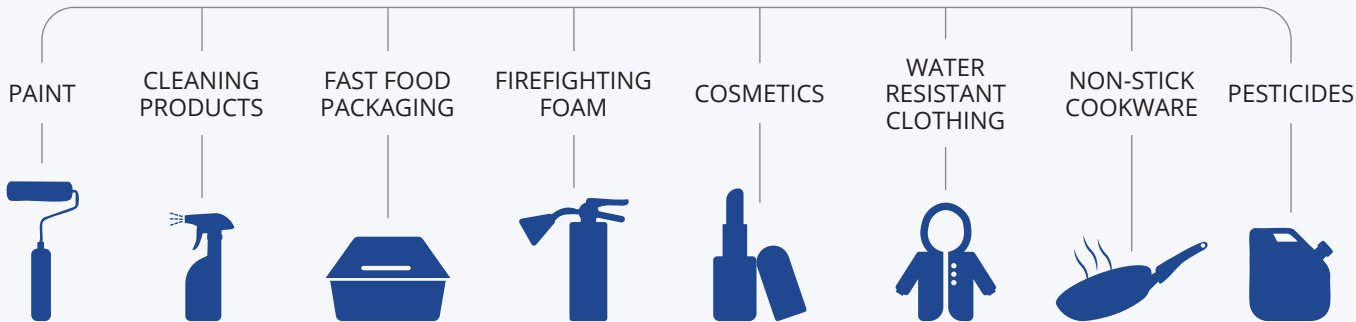


Action 7.2 Steps

- Encourage agencies with Master Plans to develop and share implementation plans for the Master Plans.



PFAS SOURCES



Antelope Valley Action Area - **PARTNERING ON REGIONAL SOLUTIONS**

- Existing steps within the LACWP Action Plan for Action 1.1 support the Antelope Valley’s need for clear, accessible data.
- Antelope Valley-specific data should be incorporated into existing efforts to improve data accessibility.
- Technical and analytical support for agencies with fewer resources should extend to small water systems in the Antelope Valley.



Antelope Valley Action Area - **PROTECTION OF GROUNDWATER SUPPLY**

- Protection of groundwater quality as well as the need to balance demands for groundwater is a high concern for Antelope Valley communities.
- Flooding is an on-going issue in the region, and could represent opportunities for managed recharge.
- Illegal dumping in the Valley, especially in or near surface waters, has the potential to negatively impact future water quality, and is difficult to enforce.
- Action 10.1’s existing step to identify areas that would benefit from increase coordination and existing opportunities would allow for developing stormwater recharge opportunities without impacting groundwater basin quality.
- Partnerships between stormwater and groundwater managers can help to address potential concerns of impacts from stormwater on groundwater quality and provide opportunities for stormwater recharge to the basin.
- Illegal dumping is being addressed by the County’s Illegal Dumping Task Force, but could benefit from coordinated messaging via the AVWP.

2027-2028 Action Plan Steps



Action 3.4 Steps

- Coordinate with existing County illegal dumping task force to address current issues of imported waste dumping.
- Coordinate with Sheriff’s department on best ways to document illegal dumping and water theft to support enforcement actions.
- Create Antelope Valley TaskForce of water purveyors, state and regional agencies, small systems and property owners focused on protecting water supplies and infrastructure, using the model of Illegal Dumping Task Force.
- Include contact information for the Illegal Dumping Task Force on the LACWP/ AVWP web portal.



Antelope Valley Action Area - **PROVIDING TECHNICAL SUPPORT FOR SMALL WATER SYSTEMS**

- Small water systems and private well owners need support to address concerns about well permitting, protection of groundwater levels and access via their wells, and ability to maintain infrastructure and respond to emergencies.
- Action 11.1 supports small system resiliency, including those in Antelope Valley.
- The LACWP’s Small At-Risk System Support Task Force (an existing action) is developing a tool kit that can be used by small systems to help address their needs. The Task Force is engaging small at-risk agencies in defining supportive actions and program elements.
- The existing action of identifying and securing upfront funding for program development will help to further support the resources being developed and could help to offset costs incurred by small systems needing support to achieve compliance or improve their systems.
- Antelope Valley’s small water systems are more dispersed than elsewhere in the County, and may not be able to readily implement all the tools available via support from the State or the Task Force.
- The State Water Board’s Senate Bill (SB) 552 Domestic Reliance Program (DRP) can be a resource to provide technical assistance and planning support to private well owners and small water systems facing drinking water quality, water supply, or infrastructure challenges.
- Similar to other small water systems in the County, those in Antelope Valley have limited technical and financial resources or capacity to maintain infrastructure and respond to emergencies.
- Existing steps in Action 11.3 that address small system needs related to resilience and funding and technical capacity should be retained. These include proactive outreach to encourage systems to participate in the Small At-Risk System Support Program, creation of a mentoring/education program framework for Board members, and incentivizing collaboration between agencies to accelerate project readiness for funding opportunities.
- The existing steps of creating a resiliency checklist and provision of administrative and technical advisory assistance to identify and develop needed actions would support small systems in Antelope Valley with articulating their needs in a manner that appeals to funding programs.
- These steps can prepare small water systems for pursuing funding under the SWRCB’s Technical Assistance Provider program.
- Additional steps specific to easing permitting challenges are recommended.

2027-2028 Action Plan Steps



Action 11.1 Steps

- Utilize the county staff member (or consultant) in Antelope Valley, as designated in Action 2.1 (communicating consistent messaging), who can act as a liaison to Small Water Systems and direct them to helpful resources.
- Include links to existing resources and the Small Systems Tool Kit on the LACWP/AVWP web portal.

Antelope Valley Action Area - **MANAGING PUBLIC PERCEPTION ON POTABLE WATER**

- Public perception of potable water quality can vary from the actual water quality shown by the data. Within Antelope Valley, water quality testing shows that it complies with drinking water standards, but some communities may question the safety of their domestic well water basin on odors and overall reliability.
- Action 11’s existing steps to identify approach and funding for a monitoring plan for post-distribution water quality for taste, odor and color issues can help to address end user concerns on water quality.
- The existing steps of advocating for SWRCB assistance in identification of systems with taste, color, and odor issues and considering needs of under-resourced communities and exploring new support systems on secondary MCLs, would help with the region’s understanding of where this may be occurring, identify reasons for why it is occurring, and craft messaging around the safety of drinking water in the region.

2027-2028 Action Plan Steps



Action 11.4 Steps

- Align AVWP messaging to reflect groundwater basin water quality conditions.
- Implement strategies and actions in the SB 552 DRP that support private well owners and small water systems through targeted outreach and water quality education.



Antelope Valley Action Area
EFFECTIVE EMERGENCY RESPONSE AND RESILIENCE

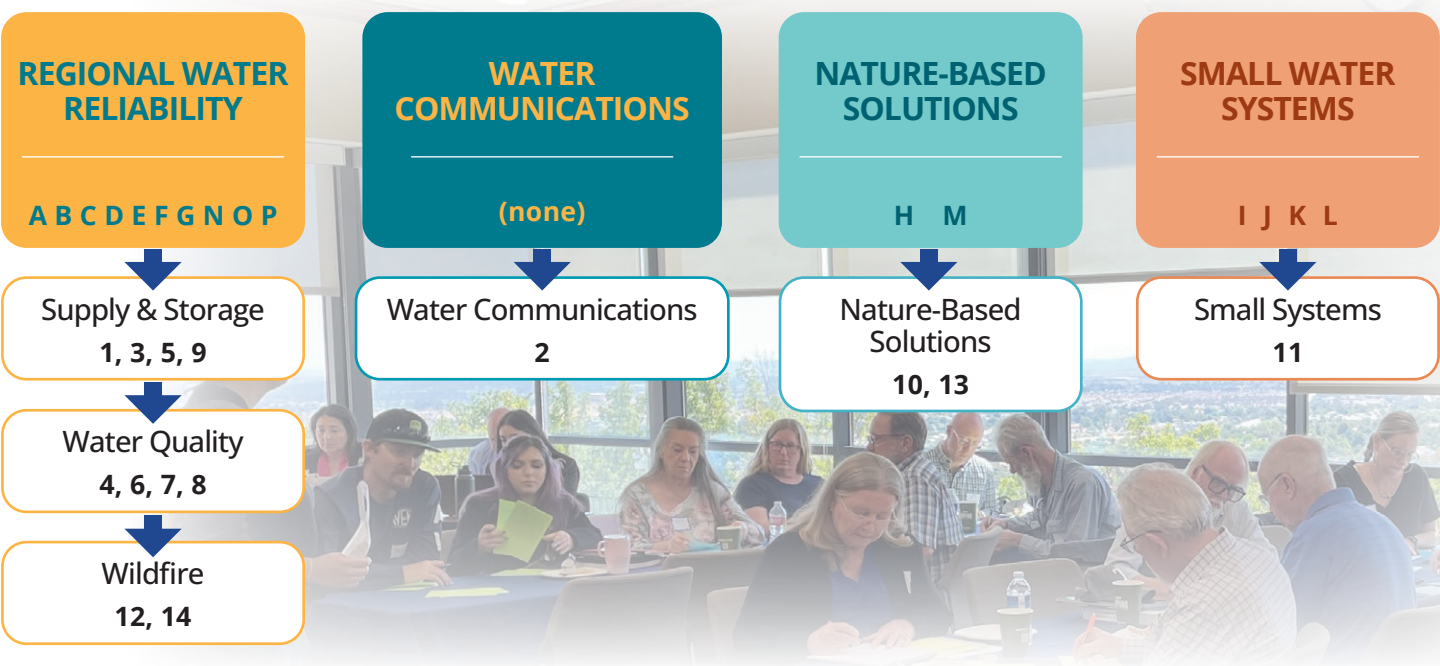
- Similar to other parts of the county, small systems in Antelope Valley often lack backup water supplies (reliant entirely on groundwater) and emergency infrastructure, which leaves them vulnerable.
- Hazard mitigation plans identify potential threats such as wildfire, earthquakes, and other emergencies, and plans for how to proactively protect against them.
- Action 11.5’s existing steps of compiling a list of agencies that have a hazard mitigation plan help with understanding which systems may be at higher risk due to lack of hazard mitigation planning, while tracking the status of specific actions in the existing Hazard Mitigation Plans will help with understanding those systems that are aware of their risks but need additional support to protect against them.
- Understanding the specific threats to each system and how prepared a system is, will support development and pursuit of solutions to protect against impacts of emergencies on system resiliency.
- Limited backup supplies and infrastructure put small systems in Antelope Valley at higher risk of system impacts from wildfire than larger systems or agencies.
- Much of the Antelope Valley is rural with limited resources for responding to wildfires, and have potential for higher exposure to wildfire incidents.
- Existing steps in Action 12.1 will help to reduce wildfire risk, thereby reducing the potential for impacts to small water systems in Antelope Valley.
- Existing steps include identifying opportunities for specific collaboration for activities to address wildfire prevention, developing a list of water utility infrastructure and resources in high-risk areas, exploring opportunities in planning for healthy headwaters, and incorporating tribal knowledge on invasive species removal.
- Antelope Valley small systems lack backup water supplies and emergency infrastructure, which limits their ability to address emergencies including wildfire.
- Recovery from fires can be challenging due to regulatory compliance requirements, which can be costly and difficult.
- Addressing wildfire will help to avoid these impacts to Antelope Valley systems.
- Action 12.5’s existing step of creating a map that overlies historical fire areas, fire agency service areas, critical infrastructure, and other layers to identify areas more vulnerable to wildfires would benefit Antelope Valley systems in understanding whether their systems are at increased risk of wildfires. By identifying these areas, resources could be prioritized to support planning for and mitigating wildfire impacts, allowing for more efficient use of limited financial and technical capacity for small systems planning for emergencies.
- State-led efforts through the SB 552 DRP recognize the need to improve drought preparedness and resilience among private well owners and small water systems.



IMPLEMENTING THE AVWP

While the strategies and actions within the LACWP are intended to be more static, the Action Plans were designed as appendices to be updated every two years. As this AVWP was being prepared, the 2025-2026 LACWP Action Plans were also in the process of being updated. Since the new AVWP steps had been aligned to LACWP strategies and actions, they were easily incorporated into the draft LACWP 2027-2028 Action Plans. These drafts will be reviewed by LACWP Task Forces and finalized by the Working Groups in December 2026 (after this AVWP is final).

The responsibility for monitoring the progress on each of the 16 Targets (A-P) and facilitating the implementation of the 14 Strategies (1-14) are divided between four Task Forces and Working Groups.



Each of the 16 LACWP strategies and affiliated Action Plans is allocated to one of four Task Forces and associated Working Groups for implementation. Task Force meetings focus on providing high level updates on progress updates made on LACWP Targets and Strategy Action Plans. As progress on Targets comes not only from LACWP activities but also from other agency and regional projects and programs, Task Force meetings are also opportunities for information sharing between water management agencies and interested parties.

LACWP Working Groups are comprised of subject matter experts across agencies and other water-related entities. The Working Groups meet quarterly to make progress on Action Plan steps and provide guidance for work done by agency volunteers and Consultant support staff. Working group membership is limited to those experts that are actively engaged in implementing the Action Plans in order to keep the meetings functional and task oriented. Several agencies that were involved in developing the AVWP have also regularly participated in LACWP Working Groups including AVEK, Palmdale Water District LACWW District 40, LACPW, LACSD and Acton Town Council. It is anticipated that through the continued participation of these and hopefully additional Antelope Valley stakeholders, the LACWP Working Groups will be able to implement the steps identified in this AVWP.

REGIONAL WATER RELIABILITY TASK FORCE

Regional Supply & Storage Working Group

The RSS WG is comprised of water purveyors, groundwater managers and water special interest groups that focus on maximizing regional supply development, distribution and storage through collaboration through the implementation of Strategies 1 (urban water use objectives), 3 (regional conveyance of local supply), 5 (groundwater storage) and 9 (groundwater recharge). Support of Antelope Valley groundwater banking programs as both a local and regional benefit are facilitated through this WG.

Regional Water Quality Working Group

The RWQ WG is comprised of wastewater agencies, groundwater producers and managers, regulators and environmental organizations focused on Strategy 4 (salt management), Strategy 6 (water treatment), Strategy 7 (impaired groundwater) and Strategy 8 (seawater intrusion). Through Permitting Consortium Workshop series Antelope Valley agencies can continue to collaborate with the Lahontan Regional Water Quality Control Board and State Board Department of Drinking Water as well as other agencies with similar issues like salinity management, beneficial use of recycled water and impaired groundwater.

Wildfire Working Group

The Wildfire WG focuses on Strategy 12 (wildfire water quality impacts) and Strategy 14 (flood control facilities). The WG is compiling resources and lessons learned from recently impacted water agencies that can be accessed by Antelope Valley agencies for use during and after wildfire events.

WATER COMMUNICATIONS TASK FORCE

The WC TF is focused on fostering public understanding of water resources across Los Angeles County. The primary mechanism for this outreach is the Water for LA website. The WC TF goes beyond the implementation of Strategy 2 (drought messaging) to leverage opportunities to provide consistent water-related messaging when useful as well as to serve as a connector to community specific information.

The interest of WWP water purveyors to work collaboratively on consistent messaging across the Antelope Valley can be facilitated through the WC TF.

NATURE-BASED SOLUTIONS TASK FORCE

In addition to a focus on LACWP Strategy 10 (decentralized stormwater) and Strategy 13 (invasive species management), the NBS TF also provides advocacy and insights for the implementation of nature-based solutions throughout LA County.

The 2027-28 Action Plan updates are an opportunity to support the ecosystem function within Antelope Valley's Littlerock Creek Watershed that is critical to local water supply quality and groundwater recharge. In addition the NBS TF is well suited to explore nature-based solutions to localized flooding in the Antelope Valley outside of Los Angeles County Flood Control District's jurisdiction.

THE SMALL WATER SYSTEMS TASK FORCE

Small Water Systems Working Group

To implement Strategy 11, the SWS TF is creating the Small Systems Support Program and Toolbox as a living set of resources for use by small systems in Los Angeles County. Continued listening sessions held specifically in Antelope Valley will ensure that the unique challenges and opportunities facing small rural systems can continue to influence the Task Force's implementation of the Strategy 11 Action Plan.

The SWS TF also developed the Drought Resilience Plan (DRP) mandated by SB552, which focuses on the state small and private wells throughout LA County. This implementation of the DRP will also be facilitated through SWS Task Force involvement.



equity
local
resilience

sustainability
opportunity

water
resources
collaboration
relationships

**ANTELOPE VALLEY
WATER PLAN**

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