2025 Urban Water Management Plan
Las Virgenes Municipal Water District

PUBLIC DRAFT

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Stantec Consulting Services Inc.

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Acronyms / Abbreviations

Acronym / Abbreviation	Full Name
AB	Assembly Bill
AC	Acre
Act	Urban Water Management Planning Act
AF	Acre Feet
AFY	Acre Feet per Year
AMI	Area Median Income
AMI/AMR	Advanced metering infrastructure / Automated Meter Reading
ARDWP	Annual Reports to the Drinking Water Program
AWWA	American Water Works Association
Bay-Delta	Sacramento-San Joaquin Bay-Delta
BMP	Best Management Practices
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
cfs	Cubic Feet per Second
CII	Commercial, Institutional, and Industrial
CIMIS	California Irrigation Management Information System
CIS	Customer Interface System
CMWD	Calleguas Municipal Water District
CRA	Colorado River Aqueduct
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CWC or Water Code	California Water Code
CY	Calendar Year
DDW	Division of Drinking Water
Delta	San Joaquin River Delta
DMM	Demand Management Measure
DRA	Drought Risk Assessment
DU	Dwelling Unit
DWR	Department of Water Resources
EIR	Environmental Impact Report
EIS	Environmental Impact Statement

Acronym / Abbreviation	Full Name
EPM	Emergency Procedures Manual
ERP	Emergency Response Plan
ESA	Endangered Species Act
ET	Evapotranspiration
Eto	Evapotranspiration from a Standardized Grass Surface
FY	Fiscal Year
GIS	Geographic Information System
GPCD	Gallons Per Capita Per Day
gpm	Gallons Per Minute
GSA	Groundwater Sustainability Agency
HCD	Housing and Community Development
ICS	Intentionally Created Surplus
IRP	Integrated Resources Plan
IWSMP	Integrated Water System Master Plan
LV	Las Virgenes
LVMWD or District	Las Virgenes Municipal Water District
MAF	Million Acre Feet
MGD	Million Gallons per Day
mg/L	Milligrams per Liter
msl	Mean Sea-level
MWELO	Model Water Efficient Landscape Ordinance
MWD	Metropolitan Water District of Southern California
PWS	Public Water System
RHNA	Regional Housing Needs Allocation
RUWMP	Regional Urban Water Management Plan
RW	Recycled Water
SB	California Senate Bill
SCAG	Southern California Association of Governments
SGMA	Sustainable Groundwater Management Act
SMP	Salinity Management Pipeline
Supplier	Urban Water Supplier
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	Thousand Acre Feet

Acronym / Abbreviation	Full Name
TDS	Total Dissolved Solids
TEA	Temporary Extraction Allocation
TMDL	Total Maximum Daily Load
TWRF	Tapia Water Reclamation Facility
TWSD	Triunfo Water and Sanitation District
USBR	U.S. Bureau of Reclamation
UWMP	Urban Water Management Plan
VCWWD	Ventura County Waterworks District
WFP	Westlake Filtration Plant
WQCP	Water Quality Control Plan
WSA	Water Service Area
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan
WSDM	Water Surplus and Drought Management

Chapter 1. Urban Water Management Plan Introduction and Lay Description

This chapter introduces the 2025 Urban Water Management Plan (UWMP) for Las Virgenes Municipal Water District (LVMWD or District) and provides an overview of the purpose, scope, and organization of the subsequent chapters in this UWMP. This chapter also includes a Lay Description of the UWMP that summarizes LVMWD's water supplies, demands, and long-term water service reliability.

1.1 Background and Purpose

This UWMP fulfills the requirements of the California Urban Water Management Planning Act (Act) and the Water Conservation Bill of 2009. An UWMP is a planning tool that guides the actions of water management agencies. It provides managers and the public with a broad perspective on several water supply issues. It is not a substitute for project-specific planning documents, nor was it intended to be, when mandated by the State Legislature. For example, the Legislature mandated that a plan include a Section which "describes the opportunities for exchanges or water transfers on a short-term or long-term basis" (California Urban Water Management Planning Act, Article 2, Section 10630(d)). The identification of such opportunities, and the inclusion of those opportunities in a general water service reliability analysis, does not commit a water management agency to pursue a particular water exchange/transfer opportunity, nor preclude a water management agency from exploring exchange/transfer opportunities not identified in the UWMP. When specific projects are chosen to be implemented, detailed project plans are developed, environmental analysis, if required, is prepared, and financial and operational plans are detailed.

The purpose of this 2025 UWMP is to provide LVMWD, its partner agencies, and the public with an updated status and long-term water resources plan, including:

- Water deliveries and uses
- Water supply sources
- Efficient water uses
- Demand management measures
- Water shortage contingency planning

This UWMP was prepared in compliance with the Water Conservation Act of 2009, also known as Senate Bill X7-7 (SB X7-7), and under the authorization of LVMWD.

Notification letters sent to agencies are provided in Appendix A.

Public notice for the 2025 UWMP public hearing is provided in Appendix B.

The agenda for the public hearing and Adoption Resolution passed by LVMWD Board of Directors on June 16, 2026, are provided in Appendix C.

A checklist to ensure compliance of this Plan with the Act requirements is provided in Appendix D.

1.2 Updated Guidance for 2025 Urban Water Management Plans

This UWMP has been prepared in compliance with California Water Code (CWC or Water Code) Sections 10610 through 10656 and Section 10608 of the Urban Water Management Plan Act (Act), which were added by Statute 1983, Chapter 1009, and became effective on January 1, 1984. This Act requires that "every urban water supplier shall prepare and adopt an urban water management plan" (Water Code § 10620(a)). An "urban water supplier" is defined as a supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually (Water Code § 10617).

UWMPs must be filed with the California Department of Water Resources (DWR) every five years. The 2025 UWMP's must be submitted to DWR by July 1, 2026. The focus of UWMPs include:

- Examining in detail current and future water use
- Analyzing potable and non-potable water supplies
- Analyzing water supply reliability
- Preparing a Drought Risk Assessment
- Developing a Water Shortage Contingency Plan
- Discuss the use and planned use of recycled water
- Reporting water loss
- Documenting compliance with Senate Bill 7, also referred to as SB X7-7

1.2.1 Changes in the Act Since 2020

Since the 2020 UWMPs were submitted, only minor changes have been made to the Water Code, primarily involving the addition or clarification of definitions. These changes do not substantively modify the statutory requirements for the 2025 UWMP. However, updated guidance and reporting expectations have been incorporated into the 2025 UWMP requirements. The following summarizes the relevant key changes and clarifications to UWMP requirements since 2020:

- **Water Code Updates**: Minor amendments to the Water Code have been adopted since 2020, largely limited to several definition additions. These amendments do not alter the fundamental UWMP requirements applicable to the 2025 UWMP.
- **Updated DWR Submittal Tables**: UWMP submittal tables have been updated to reflect the current reporting year, improve reporting accuracy, and more clearly distinguish between required information by the Water Code and optional data elements.
- **Water Loss Standard Reporting**: While no changes to the Water Code have been made to water loss reporting requirements since 2020, the 2025 UWMP now must report progress toward compliance with the 2028 Water Loss Standard, which was not finalized at the time of the 2020 UWMP.
- **Lower-Income Housing Projections**: Although projections for lower-income housing were required in 2020 UWMPs, additional optional guidance has been provided for 2025 on documenting the methodology used to develop these projections, including optional incorporation of Regional Housing Needs Allocation (RHNA) information into land use and water demand projections.

- **Groundwater Recharge and Water Storage Reporting**: Clarified guidance has been provided to distinguish between long-term and short-term water storage. Suppliers are advised not to report water placed into and withdrawn from short-term storage in the same year in order to avoid double counting.

1.3 Lay Description

LVMWD's 2025 UWMP has been prepared in compliance with the CWC as noted previously. Per CWC Section 10630.5, the UWMP must include a lay description to include the fundamental determination of the UWMP. This plan provides a detailed look at LVMWD's water system current and future water use, water sources, demand management measures, evaluation of multiple consecutive drought years, as part of the Drought Risk Assessment, and updates to the Water Shortage Contingency Plan (WSCP).

1.3.1 LVMWD's Water System, Supply, and Demand

The District has two (2) separate water systems: one for potable water to serve potable retail customers and one for recycled water to serve irrigation customers. Figure 4-1 in Chapter 4 and Figure 6-1 in Chapter 6 show schematics of water uses and supplies to each system, respectively.

Located in the Santa Monica Mountains, Conejo Valley, and San Fernando Valley, LVMWD has very limited natural water resources and currently relies on four sources: imported potable water from Metropolitan Water District (MWD), Ventura County Waterworks District (VCWWD), and the City of Los Angeles Department of Water and Power (LADWP); recycled water from the Tapia Water Reclamation Facility (TWRF); groundwater, from the Thousand Oaks Area Basin, which is only used to supplement the TWRF influent; and surface water runoff into the Las Virgenes Reservoir. See Figure 6-4 for the locations of the groundwater production wells (Westlake Well 1 and Westlake Well 2) in the Thousand Oaks Area Basin. Note that surface runoff into the reservoir generally only makes up for the evaporation losses in most years and is not classified as a reliable source of water. The imported potable water and surface water runoff stored in the Las Virgenes Reservoir is treated at the Westlake Filtration Plant (WFP).

To help meet future demands, the District recently completed several projects including an interconnection with Calleguas Municipal Water District (CMWD). This interconnection was completed in 2025 and will allow the two districts to provide water to each other as flow and pressure conditions allow. There is no guarantee of any particular flows in either direction, since the connection is only meant to be used in an emergency as long as both parties agree. See Section 3.1.2 details on more recently completed projects.

The District also has multiple projects in construction. Most notably is Pure Water Project, which will treat excess tertiary recycled water to indirect potable reuse standards and use it to augment surface water supply at the District's Las Virgenes Reservoir. See Section 3.1.3 for details on more facilities in construction and Section 3.1.4 for details on projects in design.

Over the next twenty years, the District is predicted to meet all water user demands. For more details on LVMWD's water system, supply, and demand, see Chapter 3, Chapter 4, and Chapter 6.

1.3.2 SBx7-7 2020 Target

On November 10, 2009, the California State Legislature passed Senate Bill 7 as part of the Seventh Extraordinary Session, also referred to as SB X7-7, which became effective February 3, 2010. This law was the water conservation component to the historic Bay-Delta legislative package and sought to achieve a 20% statewide reduction in urban per capita water use in California by December 31, 2020.

The law required each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020. The suppliers are required to meet SB X7-7 goals for the foreseeable future. The law is intended to promote urban water conservation standards consistent with the California Urban Water Conservation Council's adopted best management practices.

Chapter 5 of this UWMP reports LVMWD's actual 2020 water use and confirms that the 20% water use reduction target was met in 2020. As reported in the 2020 UWMP, the District met their 2020 target of not exceeding 249 gallons per capita per day (GPCD) of water usage, with an actual 2020 usage of 227 GPCD. See Chapter 5 for more details.

1.3.3 Water Service Reliability

It is the stated goal of LVMWD to deliver a reliable and high-quality water supply to its customers, even during dry periods. Based on conservative water supply and demand assumptions over the next twenty-five years, in combination with conservation of non-essential demand during certain dry years, LVMWD is projected to achieve its goal. The basis of the water supply and demand assessment is summarized in Chapter 7.

1.3.4 Water Shortage Contingency Plan

Water Code Section 10632 requires Suppliers to prepare and adopt a Water Shortage Contingency Plan (WSCP). The 2020 WSCP drew upon lessons learned from the 2012-2016 drought, California's driest period on record. The 2020 WSCP has been updated with relevant changes since 2020, and Chapter 8 includes the full 2025 WSCP.

1.3.5 Demand Management Measures

In accordance with Chapter 9 (§10609–10609.38) of the California Water Code, LVMWD has incorporated state-mandated urban water use objectives into this UWMP. These objectives include progressive indoor residential water use standards at 47 GPCD from 2025 to 2030, and 42 GPCD thereafter, as well as requirements for reporting and evaluating impacts on water, wastewater, and recycled water systems. This UWMP outlines strategies to meet these targets while maintaining service reliability and equity and includes coordination with regional wastewater agencies to assess potential operational and financial impacts. Separately, LVMWD will continue to submit Urban Water Use Objective Reports to the Department of Water Resources (DWR) via the WUE data portal, as required.

Chapter 9 describes LVMWD's demand management measures: 1) metering, 2) public education and outreach, and 3) water conservation program coordination and staffing support. The District ensures and provides support for all efforts of water conservation through education and outreach.

1.4 Urban Water Management Plans in Relation to Other Efforts

As encouraged by DWR, suppliers are expected to prepare their UWMPs in coordination with relevant agencies and to incorporate information from related planning documents, such as General Plans and Specific Plans, that may affect the UWMP's analysis, and vice versa.

1.4.1 Specific Considerations

Other related analysis, information, and planning documents that rely on information provided in UWMPs may also be included in the UWMP to support long-term planning. Two such considerations are identified below.

1.4.1.1 Demonstration of Consistency with the Delta Plan for Participants in Covered Actions

An urban water supplier that anticipates participating in or receiving water from a proposed covered action such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta should provide information in their 2025 UWMPs that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (WR P1). A detailed discussion can be found in Appendix G.

1.4.1.2 Permitting for Ocean Desalination Projects

California's Water Code requires UWMPs to describe opportunities for developing desalinated water supplies. For suppliers that are pursuing ocean desalination, UWMPs must demonstrate both the need for such a project and the appropriate sizing of proposed facilities. Should an ocean desalination project move forward, permitting agencies may rely upon the information given in the UWMP to demonstrate need for the facility.

Currently, the District is State Water Project dependent, and its allocation from Metropolitan Water District was reduced by 74% during the drought in 2021-2023. In response, the District is undertaking a Water Supply Diversification Study, scheduled to be completed in early 2026, as part of the District's pursuit to diversify its water supply portfolio. Alternative water supplies currently being analyzed by the Study include ocean desalination as well as potable reuse, groundwater banking, augmentation of the Pure Water Project with urban or storm runoff, and water exchanges with other water utilities.

Since the District is still in the alternatives analysis phase of evaluating these options, no ocean desalination facilities have been proposed at this time, and this UWMP cannot yet confirm whether a project is feasible.

Chapter 2. Urban Water Management Plan Preparation

This chapter provides insight on how the 2025 UWMP was developed, including the basis for preparing the plan, units of measurement, calculations used, coordination with other agencies, and outreach efforts.

2.1 Basis for Preparing a Plan

Urban water suppliers with 3,000 or more service connections or supplying more than 3,000 acre-feet of water per year (AFY) are required to prepare an UWMP every five years in compliance with the Water Code 10617. Since LVMWD directly provides water for municipal purposes to over 3,000 customers and supplies more than 3,000 AF of water annually, LVMWD has prepared this UWMP.

LVMWD prepared and adopted UWMPs for the years 2005, 2010, 2015, and 2020. This UWMP serves as an update to the 2020 UWMP and was prepared as an individual UWMP, covering only the LVMWD service area shown in Figure 3-1. More details on the LVMWD service area are provided in Chapter 3.

To assist LVMWD staff in preparation of their 2025 UWMP, Stantec attended the 2025 UWMP Guidebook Public Review Draft Release workshop on November 17, 2025 that was facilitated by DWR.

2.1.1 Suppliers With Both Wholesale and Retail Sales

LVMWD does not provide wholesale sales, only retail sales.

2.1.2 Public Water Systems

Public water systems (PWS) are systems that provide drinking water for human consumption, and these systems are regulated by the State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW). The SWRCB, Division of Drinking Water, requires reporting on the PWS. Reporters file electronic Annual Reports to the Drinking Water Program (ARDWP) to the SWRCB, which include annual reports on water usage and other information. The information provided in the UWMP is consistent with the data reported in the ARDWP.

LVMWD is a public water supplier that meets the definition of an urban water supplier with 20,667 municipal water service connections (as of the end of calendar year 2025) and a total 18,811 acre-feet (AF) of water used by customers in their water service area in calendar year 2025. See Submittal Table 2-1 for a summary of the Public Water System Data for LVMWD.

Submittal Table 2-1 Retail: Public Water Systems

Submittal Table 2-1 Retail: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2025	Volume of Water Supplied 2025 (AF)
Add additional rows as needed			
CA1910255	LVMWD	20,667	20,259
	Total	20,667	20,259
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES:			

2.2 Individual or Regional Plans

The 2025 UWMP for LVMWD has been prepared as an individual reporting plan that only covers the service area of LVMWD and addresses all the requirements of the CWC. Coordination of this UWMP with other agencies and constituents is described in Section 2.6. LVMWD is not a member of a Regional UWMP, nor is it a member of a Regional Alliance. See Submittal Table 2-2 for Plan Identification.

Submittal Table 2-2: Plan Identification

Submittal Table 2-2: Plan Identification		
Select One	**Type of Plan**	**Name of Regional Alliance or RUWMP** (Drop Down List)
☑	**Individual UWMP**	
	If Water Supplier is also a member of a SB X7-7 Regional Alliance, select name from the drop-down.	
☐	**Regional Urban Water Management Plan (RUWMP)**	
	If Supplier selected RUWMP, select name from the drop-down.	
NOTES:		

2.3 Fiscal or Calendar Year and Units of Measure

This section delineates the year in which all data is set, as well as the units of measure to be carried through the entirety of the plan. LVMWD is a water retailer (as opposed to a water wholesaler).

2.3.1 Fiscal or Calendar Year

The 2025 UWMP for the LVMWD is prepared on a calendar year basis and includes complete water use and planning data for calendar year 2025

2.3.2 Units of Measure

Volumes reported in this UWMP are in acre-feet (AF) and are consistent throughout the plan. Submittal Table 2-3 shows the parameters under which the 2025 UWMP was prepared.

Submittal Table 2-3: Supplier Identification

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesale supplier
☑	Supplier is a retail supplier
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP (Select from the drop down list).	
Unit	AF
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES:	

2.4 Coordination and Outreach

The UWMP Act requires that the water agency identify its coordination with appropriate nearby agencies. While preparing the 2025 UWMP, LVMWD coordinated its efforts with relevant agencies to ensure that the data and issues discussed in the UWMP are presented accurately. All agencies listed in Section 2.4.3 were sent a notice of preparation, copies of which are included in Appendix A.

LVMWD has actively encouraged community participation in its Urban Water Management Planning efforts. A notice of public hearing was published in the local newspaper [Anticipated by April 2026], notifying interested parties that the draft 2025 UWMP was under preparation. City and County agencies were notified on March 11, 2026, more than 60 days prior to the public hearing that is tentatively scheduled for June 16, 2026. Copies of the public hearing notifications are included in Appendix A.

The Draft 2025 UWMP was presented to the LVMWD Board of Directors on April 7, 2026, in a public meeting. The April meeting and public hearing on June 16, 2026 provided opportunities for LVMWD's customers, residents, and employees to learn and ask questions about the report. The Final Draft 2025 UWMP was presented and subsequently adopted by resolution of the Board on June 16, 2026. A copy of the resolution and the agenda for public hearing are included in Appendix C.

The adopted 2025 UWMP will be submitted to:

- The California Department of Water Resources
- The California State Library

In addition, the UWMP will be posted to the LVMWD website and will be made available during normal business hours at LVMWD, located at: 4232 Las Virgenes Road, Calabasas, CA 91302.

2.4.1 Wholesale and Retail Coordination

Among other coordination activities, LVMWD also informed the Metropolitan Water District of Southern California (MWD) of projected water use. See Submittal Table 2-4 for Water Supplier Information Exchange.

Submittal Table 2-4 Retail: Water Supplier Information Exchange

Submittal Table 2-4 Retail: Water Supplier Information Exchange Water Code Section 10631(h)
The retail Supplier has informed the following wholesale supplier(s) of projected water use.
Wholesale Water Supplier Name
Add additional rows as needed
Metropolitan Water District of Southern California (MWD)
Calleguas Municipal Water District (CMWD)
NOTES:

2.4.2 Coordination with Other Agencies and the Community

A written notice of this update to the LVMWD UWMP was provided to the following agencies:

- Calleguas Municipal Water District
- Triunfo Water and Sanitation District
- The Metropolitan Water District of Southern California

Table 5 summarizes the coordination and public involvement actions of each agency listed above.

2.4.3 Notice to Cities and Counties

A written notice of this update to the LVMWD UWMP was provided to the following cities and counties:

- The City of Agoura Hills
- The City of Calabasas
- The City of Hidden Hills
- The City of Malibu
- The City of Simi Valley, Waterworks District No. 8
- The City of Westlake Village
- The County of Los Angeles Regional Planning Department
- The County of Ventura Public Works Department (Ventura County Waterworks District No. 8 and 17)

Table 2-A summarizes the coordination and public involvement actions of each city and county listed above.

Table 2-A. LVMWD Coordination and Notification for Plan Preparation

Entities	Coordination and Public Involvement Actions					
	Received Copy of Draft UWMP	**Commented on Draft UWMP**	**Attended Public Meetings**	**Contacted for Assistance**	**Was Sent Notice of Intent to Adopt**	**Not Involved**
Metropolitan Water District of Southern California						
Calleguas Municipal Water District						
City of Calabasas						
City of Hidden Hills						
City of Agoura Hills						
City of Westlake Village						
City of Malibu						

Entities	Coordination and Public Involvement Actions					
	Received Copy of Draft UWMP	Commented on Draft UWMP	Attended Public Meetings	Contacted for Assistance	Was Sent Notice of Intent to Adopt	Not Involved
City of Simi Valley, Waterworks District No. 8						
Triunfo Water and Sanitation District						
Los Angeles County						
Ventura County Waterworks District No. 8 and 17						

Chapter 3. Service Area Description

3.1 General Description

The LVMWD service area comprises a 122-square mile area (74,640 acres) in western Los Angeles County, including the Los Angeles/Ventura County boundary to the northwest and the City of Los Angeles to the east. As shown in Figure 3-1, the service area includes the incorporated cities of Agoura Hills, Calabasas, Hidden Hills, and Westlake Village as well as unincorporated portions of Los Angeles County.

3.1.1 Water System Description

LVMWD's potable water system is mainly supplied by imported water from MWD, VCWWD No. 17, VCWWD No. 8, as well as from the LADWP. LVMWD also recently completed an interconnection with CMWD which establishes a voluntary water sharing agreement. Surface water runoff is collected in the Las Virgenes Reservoir, but the amount of water generally only makes up for the evaporation losses in most years. The water stored in the reservoir is treated at the Westlake Filtration Plant (WFP) to meet Title 22 California Code of Regulations, Division 4, Chapter 17 surface water treatment requirements for drinking water.

The potable water distribution system includes 25 storage tanks, 24 pump stations, and nearly 400 miles of pipelines. Due to the mountainous topography of its service area, the system has 22 main pressure zones. For billing purposes, the pressure zones are categorized into five pumping zone levels based on hydraulic grade line (HGL). The potable water use sectors, as identified in California Water Code Section 10631(d), are single and multi-family residential, commercial, and potable landscape irrigation users.

The District also supplies non-potable water to landscape and irrigation customers. The Tapia Water Reclamation Facility (TWRF) treats wastewater from LVMWD and Triunfo Water and Sanitation District (TWSD) service areas, supplemented by non-potable groundwater pulled from the Thousand Oaks Area Basin. See Figure 6-4 for the locations of the groundwater production wells (Westlake Well 1 and Westlake Well 2) in the Thousand Oaks Area Basin. LVMWD's recycled water distribution system consists of 70 miles of pipelines, 3 storage tanks, 3 open reservoirs, and 3 pump stations. The LVMWD recycled water customers are landscape and gold course irrigation users.

For more details on LVMWD's potable and non-potable water system supply and demands, see Chapters 4 and 6, respectively.

3.1.2 Recently Completed Projects

Las Virgenes Municipal Water District is consistently working on new projects that will enhance the reliability of the potable and recycle water systems for their customers. Most notably, LVMWD constructed an interconnection with CMWD. This interconnection was completed in 2025 and includes a joint facility consisting of a pump station and pressure reducing station. LVMWD operates the pressure reducing side of the facility to reduce CMWD's water to a pressure acceptable for the LVMWD system. This interconnection is meant to be used in an emergency as long as both parties agree.

Other projects that the District has completed include:

- Calabasas Recycled Water Pipeline Replacement
- LV2 Variable Frequency Drive Replacement
- Centrate Tank Rehabilitation
- Jed Smith Tank Rehabilitation
- Calabasas Tank Rehabilitation
- Aluminum Sulfate Storage Tank Replacement
- Rancho Air Lock Retrofit
- Malibu Lake Siphon Replacement Project
- Advanced Metering Infrastructure (November 2022)

3.1.3 Facilities in Construction

In addition to recently completed projects, the District has multiple projects in construction. Most notably is the Pure Water Project – Triunfo / Advanced Water Purification Facility (AWPF). The Pure Water Project will treat excess tertiary recycled water from the TWRF to indirect potable reuse standards through advanced filtration methods and use it to augment surface water supply at the District's Las Virgenes Reservoir. It is anticipated that the Pure Water Project will be constructed and operational by 2030.[1] See Section 6.1 for more details on the Pure Water Project.

Other facilities in construction at the time of this UWMP include:

- Cornell Pump Station Rehabilitation
- Secondary Clarifiers Rehabilitation
- Pure Water Project Las Virgenes
- McCoy Tank Rehabilitation
- Twin Lakes Pumping Upgrades
- Tapia TMDL Compliance

3.1.4 Projects in Design

To ensure the District continues to provide reliable, quality water to its customers, LVMWD has several projects planned for future developments, including the projects in design listed below:

- Twin Lakes Pipeline
- SCADA Systems Communications Upgrades
- Equestrian Tank Rehabilitation
- Stunt Road Pump Station and Saddle Peak Tank Pipeline Improvements
- Tapia Flow Equalization
- Old Chimney Pressure Reducing Station Improvements
- Lift Station 1 Rehabilitation
- Outfall 003 Discharge Point Rehabilitation
- Rancho New Flare and Boiler Replacement

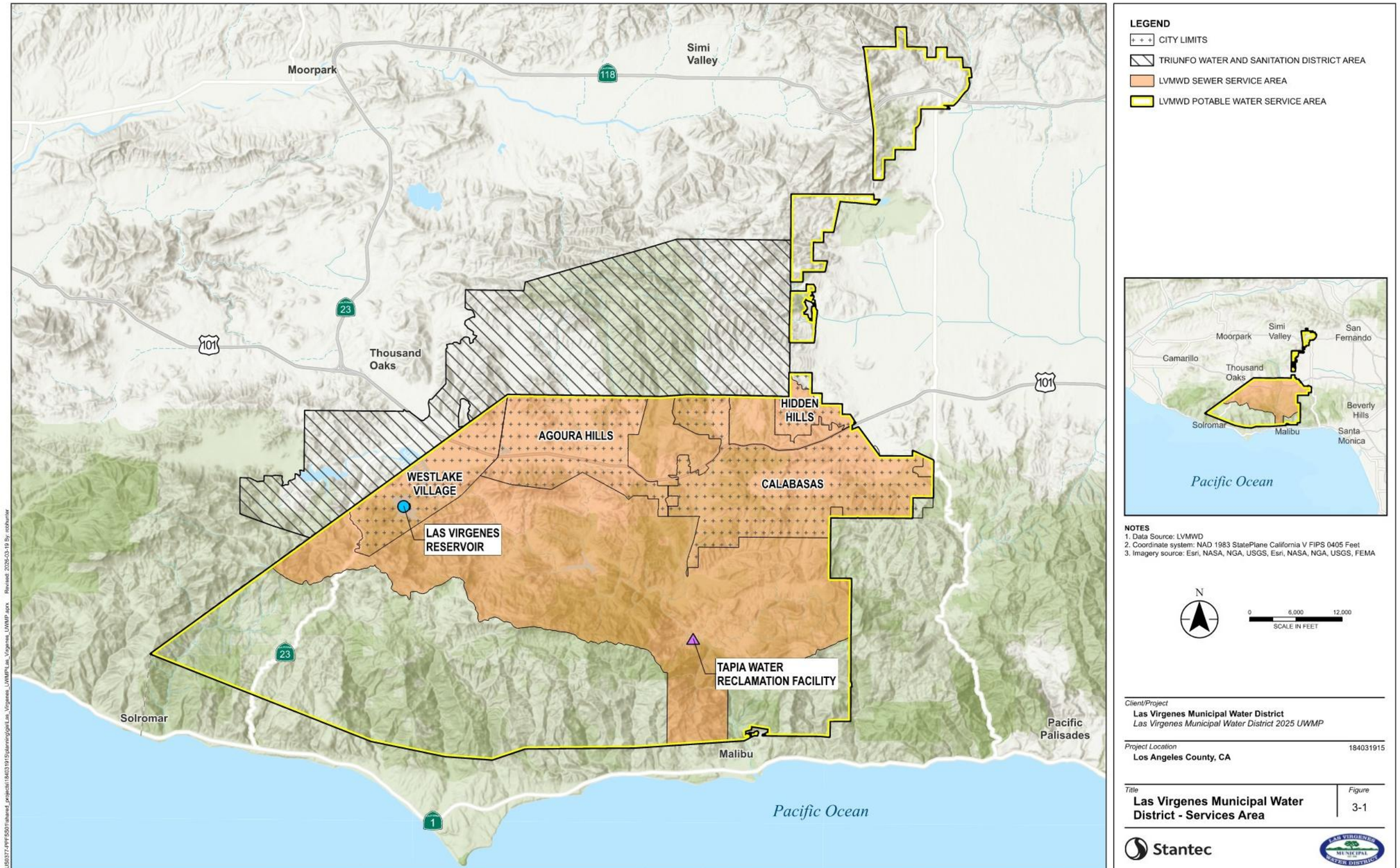
[1] Pure Water Project FAQs - Las Virgenes-Triunfo Joint Powers Authority https://www.ourpureh2o.com/faqs

- Lindero & Agoura Main Relocation
- Tapia Sulzer Blower Check Valve Replacement
- Twin Lakes #2, Dardenne, and Oakridge Tank Rehabilitation
- Tapia Effluent Pump Station / Recycled Water Pump Station West Rehabilitation

3.2 Service Area Boundary Maps

LVMWD's District boundary is shown in Figure 3-1.

Figure 3-1: Las Virgenes Municipal Water District Service Areas



3.3 Service Area Climate

The majority of LVMWD's service area climate is a semi-arid environment with mild winters, warm summers and moderate rainfall, consistent with coastal Southern California. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or dry hot Santa Ana winds. The standard monthly average evapotranspiration (ETo) rates, rainfall, and temperature are summarized in Table 3-A.

From 2015 to 2025, LVMWD's average monthly temperature ranges from about 49 to 87 degrees Fahrenheit (°F), with an annual average temperature of 75°F. ETo averages a total of 56 inches per year, while the average annual rainfall is 16.1 inches. Records for the ten-year timeframe show that the monthly precipitation averages 3.5 inches in wet months (December through March) and near zero inches in dry months (June through October).

Table 3-A. LVMWD Average Seasonal Climate Characteristics

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
Avg. Max Temp. (°F)	66.07	67.07	68.10	72.04	71.66	79.67	85.10	86.42	84.29	80.14	72.87	66.24	75.0 (avg)
Avg. Min. Temp. (°F)	49.17	48.60	49.25	51.42	53.00	57.98	61.51	62.46	61.19	58.11	52.66	48.86	54.5 (avg)
Total Monthly Precipitation (in)	3.50	3.45	3.47	0.59	0.38	0.02	0.04	0.40	0.23	0.20	0.76	3.09	16.1 (total)
Monthly ETo (in)	2.78	3.22	4.27	5.30	5.25	5.97	6.98	6.68	5.15	4.46	3.38	2.58	56.0 (total)

Sources:
LVMWD, based on average data from two CIMIS stations: Santa Monica – Los Angeles Basin (Station 99), and Chatsworth – Los Angeles Basin (Station 215). https://cimis.water.ca.gov/Default.aspx

3.4 Service Area Population and Demographics

3.4.1 Service Area Population

3.4.1.1 Development Projections

The development projections for this 2025 UWMP have been updated using the most recent Housing Element reports available from local jurisdictions. These reports, dated between 2021 and 2022, cover the planning period from 2021 to 2029 and were used to estimate future population growth for the cities of Agoura Hills, Calabasas, Hidden Hills, and Westlake Village. Notably, Hidden Hills provided a more recent update in 2025, which was incorporated into this analysis.

To estimate population growth within the broader LVMWD service area, including unincorporated areas of Los Angeles County, no new housing data was available specific to the District. Therefore, projections for these areas were derived from the 2014 Potable Water Master Plan, which remains the most comprehensive source of land use and development data for the unincorporated regions. This blended approach reflects both current housing policy and historical planning assumptions, providing a basis for water demand forecasting through the 2040 build-out horizon.

In the 2020 UWMP, a total of 5,485 new dwelling units were anticipated by build-out (in 2040), which resulted in an estimated additional population of 16,667 persons. An estimate of 7,202 new dwelling units is anticipated at build-out (in 2045), resulting in an increase in population of 20,743 persons. This aligns with the significant evolution of housing policy between 2020 and 2025, which incentivizes accelerated housing development. These projections are summarized in Table 3-B.

Table 3-B. Housing and Population Projections from 2025 to 2045

Agency/Growth Description	Projected New Dwelling Units	Persons Per Household (PPH)	Projected Additional Population
Agoura Hills	(a)	(b)	
Vacant Single-family Sites	102	2.77	283
Accessory Dwelling Units (ADUs) (j)	80	1.5	120
Agoura Village Specific Plan Sites	660	2.77	1,828
Mixed Use Shopping Center Sites	188	2.77	521
RM15 Rezone Sites	523	2.77	1,449
Ladyface Mountain Specific Plan Sites	30	2.77	83
Calabasas	(c)	(d)	
Vacant Single-family Sites	44	2.71	119
Multi-family & Mixed-Use Opportunity	1019	2.71	2,761
Accessory Dwelling Units (ADUs) (j)	96	1.5	144
Hidden Hills	(e)	(f)	
Vacant Lots	17	3.43	58
Affordable Housing Overlay	26	3.43	89
Accessory Dwelling Units (ADUs) (j)	22	1.5	33
Westlake Village	(g)	(h)	
Vacant Single-family Sites	102	2.48	253
Residential Sites	4	2.48	10
Mixed-Use Sites	607	2.48	1,505
Additional Units	(i)	(i)	
From Land Use Calculations	2746	3.15	8,650
From Vacant units	936	3.03	2,836
Total	**7,202**		**20,743**
Estimated population at baseline (2025)			**77,562**
Total Population at Buildout (2045)			**98,305**
Sources:			
Agoura Hills 2021-2029 Housing Element (a) is from Table IV-1 (p.89) and (b) is from Table II-6 (p. 32)			
Calabasas Revised 2021-2029 Housing Element (c) Table V-4 p.30 (d) Table 6 p. 223			
Hidden Hills 2021-2029 Housing Element (e) Table III-1 (p26) and (f) Table II-3 [total pop 1,868/544 households]			
Westlake Village 2021-2029 Housing Element (g) Table 11 (p. 33) (h) Table 1 p. 11			
(i) 2014 Las Virgenes Potable Master Plan Table 2-2 (p39)			
(j) SCAG Regional Accessory Dwelling Unit Affordability Analysis for Round 6 Housing Elements (p. 8); https://ahsc.scag.ca.gov/sites/default/files/2024-05/adu_affordability_analysis_120120v2.pdf			

3.4.1.2 Service Area Population

Based on 2025 population data and additional population from full buildout, which is assumed to occur in 2045, future population was calculated for all intervening years through the end of the planning period. See Submittal Table 3-1 for the current and projected population. As can be seen, it is anticipated that LVMWD's service area population will increase to approximately 98,305 by 2045.

Submittal Table 3-1 Retail: Population – Current and Projected

Submittal Table 3-1 Retail: Population - Current and Projected Water Code Section 10631(a)					
Population Served	**2025**	**2030**	**2035**	**2040**	**2045**
	77,562	82,296	87,320	92,650	98,305
NOTES: Population per LVMWD and local agencies housing elements					

3.4.2 Other Social, Economic, and Demographic Factors

Most of LVMWD's service population includes the incorporated cities of Agoura Hills, Calabasas, Hidden Hills, and Westlake Village as well as unincorporated portions of Los Angeles County. Current and future demographics, housing development, and land use in the cities will have significant impact on water use and system planning for LVMWD.

Though LWMWD has no disadvantaged census group, it is a common destination for disadvantaged community members who come to enjoy the visitor facilities. Safe, clean water is necessary to support these recreational experiences. LVMWD is committed to support programs that ensure resources are available to serve the region's disadvantaged communities.

3.5 Land Uses within Service Area

A large portion of the service area is undeveloped land characterized by the Santa Monica Mountains that range in elevation from a few feet above mean sea level (msl) to elevations exceeding 2,500 ft-msl. These open space areas comprise about 35 to 40 percent of the total service area and are mostly held in public ownership, such as state and national parks that will not require water service. Because of this, there is a limited amount of development planned for the future despite the significant amount of open land available.

There are also many undeveloped private parcels, particularly in the southern half of the service area. While these parcels are difficult to develop due to the topography of the land, they are accounted for in long-range water planning as these parcels could potentially receive water from LVMWD in the future[2]. The remaining portion is primarily made up of mixed residential and commercial land uses, while only a small portion of the service area is designated as agricultural land use types. The development pattern in recent years within the service area has included redevelopment of commercial/office uses into mixed-use and multifamily residential along the freeway corridor with some modest residential development and

[2] Potable Water Master Plan Update 2014, Kennedy Jenks

growth. LVMWD's water demands are primarily residential, as opposed to commercial, industrial, institutional, or agricultural, so LVMWD's customer base consists of many small users (i.e., single family residential homes) with associated landscape irrigation.

3.5.1 Service Area Geography

There are several unique aspects of LVMWD's geography which must be considered when discussing regional water infrastructure. Secondly, because of LVMWD's rural location within the Santa Monica Mountains, the distribution systems are large and must accommodate geographical challenges such as rapidly changing elevations. And while LVMWD benefits from a highly integrated recycled water system, effective potable distribution has been an ongoing challenge.

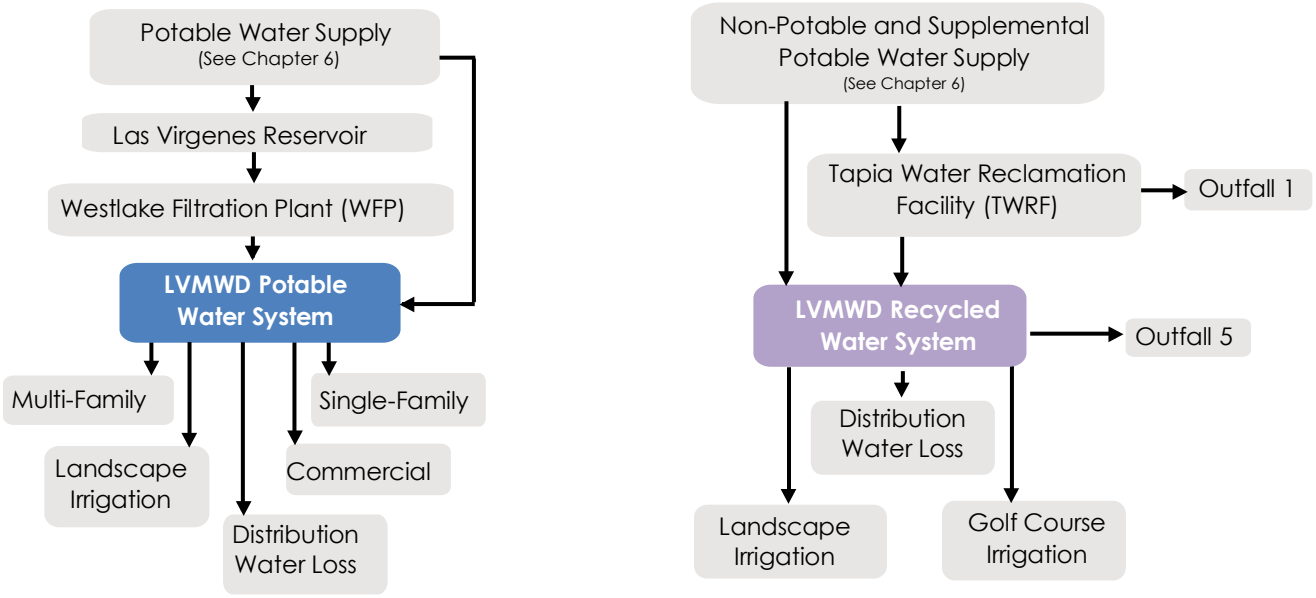
Chapter 4. Water Use Characterization

This chapter describes and quantifies LVMWD's past, current, and future potable and non-potable water use projections through at least the year 2050, which are summarized in Table 4-3. Available records are used to project future water use based upon LVMWD's historical records and considering anticipated growth, new regulations, changing climate conditions, and trends in customer water use behaviors. Examining each water use sector and then aggregating the information into a comprehensive projection of customer water use, becomes the foundation for integration with LVMWD's water supplies (Chapter 6) to assess long-term water system reliability (Chapter 7).

4.1 Non-Potable Versus Potable Water Use

As described in Chapter 3, the District has two (2) separate water systems: one for potable water to serve potable retail customers and one for recycled water to serve non-potable irrigation customers. See Figure 4-1 for a schematic of water uses for each system.

Figure 4-1: Schematic of LVMWD Water Uses Each System



As discussed in Section 1.3.1, the potable water distribution system consists of 25 storage tanks, 24 pump stations, and nearly 400 miles of pipelines. The District's potable water is mainly used for all indoor residential and commercial demands and for outdoor irrigation in areas not served by the recycled water network. Based on customer consumer data, the potable system serves a total of 20,009 connections, consisting of 18,622 single-family, 825 commercial, 555 multi-family and 7 landscape irrigation accounts.

LVMWD's recycled water distribution system includes 70 miles of pipelines, 3 storage tanks, 3 open reservoirs, and 3 pump stations. Tertiary-treated recycled water is supplied from the Tapia Water

Reclamation Facility (TWRF), supplemented as necessary by non-potable groundwater from the Thousand Oaks Area Basin and potable imported water. When recycled water production exceeds system demand, excess tertiary-treated water is discharged through Outfall 001 or Outfall 005 in accordance with regulatory requirements (see Section 6.2.4.2).

The recycled water system serves 658 customers. These customers use recycled water for irrigating parks, roadway medians, schools, and golf course irrigation.

As presented in Submittal Table 2-1, LVMWD serves a total of 20,667 municipal water service connections.

4.2 Past, Current, and Projected Water Use by Sector

This section discusses past, current, and projected water use in five-year increments through 2050. The water uses shall be identified by sector and based upon information provided by LVMWD.

4.2.1 Water Use Sectors Listed in Water Code

To characterize LVMWD's water use customers, the following sections define the water sectors listed in the CWC 10631(d). The order of the sectors follows the order found in the Water Code. If a sector is not applicable or no information is available, it will be indicated as such in the respective sector and shall be excluded from the analysis. Additional sectors or subdivisions of these sectors shall be included in Section 4.2.2 to allow the analysis of unique conditions that may apply to certain sectors or subsectors not listed in the Water Code.

4.2.1.1 Single-Family Residential

A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.

4.2.1.2 Multi-Family Residential

Multiple dwelling units contained within one building or several buildings within one complex.

4.2.1.3 Commercial

A water user that provides or distributes a product or service. Water Code 10608.12(d).

4.2.1.4 Landscape

Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.

4.2.1.5 Distribution System Losses

Reporting of distribution system losses is required by the Water Code. Per CWC §10631(d)(3), distribution system water losses for each of the five years preceding the plan update must be reported in accordance with the rules adopted pursuant to CWC §10608.34. These water losses are listed in Submittal Table 4-4 and all relevant AWWA reporting worksheets can be found in Appendix E.

Projected water losses, reported in five-year increments for 20 years, are included to effectively evaluate water service reliability. It is one of the water use sectors that requires reporting per Water Code Section 10631(d)(1). Projected water losses are summarized in Section 4.3.

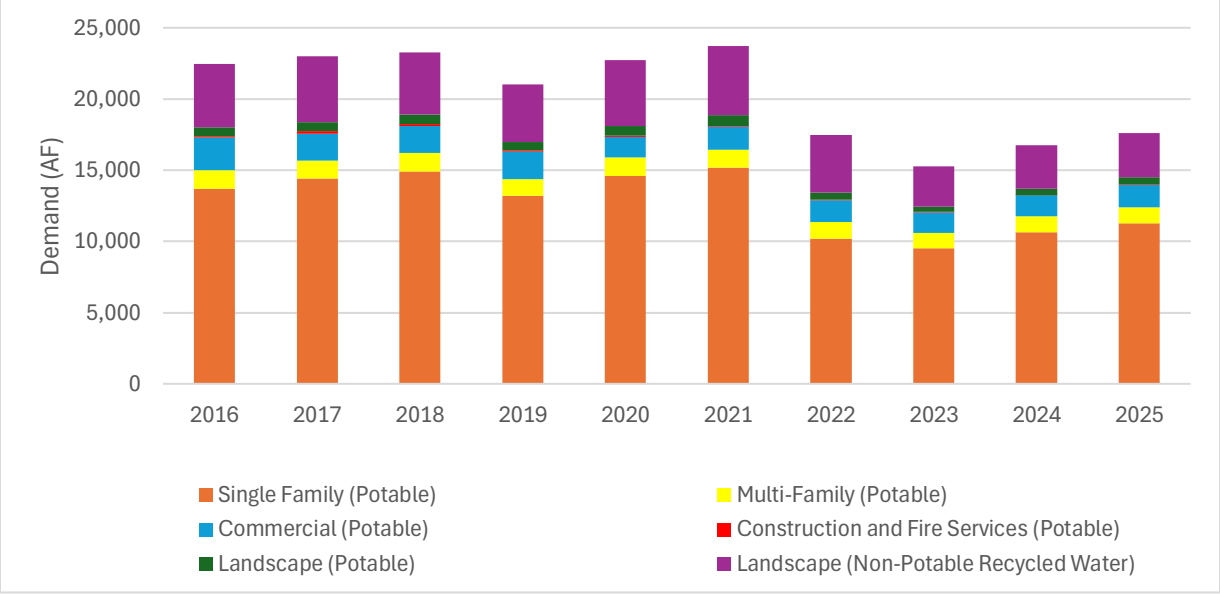
4.2.2 Optional Water-Use Sectors in Addition to Those Listed in Water Code

This section describes water demands that are not adequately represented by the water sectors listed in the CWC 10631(d), such as unbilled, authorized consumption like construction and fire services. Construction services include water uses such as dust suppression, washing equipment, and other uses associated with construction activities. Water used for fire services include line flushing, firefighting, hydrant testing, and others.

4.2.3 Past Water Use

Figure 4-2 below quantifies past water use for the LVMWD service area. Past water use accounting helps show LVMWD's water use trends; the effects of temporary use restrictions, and recovery from such temporary restrictions; effects of long-term demand management measures; and other pertinent water use patterns.

Figure 4-2. 10-Year Historical Water Use



NOTE: Does not include losses or outfall discharges. See Figure 6-10 for Landscape (non-potable recycled water) use volumes.

4.2.4 Current Water Use

Existing water use by customer sector is shown in Submittal Table 4-1. Residential (single-family plus multi-family) connections accounted for approximately 79 percent of total potable water service demands in 2025.

Submittal Table 4-1 Retail: 2025 Actual Total Uses for Potable and Non- Potable Water

Submittal Table 4-1 Retail: Total Uses for Potable and Non-Potable Water — Actual Water Code Section 10631(d)(1)			
Use Type	Additional Description (as needed)	2025 Actual Water Use	
Drop down list May select each use multiple times These are the only use types that will be recognized by the WUEdata online submittal tool		**Potable or Non-Potable** (OPTIONAL) Drop down list	Volume (AF)
Add additional rows as needed			
Single Family		Potable	11,266
Multi-Family		Potable	1,147
Commercial		Potable	1,554
Landscape		Potable	489
Distribution System Water Loss		Potable	1,225
Landscape		Non-Potable	3,096
Other (optional)	Construction and Fire Services	Potable	34
		Subtotal Potable	15,714
		Subtotal Non-Potable	3,096
		Total	18,811
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES:			

4.2.5 Projected Water Use

In accordance with Water Code Section 10635(a), below (and in Chapter 7) includes an assessment of the reliability of LVMWD's water service to its customers during normal, dry, and multiple dry water years.

This water supply and demand assessment compares the total water supply sources available to LVMWD with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. See Chapter 7 for further details.

4.2.5.1 General Guidance on Projections

For the water service reliability assessment, suppliers shall characterize the normal water use for estimating normal water supply reliability and reliability in the event of a single dry year. Suppliers may choose to characterize the normal year water use in whatever manner makes the best planning sense. Both normal year and single dry year data is reported in Chapter 7.

A critical component of statutory language in Water Code Section 10635(b) is the requirement to prepare a five-year drought risk assessment (DRA), discussed in Chapter 7. This five-year DRA can also be used to provide the water service reliability assessment for a drought lasting five years.

DWR recommends that, as a first step, suppliers estimate expected gross water use for the next five years without drought conditions (also known as unconstrained demand). These numbers can then be adjusted to estimate the five-years' cumulative drought effects, as summarized in Chapter 7.

LVMWD's projected water use, in five-year increments, is shown below through 2050 (including projections for each of the water use sectors identified in Section 4.2.1).

4.2.5.2 Water-Use Projections by Sector

Retail Suppliers are required to report projected water uses by the sectors described in Section 4.2.1 of this UWMP. In accordance with Water Code Section 10635(a), Submittal Table 4-2 shows the projected water use by sector, in five-year increments through 2045.

Residential (Single-Family and Multi-Family)

Using the Housing and Population Projections in Chapter 3, LVMWD projects full buildout in 2045. Population growth naturally increases potable water use demands. However, per capita residential potable demand is anticipated to decline over the 2025–2045 planning horizon primarily due to two state requirements:

1. Indoor Residential Water Use Standard established by SB 1157 (2022), which lowers the indoor standard from 47 gpcd (2025–2029) to 42 gpcd beginning January 1, 2030; LVMWD is currently meeting the 47 gpcd standard based on the average indoor water use data and percentage estimated by LVMWD.

2. Outdoor efficiency requirements adopted under the "Making Conservation a California Way of Life" regulation (Title 23, CCR §§965–969), which require suppliers to apply state defined outdoor efficiency factors (implemented via the adopted framework for outdoor standards and CII landscapes with dedicated irrigation meters).

LVMWD data indicates that on average in 2025, approximately 30% of residential use is indoor and 70% is outdoor.

With anticipated indoor water use reductions and outdoor efficiency requirements, it is anticipated that overall residential water use will slightly decrease even as population grows. Below find the resulting per capita residential reductions and outdoor efficiency reductions used in the water use projections:

- Beginning 2030 (Indoor standard change): Reducing indoor use from 47 to 42 gpcd is a 10.6% indoor reduction. Applying the 30% indoor share, the per capita residential demand decreases by ~3.2% in 2030 (0.30 × 10.6% = 3.2%).

- Beginning 2035 (Outdoor efficiency tightening): Based on LVMWD's planning assumption that the effective Landscape Efficiency Factor (LEF) for residential outdoor use declines 21% (from 0.80 to 0.63) in 2035, the per capita residential demand decreases by ~14.9% in 2035 due to outdoor use alone (0.70 × 21.0% ≈ 14.9%). (Incremental to 2025 baseline; see cumulative note below.)

- Beginning 2040 (Additional outdoor tightening): Under LVMWD's planning assumption that the residential outdoor LEF decreases an additional ~12.7% (from 0.63 to 0.55) in 2040, the per capita residential demand decreases by ~8.9% in 2040 due to outdoor use alone (0.70 × 12.7% ≈ 8.9%).

Applying the reductions, the combined indoor and outdoor changes yield an overall ~25% reduction in per capita residential potable demand by 2040 relative to the 2025 baseline (≈3.2% in 2030; then ≈14.9% at 2035; then ≈8.9% at 2040). These cutbacks are incorporated into the projected use for Single-Family and Multi-Family in Submittal Table 4-2.

Commercial

LVMWD's projected commercial water use will increase at the same rate as population growth throughout the planning period. There are no modelled cutbacks or water savings.

Landscape (potable)

LVMWD's projected potable landscape water use may increase as a function of population growth, however ongoing water efficient program efforts and the tightening of outdoor standards in 2035 and 2040 will result in water savings.

- 2035 (efficiency tightening): LVMWD's planning assumption is that the effective Landscape Efficiency Factor (LEF) for landscaping use declines 21% (from 0.80 to 0.63) in 2035.

- 2040 (additional tightening): LVMWD's planning assumption is that the landscaping LEF decreases an additional ~28.6% (from 0.63 to 0.45) in 2040 and beyond.

These cutbacks are incorporated into the projected use for Landscape (potable) in Submittal Table 4-2.

Distribution System Water Loss

LVMWD'S projected distribution system losses will remain stable in the context of population growth due to several water loss reduction efforts. The District is implementing a comprehensive pipeline replacement program focused on identifying and prioritizing potable water mains for rehabilitation or replacement based on condition, age, and risk of failure. In addition, LVMWD is initiating a proactive field-based leak detection program beginning in 2026. This effort will supplement existing monitoring and audit practices by systematically surveying the distribution system to identify and repair leaks that may not be immediately apparent through customer reports or system operations data. These programs are further discussed in Section 9.1.3.5.

Together, these initiatives are expected to contribute to ongoing reductions in per capita real water loss and improvements in overall distribution system efficiency.

Non-potable Landscape

LVMWD's projected recycled water use is expected to remain constant at 3,465 AF due to current customer demand trends and a major pipeline replacement project which will address leaks.

Other: Construction and Fire Services

LVMWD's projected Construction and Fire Services water use is based on a multi-year historical average and is assumed to remain constant throughout the planning horizon. This approach reflects the episodic and variable nature of construction activity and emergency response demands, which are not directly correlated with population growth or customer water use trends. Using a long-term average provides a conservative and stable estimate for system planning purposes and avoids understating operational demands associated with temporary construction activities, firefighting, and other unbilled authorized uses.

Submittal Table 4-2 Retail: Total Use for Potable and Non-Potable Water – Projected

Submittal Table 4-2 Retail: Total Uses for Potable, and Non-Potable Water — Projected **Water Code Section 10631(d)(1)**							
Use Type	Additional Description (as needed)	**Projected Water Use** (Report To the Extent that Records are Available)					
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		**Potable or Non-Potable** (OPTIONAL) Drop down list	**2030 (AF)**	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 opt (AF)**
Add additional rows as needed.							
Single Family	(a)	Potable	11,524	10,398	10,112	10,708	
Multi-Family	(a)	Potable	1,173	1,058	1,029	1,090	
Commercial	(e)	Potable	1,646	1,743	1,845	1,954	
Landscape	(a)	Potable	518	432	507	615	
Distribution System Water Loss	(b)	Potable	1,297	1,297	1,297	1,297	
Landscape	(c)	Non-Potable	3,465	3,465	3,465	3,465	
Other (optional)	Construction and Fire Services (d)	Potable	68	68	68	68	
		Subtotal Potable	16,225	14,996	14,859	15,731	0
		Subtotal Non-Potable	3,465	3,465	3,465	3,465	0
		Total	19,690	18,461	18,324	19,196	0
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.							

NOTES:
(a) Assumes demand projections based on actual 2025 water use per Submittal Table 4 1 and population projections per Submittal Table 3 1. Projected cutbacks are described in Section 4.2.5.2 Water Use Projections by Sector.
(b) The 2030 Losses are estimated using 2025 data per Submittal Table 4 1 and assumed to remain constant through 2050 due to planned pipeline replacement program and ground leak detection program to be implemented in 2026.
(c) Average recycled water demand from 2016-2025 with a 20 percent reduction, based on recent trends over the last five years, was assumed to remain constant for 2030 through 2050.
(d) Average construction and fire services demand from 2016-2025 was assumed to remain constant for 2030 through 2050.
(e) Assumes demand projections based on actual 2025 water use per Submittal Table 4 1 and population projections per Submittal Table 3 1.

4.2.5.3 Standards, Codes, Ordinances, and Plans

The water use projections described above take into consideration LVMWD land use plans (see Chapter 3). LVMWD has a land-use buildout set for 2045.

4.2.5.4 Retail Only

Future water projections reported in Submittal Table 4-2 include, where available, estimated future water savings expected to occur pursuant to Water Code Section 10631(d)(4)(A). As shown in Submittal Table 4-3, future water savings are included in projections. For the purposes of the 2025 UWMP and data available at the time of preparation, the projected potable water and recycled water demands are described in Section 6.2.4 and Submittal Table 4-2.

Submittal Table 4-3 Retail: Inclusion in Water Use Projections

Submittal Table 4-3 Retail: Inclusion in Water Use Projections **Water Code Section 10631(a), 10631(d)(4)(A), and 10631(d)(4)(B)**	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) **Drop down list (y/n)**	Yes
If "Yes" to above: State the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found. **OPTIONAL** Suppliers may complete Optional Submittal Table 4-4 R to quantify the expected savings.	See Section 4.2.5.2
Are Lower Income Residential Demands Included In Projections? (Refer to Appendix K of UWMP Guidebook) **Drop down list (y/n)**	Yes
OPTIONAL If the method for accounting Lower Income Residential Demands has been included, provide page number where this accounting can be found. (An example is included in Appendix K.)	N/A
NOTES: Lower Income Residential Demands are incorporated in demand projection with the same level of water use as higher income residential. No separate accounting method is used for Lower-Income Residential Demands.	

4.2.5.5 Lower-Income Households

The projected water use for lower income households is shown below. A lower income household has an income below 80 percent of area median income, adjusted for family size.

The State Department of Housing and Community Development (HCD) categorizes households into five income groups based on the County Area Median Income (AMI) which can be used for planning and funding purposes. The five income groups include:

- Extremely Low-Income – up to 30% of AMI
- Very Low-Income – 31 to 50% of AMI
- Low-Income – 51 to 80% of AMI

- Moderate Income – 81 to 120% of AMI
- Above Moderate Income – greater than 120% of AMI

As required by State Housing Element law, jurisdictions shall provide sufficient land to accommodate a variety of housing opportunities for all economic segments of the community. The region's projected housing needs shall be accommodated for the planning period, known as the Regional Housing Needs Allocation (RHNA). To comply, jurisdictions shall provide adequate land with enough density and appropriate development standards. The Southern California Association of Governments (SCAG) allocates the RHNA to individual jurisdictions within the region.

The LVMWD service area includes the incorporated cities of Agoura Hills, Calabasas, Hidden Hills, and Westlake Village as well as approximately 5 percent of unincorporated areas within the County of Los Angeles. As such, RHNA data assigned by SCAG to these cities and unincorporated areas shall be used for this UWMP. RHNA units of the respective cities and areas for the 2025 to 2045 forecast, based on income distribution, are summarized in Table 4-A.

Table 4-A. 2025-2045 RHNA Assigned Units of Cities within LVMWD

Income Group	Number of Units[1]						Percentage
	Agoura Hills	Calabasas	Hidden Hills	Westlake Village	Unincorporated LA County[2]	Total	
Extremely/ Very Low	127	132	17	58	1,279	1,612	30%
Low	72	71	8	29	683	863	16%
Moderate	55	70	9	32	708	874	16%
Above Moderate	64	81	6	23	1,822	1,996	37%
Total	318	354	40	142	4,492	5,346	100%

[1] From document "SCAG 6th Cycle Final RHNA Allocation Plan"
[2.] Approximately 5 percent of unincorporated areas within Los Angeles County (LA County)

Extremely low-, very low-, and low-income households are often combined and referred to as lower-income households. This is accounted for in the prorated population estimates of Table 3-B in Chapter 3. In accordance with Water Code Section 10631.1, Submittal Table 4-3 confirms and indicates how future water savings estimates and lower-income household demands are included in water use projections.

4.2.5.6 Climate Change Considerations

Climate change presents a challenge in water planning for water suppliers around the globe. For LVMWD, long-term supply is projected to meet demands even with climate change considerations incorporated. In 2025, firefighting efforts for the Palisades Fire required approximately 18.51 AF of water. Water use is anticipated to increase as a result of temporary emergency firefighting demands. Climate change considerations are shown in supply projections by means of available imported water predicted through MWD. Climate changes are expected to impact groundwater and other supply sources, but they are difficult to quantify and are accounted for in the conservative reporting of this UWMP.

MWD's water supply planning has almost one-hundred years of hydrological data regarding weather and water supply. This history has provided a foundation for forecasting frequency and severity of future droughts, as well as the frequency and abundance of above-normal rainfall. However, weather patterns can shift dramatically and unpredictably, significantly affecting water supply planning.

Although there are uncertainties of the exact timing, magnitude, and regional impacts of temperature and precipitation changes, researchers have identified several areas of concern for California water planners including:

- Reduction in Sierra Nevada snowpack
- Increasing intensity and frequency of extreme weather events
- Increased frequency and duration of extreme heat, impacting health and evapotranspiration
- Rising sea levels resulting in the following:
    - Impacts to coastal groundwater basins due to seawater intrusion
    - Increased risk of damage from storms, high-tide events, and the erosion of levees
    - Potential pumping cutbacks on the State Water Project (SWP) and Central Valley Project (CVP)

Other areas of concern due to climate change include:

- Effects on local supplies such as groundwater
- Changes in urban and agricultural demand levels and patterns
- Impacts to human health from water-borne pathogens and water quality degradation
- Declines in ecosystem health and function
- Alterations to power generation and pumping regimes

4.3 Distribution System Water Losses

Distribution system water losses are the physical potable water lost from the pressurized water distribution system and facilities up to the point of delivery to the customer. Water losses are calculated using the American Water Works Association Method (Title 23 California Code of Regulations [CCR] Section 638.1 et seq.).

4.3.1 Previous Five Years Distribution System Losses

Per CWC §10631(d)(3), distribution system water losses for each of the five years preceding the UWMP update must be reported in accordance with the rules adopted pursuant to CWC §10608.34. See Table 4-B for the last five years of water loss audit reporting of the LVMWD systems.

Table 4-B. Last Five Years of Water Loss Audit Reporting

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss (AF)
01/2021 - 12/2021	529
01/2022 - 12/2022	1,289
01/2023 - 12/2023	1,389
01/2024 - 12/2024	1,820
01/2025 - 12/2025	1,225
NOTES: Loss numbers are calculated by subtracting Authorized Consumption from Water Supplied to the delivery system.	

LVMWD conducts annual validated water loss audits in compliance with California Water Code and SB 555 requirements using AWWA methodology. The audits quantify real and apparent losses, calculate non-revenue water, and compare performance to state standards. These results guide ongoing leak detection, pressure management, and meter accuracy programs to reduce losses and improve system efficiency. Submittal Table 4-4 shows the status of submission to DWR's Water Loss Audit Program.

Submittal Table 4-4 Retail: Water Loss Audit Reporting

Submittal Table 4-5 Retail: Water Loss Audit Reporting Water Code Section 10631(d)(3)(A)		
Public Water System ID # Reported in Table 2-1 R	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)
Report submittal status for all five years for each Public Water System as available. Add rows as needed		
	2020	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
DWR NOTES: Suppliers will provide a link to the WUEdata submittals of their Water Loss Audit Reports.		
NOTES: https://wuedata.water.ca.gov/awwa_plans		

4.3.2 Progress Toward Meeting the Water Loss Performance Standard

Pursuant to Water Code Section 10631(d)(3)(C), Retail Suppliers are required to provide data demonstrating whether the Retail Supplier met its State Water Board Water Loss Performance Standard in 23 CCR Section 980 for each applicable PWS. Submittal Table 4-6 R allows for reporting on progress toward meeting the Water Loss Performance Standard. Projected water losses, reported in five-year increments for at least 20 years, must also be included to effectively evaluate water service reliability, and

it is one of the water use sectors that requires reporting per Water Code Section 10631(d)(1). Projected water losses through 2050 are shown in Table 4-2.

See Submittal Table 4-5 for the district's progress towards the 2028 Water Loss Standard. Note that the Water Loss Performance Standard does not have to be met until 2028. However, Water Code Section 10631(d)(3)(C) still requires that Retail Suppliers include data in their 2025 UWMPs to show whether they met it.

Submittal Table 4-5 Retail: Progress Towards 2028 Water Loss Standard

Submittal Table 4-6 Retail: Progress Towards 2028 Water Loss Standard
Water Code Section 10631(d)(3)(C)

Public Water System ID # Reported in Submittal Table 2-1 R	Did the Water Board Calculate a Water Loss Standard for this Public Water System? (y/n) If no, Supplier will not complete this row.	Real Water Loss					Apparent Water Loss				
		State Water Board Standard		Most Recent AWWA Water Loss Audit		Real Water Loss Per Unit per Day	State Water Board Standard		Most Recent AWWA Water Loss Audit		Apparent Water Loss Per Unit per Day
		2028 Real Water Loss Standard per Unit per day	Units for Real Water Loss Drop down list	Number of Units (Connections or Miles corresponding with units selected)	Volume of Total Real Loss (from AWWA Water Loss Audit) (AF)		2028 Apparent Water Loss Standard per Unit per Day	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss (from AWWA Water Loss Audit) (AF)	
Add additional rows as needed.											
CA1910255	Yes	230	Gallons per Service Connection per Day (GPSCD)	20,667	1,006.21	43.5	12.6	Gallons per Service Connection per Day (GPSCD)	20,667	218.31	9.4

Water Board's Calculated Water Loss Standards

DWR NOTES: Units of measure (AF, CCF, MG) for Water Loss **MUST** remain consistent with units reported in Submittal Table 2-3. The units reported in Submittal Table 2-3 are used in this table's calculations.

Chapter 5. SBX7-7 Baseline, 2020 Targets, and 2025 Reporting

This chapter reports the actual 2020 daily per capita water use that was determined by the 2020 UWMP in accordance with the Water Conservation Act of 2009, also known as Senate Bill x7-7 (SBx7-7), and whether the District met their 2020 SBx7-7 target. SBx7-7 provides regulatory framework to support a statewide reduction of urban per capita water use of 20% by December 31, 2020, and on.

The previous 2020 UWMP reported an actual per capita water use of 227 GPCD, which falls under the 2020 target of 249 GPCD, as shown in Submittal Table 5-1. Therefore, the District met the targeted reduction for 2020. The baseline daily per capita water use was calculated using 80% of the water supplier's baseline per capita water use. Baseline daily per capita water use is defined as a continuous 10- or 15-year base period (baseline) for water use between December 31, 2004, and December 31, 2020. The DWR Population tool was used to determine the 2020 population for the LVMWD service area, which extracts U.S. Census data at the block level for boundaries submitted by the user.

A regional alliance is a group of water suppliers agreeing among themselves to plan, comply, and report urban water use target requirements of SBX7-7 as a region. The District is not participating in a regional alliance in the context of this UWMP.

Submittal Table 5-1 Retail: SBx7-7 2020 Target Progress

Submittal Table 5-1 Retail: SB X7-7 2020 Target Progress
Water Code Section 10608.40

☐	**Check the box if the Supplier was not an Urban Water Supplier during or before the 2020 UWMP reporting cycle. Proceed to the next table.**					
Was Supplier part of a merger or consolidation since 2020?	Regional Alliance Target or Individual Target? Drop down list	2020 Target	Actual 2020 GPCD	Did Supplier Achieve Targeted Reduction for 2020?	**Only for suppliers that did not meet the Target in 2020 See DWR NOTES below.**	
					Actual 2025 GPCD (From SB X7-7 Compliance Form)	Did Supplier meet the 2020 Target in 2025?
No	Individual Target	249	227	Yes		NA

DWR NOTES:
Suppliers calculating a 2025 GPCD will need to complete and submit SB X 7-7 Compliance Tables to verify the use of SB X7-7 Methodologies.
Suppliers that were part of a merger or consolidation since 2020 see Chapter 5 and Appendix P for guidance.
NA=Not Applicable

NOTES:

Chapter 6. Normal-Year Water Supply Characterization

6.1 Water Supply Analysis Overview

LVMWD is in the Santa Monica mountains and has very limited natural water resources based on the geographic location and topography. Currently, the District relies on four main sources for water supply:

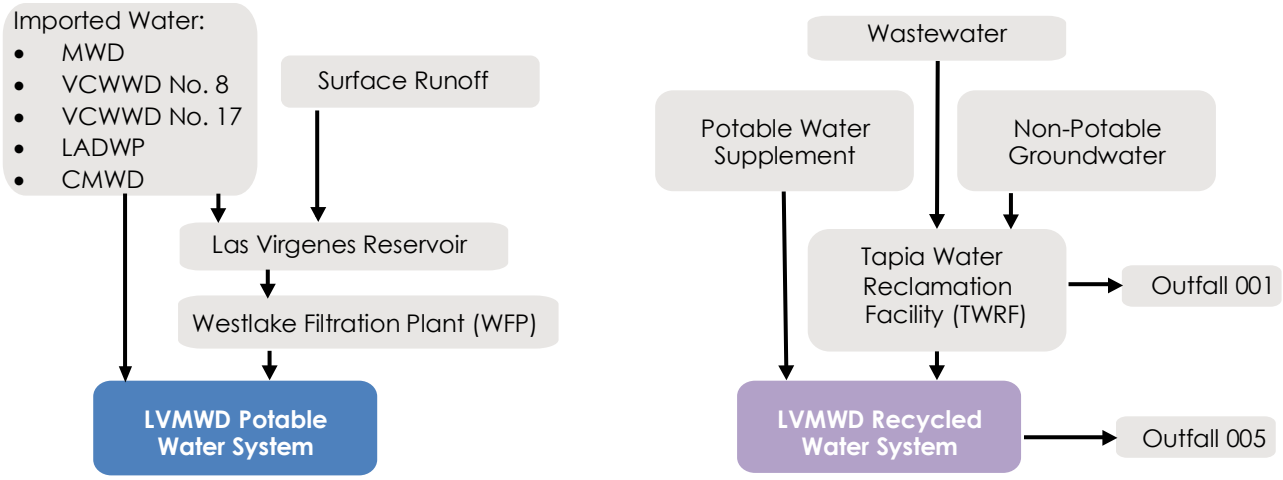
- **Imported Potable Water** from MWD, City of Simi Valley/ Ventura County Waterworks District (VCWWD) No. 8, VCWWD No. 17, City of Los Angeles Department of Water and Power (LADWP), and Calleguas Municipal Water District (CMWD).
- **Recycled Water** produced at the TWRF, which treats wastewater from the LVMWD and Triunfo Water and Sanitation District (TWSD) service areas and supplemental groundwater.
- **Groundwater** from the Thousand Oaks Area Basin, which is only used to supplement the recycled water supplies.
- **Supply from Storage** from the Las Virgenes Reservoir, which is filled by imported water during low demand seasons and surface water runoff.

The Las Virgenes – Triunfo Joint Powers Authority (JPA) is also investing in their Advanced Water Purification Facility (AWPF) through their Pure Water Project to comply with increasingly stringent regulatory requirements for discharging to the Malibu Creek and create a local drinking water source. This provides increased reliability and will help meet the water demand of the LVMWD service area into the future. Anticipated to be operational by 2030, this project involves treating excess tertiary treated recycled wastewater to State indirect potable reuse standards through advanced filtration methods to augment surface water supply in the Las Virgenes Reservoir.

6.1.1 Specific Analysis Applicable to All Water Supply Sources

The District has two (2) separate water systems: one for potable water to serve potable retail customers and one for recycled water to serve irrigation customers. The two water systems are described in detail in Chapter 3. See Figure 6-1 for a schematic of water supplies to each system.

Figure 6-1: Schematic of LVMWD Water Supplies to Each System



Potable Water System: The largest source of supply for LVMWD's potable water system is imported water. The majority of imported potable water enters directly into the District's potable water distribution system; however, some is used to recharge Las Virgenes Reservoir during low-demand seasons. The water stored in the reservoir is treated at the Westlake Filtration Plant (WFP) to meet Title 22 California Code of Regulations, Division 4, Chapter 17 surface water treatment requirements for drinking water.

Between 2021 and 2025, the District purchased potable water from MWD, VCWWD No. 17, and VCWWD No. 8. MWD treats SWP imported water at the Jensen Filtration Plant in Granada Hills, California, prior to delivery to LVMWD. An interconnection with LADWP has historically been used to supplement potable water supplies during MWD outages. Over the last five years, only 2 AF has been purchased from LADWP. In 2025, LVMWD established an interconnection with CMWD to further increase the reliability of its potable water systems and it is now operable. However, the CMWD connection is only intended to be used in an emergency if both parties agree.

The District is also investing in their Pure Water Project, which will use surplus tertiary-treated recycled water from the TWRF and purify it through advance water treatment methods (membrane filtration, reverse osmosis, and ultraviolet light with advanced oxidation) to meet State indirect potable reuse standards to augment surface water supply. The advanced water purification facility (AWPF) will treat 7.5 MGD that will produce up to 6.0 MGD of purified water. The advanced treated water will then be blended and stored with the imported water in the Las Virgenes Reservoir and undergo final treatment at the Westlake Filtration Plant prior to distribution in the potable water system. The AWPF will operate seasonally with sequential removal of individual process units from service, followed by extended periods of offline time when treatment equipment will need to be drained or preserved. The design accommodates preservation of membranes, as well as flushing and draining of systems and piping during

seasonal downtime.[3] It is anticipated that the Pure Water Project will be constructed and operational by 2030, allowing LVMWD to reduce the volume of imported water purchased through MWD.[4]

Recycled Water System: The TWRF treats an average of 7.9 MGD of sewage and brings virtually all of the secondary effluent to tertiary treated levels meeting Title 22 Requirements. In 2025, 4,976 AF of recycled water was delivered to LVMWDs recycled water system for beneficial reuse. Wastewater flows to the TWRF are historically consistent through normal and dry years so supply during normal, single-dry, and five-year drought are expected to remain constant.

Groundwater from LVMWD's two (2) groundwater production wells provide supplemental water to the TWRF to aid in recycled water supplies as needed. Submittal Table 6-8 is used to report current water supplies for each water supply source. Groundwater supply is not directly shown in Table 6-8 but is accounted for in the total recycled water volume.

Projected supply for the potable water and recycled water systems for 2030 to 2050 is shown in Submittal Table 6-9. The projected supply from these sources for normal, single-dry, and five-year drought reflects the reliability of these sources as discussed in 7.2.

6.1.2 Special Considerations

Numerous special conditions could affect the availability and long-term reliability of LVMWD's potable, recycled, and groundwater supplies. These considerations include climate-driven hydrologic changes, regulatory conditions affecting imported water deliveries, recycled water production, groundwater extraction, and coordination requirements with MWD and partner agencies. This section summarizes the key considerations relevant to LVMWD's supply characterization.

6.1.2.1 Climate Change Effects

Climate change is expected to have a direct impact on LVMWD's local and imported supplies. Although the exact magnitude is uncertain, the District anticipates reduced long-term reliability due to the following factors: an increase in evaporation, an increase in temperature, and a decrease in annual precipitation that may increase losses at the Las Virgenes Reservoir and reduce surface water from infiltrating into groundwater basins resulting in lower groundwater levels. Considerations from climate change are discussed in Section 4-2.

6.1.2.2 Regulatory Conditions and Project Development

Regulatory actions and regional projects can influence LVMWD's future supply reliability.

Imported water: Regulatory conditions that could affect imported water supply to LVMWD service include any change in allocation either directly from MWD or other Ventura County suppliers. Since MWD has a contract allocation to obtain water from the SWP and the Colorado River, any changes to these

[3] PWP Conceptual Design Report Final, Jacobs (February 2023) https://www.ourpureh2o.com/files/1d4751942/PWP_RPT_ConceptualDesignReportFinal_Jacobs_230208.pdf

[4] Pure Water Project FAQs - Las Virgenes-Triunfo Joint Powers Authority https://www.ourpureh2o.com/faqs

contracted sources can influence the supply available to LVMWD. Also, during periods of reduced water measures or drought, MWD could implement Water Shortage Action Plans that could affect supply. Future projects such as expanded storage capacity or conveyance facilities implemented by MWD can provide additional capacity to their water systems which may strengthen the reliability of the of the supply to LVMWD.

Groundwater: There are no defined legal pumping rights for LVMWD within the Thousand Oaks Area Basin. As discussed in Section 6.2.2.2, LVMWD has not adopted a groundwater management plan, and no regional groundwater management plan currently exists for the Basin.

Recycled Water: Recycled water supply is regulated by the State Title 22 requirements. Any change in the State law applicable to the production, distribution and disposal of recycled water may influence the supply produced at the TWRF.

6.1.2.3 Other Local Applicable Criteria

There are no additional local criteria that affect LVMWD's water supply characterization.

6.1.2.4 Wholesale and Retail Suppliers Coordination

LVMWD relies on MWD for reliability projections for its imported water supplies, including projected allocation conditions during normal year, single dry year, and five consecutive dry years. LVMWD incorporates these wholesale projections into its own reliability analysis presented in Chapter 7. In return, the District provides MWD with updated demand projections in five-year increments to 20 years, as required under the Water Code Section 10631(h).

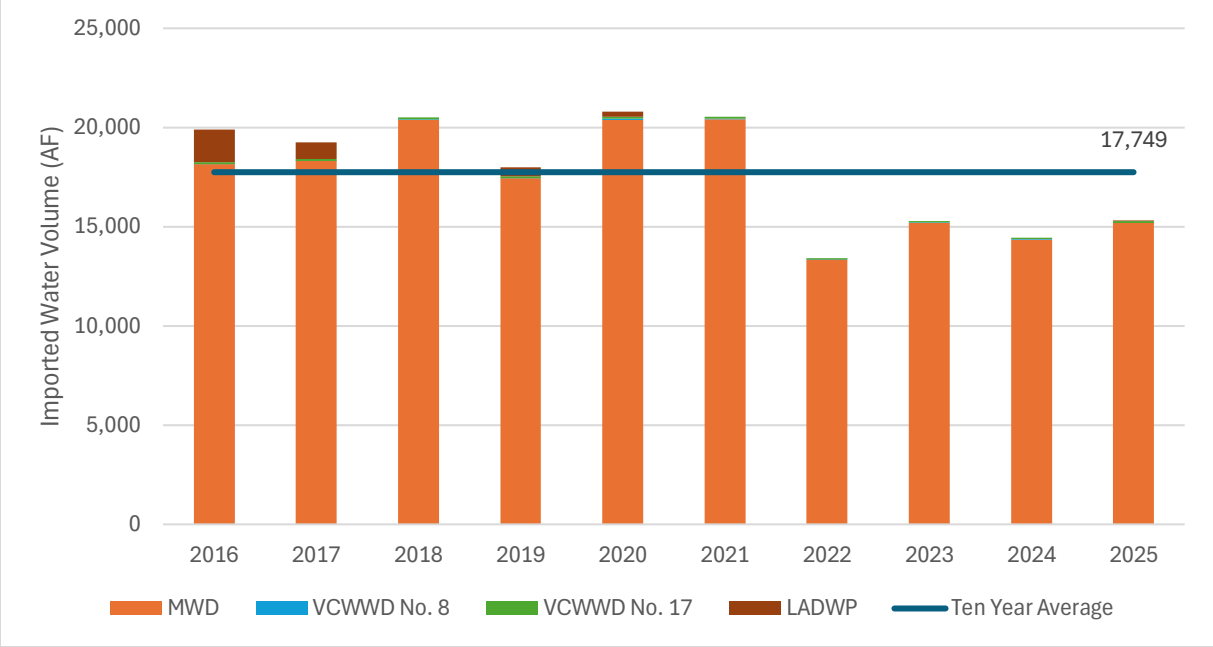
LVMWD also coordinates with the TWSD for joint operation of the TWRF to provide recycled water and has connections with the City of Simi Valley/Ventura County Waterworks District (VCWWD) No. 8, VCWWD No. 17, City of Los Angeles Department of Water and Power (LADWP), and Calleguas Municipal Water District (CMWD) for supplemental and emergency imported potable water.

6.2 Water Supply Characterization

6.2.1 Purchased or Imported Water

Although the District also has imported water supply connections with VCWWD No. 8, VCWWD No. 17, LADWP, and CMWD, its largest imported supply is through MWD. As shown in Figure 6-2, over the last 10 years, MWD has accounted for 97.6 percent of the District's imported water supplies. On average, the District has received approximately 17,749 AF per year through its imported water connections over the past decade, with higher deliveries occurring prior to 2022 and reduced deliveries in more recent years. Specific imported water volumes for the 2021 through 2025 period are summarized in Table 6-C.

Figure 6-2: LVMWD 10-Year Historical Imported Water Supplies



6.2.1.1 Metropolitan Water District of Southern California (MWD)

Formed in 1928, MWD is a wholesale water agency that has no retail customers but serves customers through its member cities and agencies, which account for approximately 19 million people. MWD imports water from northern California through the SWP and the Colorado River to meet the needs of 26 member cities and agencies across six Southern California counties. As shown in Table 6-A and Figure 6-3, LVMWD is one of MWD's member agencies.

Table 6-A: MWD Member Cities and Agencies

MWD Member Cities and Agencies		
City of Anaheim	City of San Fernando	Inland Empire Utilities Agency
City of Beverly Hills	City of San Marino	**LVMWD**
City of Burbank	City of Santa Ana	Municipal Water District of Orange County
City of Compton	City of Santa Monica	San Diego County Water Authority
City of Fullerton	City of Torrance	Three Valleys Municipal Water District
City of Glendale	Calleguas Municipal Water District	Upper San Gabriel Valley Municipal Water District
City of Long Beach	Central Basin Municipal Water District	Western Basin Municipal Water District
City of Los Angeles	Eastern Municipal Water District	Wester Municipal Water District of Riverside County

MWD Member Cities and Agencies		
City of Pasadena	Foothill Municipal Water District	

Currently, the configuration of MWD's distribution system allows LVMWD to receive SWP water originating from northern California through the Sacramento-San Joaquin Bay-Delta (Bay-Delta). The SWP water is treated at Jensen Filtration Plant in Granada Hills prior to delivery to LVMWD. LVMWD's SWP deliveries from MWD for years 2021 through 2025 are shown in Table 6-C.

Colorado River

MWD has a permanent service contract with the Secretary of the Interior, which grants them legal entitlement to receive water from Lake Havasu on the Colorado River. MWD owns and operates the Colorado River Aqueduct (CRA), which transports an annual 1.2 million acre-feet of water from Lake Havasu to Lake Mathews in Riverside County. Lake Havasu, located on the Colorado River along the California-Arizona border, is approximately 242 miles from Lake Mathews. Most of this water is conveyed to member agencies south and east of LVMWD.

Sacramento- San Joaquin River Delta

MWD also receives and treats water from the San-Joaquin River Delta (Delta) in Northern California via a contract with the DWR. Water is conveyed from the Delta via the 444-mile-long California Aqueduct that is part of the SWP. The SWP is a water storage and delivery system of reservoirs, aqueducts, power plants and pumping plants extending more than 700 miles throughout California. Managed by DWR, the SWP is the nation's largest state-built, multi-purpose, user-financed water project and can deliver nearly 4.2 million acre-feet of water annually.

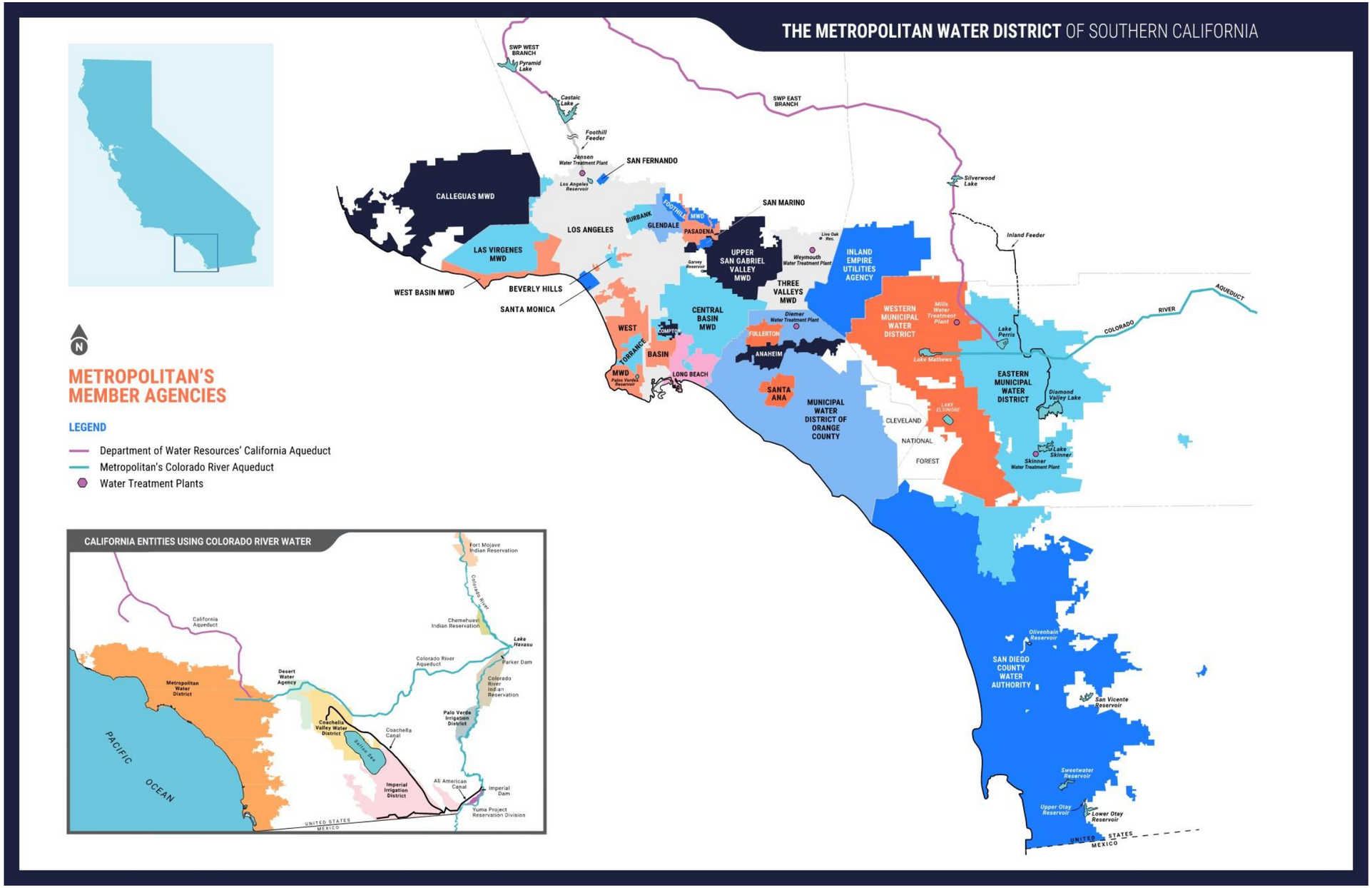
The SWP provides imported water to MWD's service area, making up 25% to 50% of MWD's supply. In accordance with its contract, MWD has a Table A allocation of 1,911,500 acre-feet per year. SWP water is treated at MWD's owned and operated Joseph Jensen Filtration Plant in Grenada Hills. This treated water from the Sacramento-San Joaquin River delta is imported to LVMWD via three connections (LV1, LV2, and LV3) from MWD's system. Based on the LVMWD's 2014 Potable Water Master Plan Update, LVMWD's total instantaneous imported water supply capacity is 33,000 gallons per minute (gpm), or 73 cubic feet per second (cfs), as shown in Table 6-B.

Table 6-B: Capacities of MWD Connections

Connection	MWD Pipeline Designation	Current Capacity (gpm/AFY)	Planned Capacity (gpm/AFY)
LV1	West Valley Feeder No. 1	11,000 (gpm) / 17,750 (AFY)	11,000 (gpm) / 17,750 (AFY)
LV2	Calabasas Feeder	20,000 (gpm) / 34,000 (AFY)	34,000 (gpm) / 54,880 (AFY)
LV3	West Valley Feeder No. 2	2,000 (gpm) / 3,228 (AFY)	3,100 (gpm) / 5,004 (AFY)
	Total	**33,000 (gpm) / 53,258 (AFY)**	**48,000 (gpm) / 77,634 (AFY)**

Source: 2007 Integrated Systems Master Plan (Boyle 2007a), as presented in LVMWD's 2010 UWMP Table 3.4.
*The capacity of the turnouts is limited by agreement.

Figure 6-3: MWD Member Agencies' Services Areas



Source: https://www-admin.mwdh2o.com/media/13xbx2gm/member-agency-map.pdf

Reliability of MWD Supplies

Based on the 2025 Final Draft MWD UWMP, as discussed in Chapter 7, it is anticipated that supplies will reliably meet water demands through 2040 during average, single dry-, and five-year drought. MWD estimates a surplus of supplies over demands for all water year types for their customer base. Based on this reliability, MWD can supply the full water demands for LVMWD for all year types. Hence, for purposes of projecting available imported MWD supplies for this 2025 UWMP, these water supplies have been set equal to total LVMWD demands (see Submittal Table 6-9).

6.2.1.2 Imported Supplies from Other Agencies

Over the last ten years, water supply agencies other than MWD account for less than 2.4 percent of LVMWD's potable water supply. A summary of imported water purchases from 2021 to 2025 for imported sources are shown in Table 6-C.

During MWD system outages, LVMWD has historically purchased water supplied by LADWP through two different turnouts: one located at Kittridge Street and the other at Germain Street with maximum capacities of 9,000 gpm and 1,350 gpm, respectively. However, as shown in Table 6-C, LVMWD has not purchased any water from LADWP over the past 5 years. As described in Section 6.2.7.1, an interconnection with CMWD was completed in 2025. At the time of this UWMP, LVMWD has not yet purchased water through this Calleguas interconnection.

Interconnections with these VCWWD No 8 and VCWWD No 17 provide potable water generally to two small areas in the hills west of the San Fernando Valley, Woolsey Canyon and Box Canyon, which include the cities of West Hills and Chatsworth. These areas are geographically isolated, and currently not connected to the rest of the LVMWD distribution system.

Table 6-C: LVMWD Imported Water Supply for 2021 to 2025

	Imported Water Supply for 2021 to 2025 (AFY)				
Import Water Supplier	**2021**	**2022**	**2023**	**2024**	**2025**
MWD	20,428	13,339	15,189	14,365	15,177
VCWWD No. 8	18.2	10.9	18.2	7.2	14.3
VCWWD No. 17	100	69.6	81	85	89.4
LADWP	0	0	0	0	2
CMWD	--	--	--	--	0
Total	**20,546**	**13,420**	**15,288**	**14,457**	**15,283**

6.2.2 Groundwater

As shown in Figure 6-4, LVMWD service area overlies portions of multiple groundwater basins including the Thousand Oaks Area, Russell Valley, Malibu Valley, and San Fernando Valley Basins. Currently, LVMWD operates two (2) groundwater production wells in the Thousand Oaks Area Basin: Westlake Well 1 and Westlake Well 2.

6.2.2.1 Basin Description

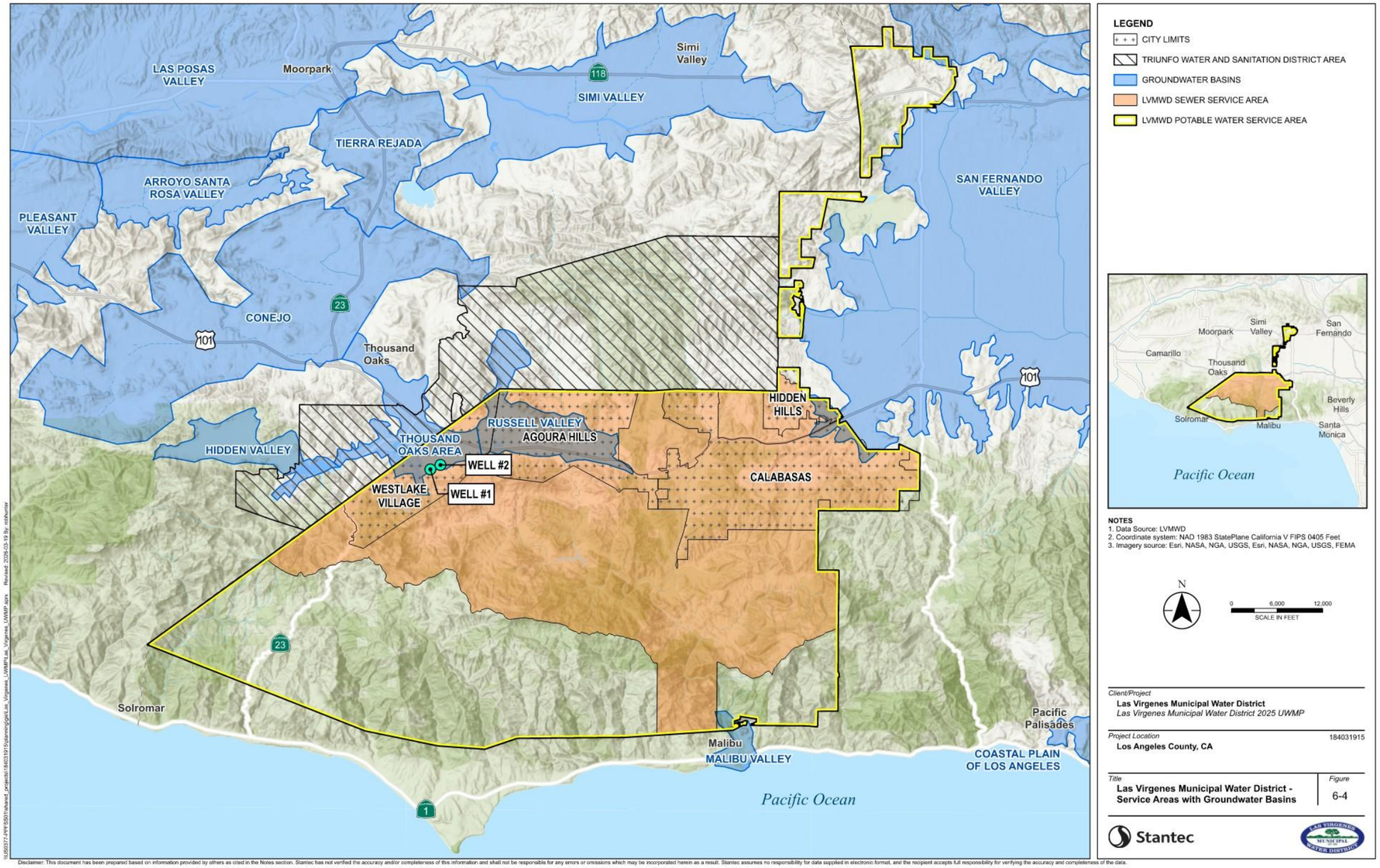
The Thousand Oaks Area Groundwater Basin (Basin), DWR Basin No. 4-019, shown on Figure 6-3, is a relatively small alluvial basin straddling Ventura and Los Angeles Counties in the Russell Valley area. The basin is bounded by semi-permeable rocks of the Santa Monica Mountains. Triunfo Creek and Potrero Valley Creek drain the areas of Russell Valley and Triunfo Canyon into Malibu Creek. The Basin underlies a surface area of about 3,100 acres or five square miles. Groundwater in the Basin is primarily found in Quaternary age alluvium, with some water found in sandstone beds and fractures. Recharge to the Basin occurs by percolation of rainfall and stream flow from Conejo Creek. The Basin is estimated to have a total storage capacity of 130,000 AF.

According to California's Groundwater Bulletin 118, groundwater quality is impacted by magnesium-calcium- and sodium-sulfate. TDS content averages about 1,400 mg/L but can be as high as 2,300 mg/L in some areas. In addition to high TDS levels in the Basin, water quality is also impaired by high alkalinity and hardness. Due to poor water quality, groundwater from the Basin is only used to supplement the recycled water supply by pumping and blending with the wastewater collection system which is conveyed to TWRF for treatment.

6.2.2.2 Basin Management Information

The Thousand Oaks Area Basin is not adjudicated and DWR has not identified it to be in an overdraft condition based on Bulletin 118. There are no defined legal pumping rights for LVMWD within the basin. LVMWD has not adopted a groundwater management plan, and a regional groundwater management plan does not currently exist for the Basin. The Basin has been rated a "very low" priority basin by DWR and as such is not subject to the Sustainable Groundwater Management Act of 2014.

Figure 6-4: LVMWD Service Areas with Groundwater Basins



6.2.2.3 Other Considerations

The Westlake Well 1 and Westlake Well 2 are located along Lindero Canyon Road, south of Highway 101. The combined capacity of these two wells is approximately 1.15 MGD, or 800 gpm.

Groundwater from these wells provides a local source of water supplies solely used to augment recycled water supplies due to high levels of iron and manganese found in the groundwater. Before the groundwater is used to supplement recycled water, it is treated via discharge into the sewer collection system when additional recycled water is needed. After mixing within the wastewater collection system, this water is treated at the TWRF, at which point it is used to supplement the recycled water system.

6.2.2.4 Past Five Years Groundwater Pumping

Since groundwater supplies are only used to supplement LVMWD's recycled water system during the peak demand season, annual groundwater pumping can vary significantly seasonally and annually. Figure 6-5 shows annual groundwater pumping in 2025.

Figure 6-5: LVMWD 2025 Groundwater Extractions

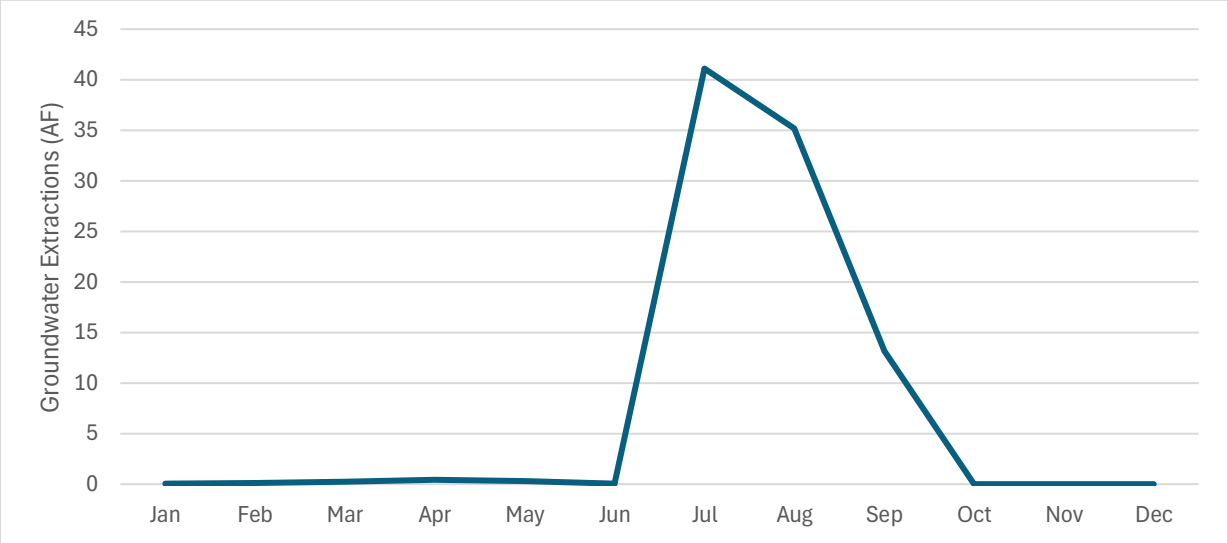
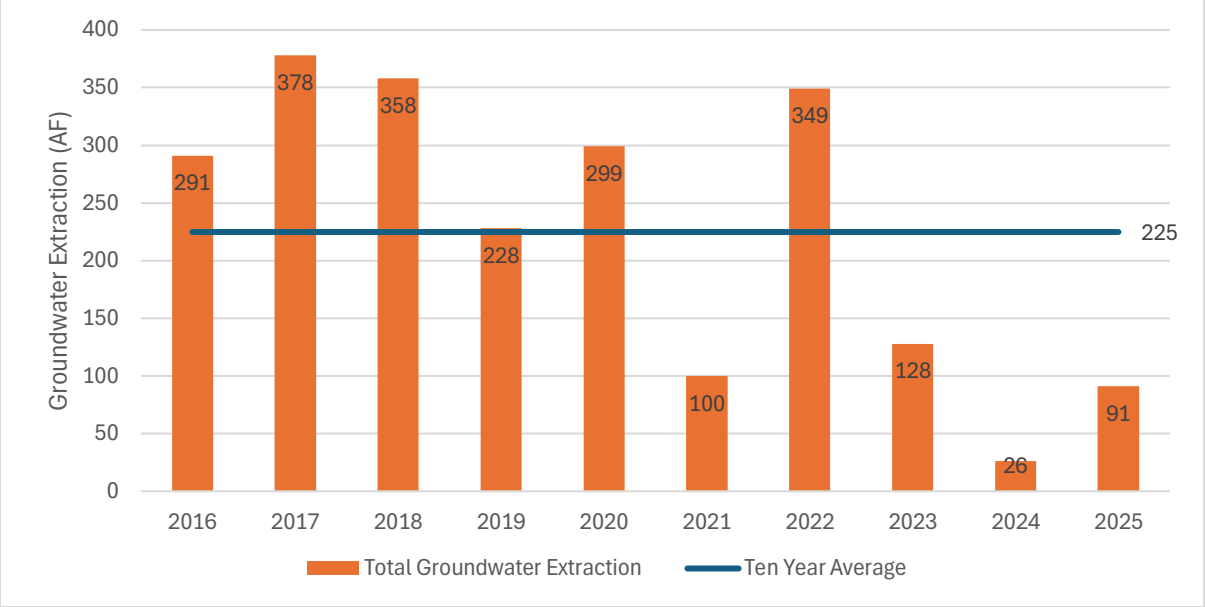


Figure 6-6 shows LVMWD's 10-Year historical groundwater extractions. Over the 10-year period, average annual groundwater extractions are approximately 225 AFY. Pumping was generally higher prior to 2021 and has substantially reduced in more recent years. The reduced pumping observed from 2023 through 2025 reflects a possible trend toward decreased reliance on groundwater supplies during peak demand periods.

Figure 6-6: LVMWD Historical Groundwater Extractions



The amount of groundwater pumped each year from the Basin via the two Westlake Wells over the last five years is presented in Submittal Table 6-1.

Submittal Table 6-1 Retail: Groundwater Volume Pumped

Submittal Table 6-1 Retail: Groundwater Volume Pumped Water Code Section 10631(4) and 10631(4)(c)							
☐	Check the box if the Supplier does not pump groundwater. Proceed to the next table.						
☐	Check the box if all or part of the groundwater described below is desalinated. (OPTIONAL)						
Groundwater Type **Drop Down List** May use each category multiple times	Potable or Non-Potable (OPTIONAL) **Drop down list**	Location or Basin Name	2021 (AF)	2022 (AF)	2023 (AF)	2024 (AF)	2025 (AF)
Add additional rows as needed							
Alluvial Basin	Non-Potable	Thousand Oaks Area Basin	100	349	128	26	91
		Total	100	349	128	26	91
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.							
NOTES							

Based on the current conditions of the Thousand Oaks Area Basin, the low-priority rating by DWR, and historically low levels of pumping by LVMWD, groundwater supplies are anticipated to be reliably available throughout the planning period of this UWMP. Projections of groundwater to be pumped from the Basin are presented in Table 6-D. These projections assume that groundwater will be required to supplement wastewater flows for production of recycled water for two months out of each year based on average 10-year historical pumping rates.

Table 6-D. Projected Groundwater Supply

Location or Basin Name	2030	2035	2040	2045	2050
Thousand Oaks Area Basin	225	225	225	225	225
TOTAL	225	225	225	225	225
NOTES: Groundwater pumping projections assumes the average over the last ten years will remain constant to supplement recycled water supplies.					

6.2.3 Surface Water

The Las Virgenes Reservoir watershed receives a small amount of surface runoff each year. Based on an assumed watershed area of 550 acres, the reservoir receives approximately 770 AF of runoff annually. It is estimated that watershed runoff roughly offsets evaporative losses on an annual basis. However, due to the uncertainty of runoff volumes and the minimal contribution to overall water supplies, this runoff cannot be reliably accounted for in LVMWD supplies and is not included in Submittal Table 6-9.

Stormwater is not used for water supply to LVMWD's system currently, but LVMWD is pursuing using stormwater as a water augmentation strategy to maximize the operational capacity of the AWPF.

6.2.4 Wastewater and Recycled Water

6.2.4.1 Recycled Water Coordination

Wastewater flows in the area are treated to secondary and tertiary levels at the TWRF. The existing recycled water system is jointly owned and operated by LVMWD, Triunfo Water and Sanitation District (TWSD), and Calleguas Municipal Water District (CMWD). This system currently serves customers ranging from Calabasas in the east to Thousand Oaks in the west.

LVMWD has aggressively pursued the development of a recycled water system and optimizations for reuse in its service area. The District requires all non-residential landscaping located along the District's recycled water distribution main lines to be designed or converted to utilize recycled water for landscape irrigation. Currently, LVMWD serves recycled water to 658 dedicated recycled water accounts within their service area.

Recycled water master planning efforts began in the 1980s with concepts for a system to serve the region. Master Plans for the existing recycled water system were prepared in 1985, 1988, 1999, 2007, and most recently updated in 2014.

6.2.4.2 Wastewater Collection, Treatment, and Disposal

Wastewater is collected and treated at TWRF, which is owned by the Joint Powers Authority (JPA) of LVMWD and TWSD. TWRF was initially constructed in 1965 with an initial capacity of 0.5 MGD. The current design treatment capacity of TWRF is 16 MGD (17,922 AFY). However, due to permit limitations on nutrients, the current treatment capacity is approximately 12 MGD (13,442 AFY). The plant is located on Malibu Canyon Road at the southern edge of LVMWD's wastewater service area, as shown in Figure 3-1, and provides primary, secondary, and tertiary treatment.

Wastewater Collection

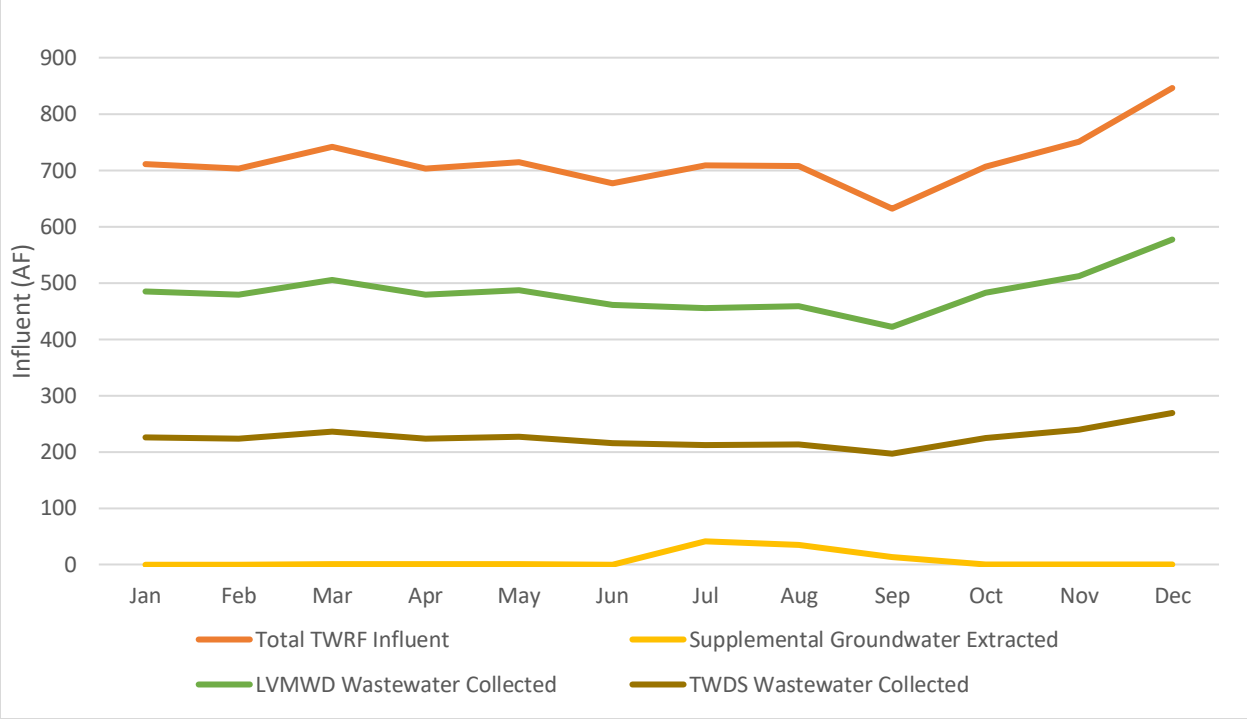
TWRF treats wastewater contributed by both LVMWD and TWSD from their respective service areas, as well as groundwater from the Westlake Wells when needed. As mentioned in Section 6.2.2, groundwater from Westlake Well 1 and Westlake Well 2 is conveyed via the sewer system to the TWRF, where it is treated and distributed as supplemental recycled water.

As shown in Figure 6-7, the average 2025 daily flows into TWRF were consistent throughout the year but did show slight seasonal variation. During storm events, the daily flows into the TWRF can double due to inflow and infiltration into the sewer mains. On average, the ratio of LVMWD wastewater to TWSD wastewater is approximately 68.2 to 31.8 percent based on billing records.

The total TWRF influent in 2025 was approximately 7.67 MGD (8,601 AFY), with

- 5.18 MGD (5,804 AFY) from customers in LVMWD service area,
- 2.41 MGD (2,706 AFY) from TWDS's service area, and
- 0.08 MGD (91 AFY) of groundwater from LVMWD's two groundwater wells to supplement recycled water during the summer months.

Figure 6-7: 2025 Gross Influent Flows to TWRF



The volume of wastewater collected within LVMWD's service area in 2025, excluding flows from TWSD, is presented in Submittal Table 6-2. Although the TWRF is jointly owned by the Las Virgenes–Triunfo Joint Powers Authority (JPA), the TWSD lies outside LVMWD's service area. Accordingly, the wastewater volumes summarized in Submittal Table 6-2 represent only flows generated within LVMWD's service area and do not include contributions from TWSD.

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2025

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area Water Code Section 10633(a)				
☐	Check the box if there is no wastewater collection system. Proceed to the next table.			
	Percentage of 2025 service area served by wastewater collection system (OPTIONAL)			
	Percentage of 2025 service area population served by wastewater collection system (OPTIONAL)			
Wastewater Collection			**Recipient of Collected Wastewater**	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? OPTIONAL **Drop Down List**	Volume of Wastewater Collected from UWMP Service Area 2025 (AF)	Name of Wastewater Treatment Plant (WWTP) and Place ID Number **Drop down list**	Is WWTP Located Within UWMP Area? **Drop Down List**
Add additional rows as needed				
JPA (LVMWD, TWSD)	Estimated	5,804	Tapia WRF, Place ID 266940	Yes
Total Wastewater Received from UWMP Service Area in 2025:		5,804		
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3. **Additional Guidance**: See Appendix M, Section M.21 for detailed guidance on this table.				
NOTES: Volume of wastewater collected is for LVMWD Service Area only and does not include inflows from TWSD				

Recycled Water and Disposal

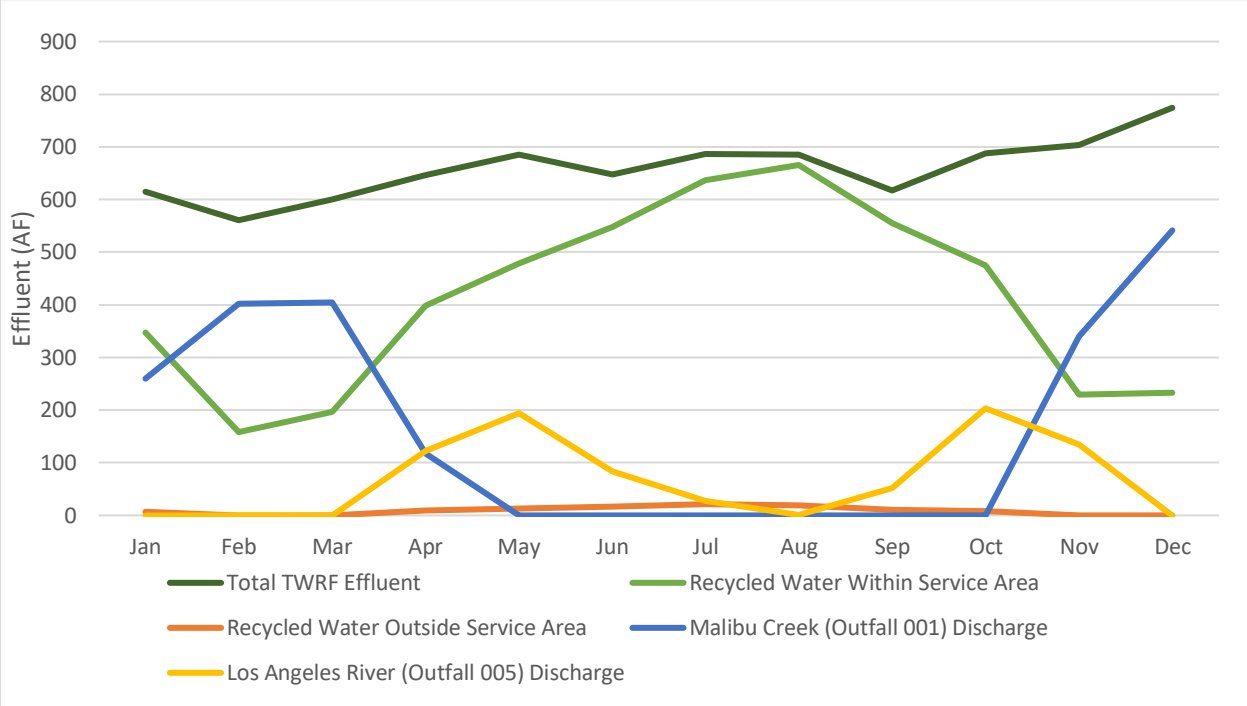
Excess treated effluent from TWRF is discharged to two local waterways: Outfall 001 and Outfall 005. Discharges from the TWRF are regulated under an NPDES permit (Order No. R4-2005-0074) issued by the Los Angeles Regional Water Quality Control Board.

As shown in Figure 6-8, excess treated effluent is discharged to Malibu Creek (Outfall 001) primarily during the months of November to April. The NPDES permit generally prohibits discharging to Malibu Creek from April 15 to November 15 (Discharge Prohibition Period). LVMWD no longer releases recycled water from TWRF into the Malibu Creek, and instead uses treated potable water using breakpoint chlorination and de-chlorination for the required fish flow discharges to provide water pools (habitat) for the endangered steelhead trout. Beyond what can be discharged to Malibu Creek, the excess is discharged to the Los Angeles River (Outfall 005) via the Arroyo Calabasas, which requires pumping over the Calabasas grade.

Additional disposal through Rancho Farm Irrigation using the “spray fields” is available and utilized primarily during the discharge prohibition period when disposal to Malibu Creek is not permitted per NPDES permit compliance requirements.

The differences in TWRF influents versus effluent flows is due to flow-meter variability, water removed from the process as biosolids, and the return flows used during treatment, which average approximately 200,000 gallons. Additional losses occur in summer months due to evapotranspiration.

Figure 6-8. 2025 Gross Effluent Flows to TWRF



Submittal Table 6-3 summarizes the treated recycled water and discharge activities associated with the TWRF in 2025. The water recycled outside of UWMP service area represents the volume supplied to Pepperdine University. Effluent discharge that is not a permitted recycled water use represents the total volume discharged by Outfall 001 and Outfall 005.

Submittal Table 6-3 Retail: Wastewater Treatment and Outcomes Within UWM Service Area in 2025

Submittal Table 6-3 Retail: Wastewater Treatment and Outcomes Within UWMP Service Area
Water Code Section 10633(b)

☐ **Check the box if no wastewater is treated or disposed of within the UWMP service area.**
Proceed to the next table.

Wastewater Treatment Plant Name and Place ID Number **Drop down list**	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area? (OPTIONAL) **Drop down list**	2025 Volume of Wastewater Received from UWMP Service Area (As Reported in Submittal Table 6-2 R) (AF)	Total 2025 Volume of Water Treated (AF)	2025 Outcomes of Treated Wastewater										
				Water Recycled Within UWMP Service Area (enter data as applicable)		**Water Recycled Outside of UWMP Service Area** (enter data as applicable)		**Effluent Discharge that is not a Permitted Recycled Water Use** (enter data as applicable)		**Required Discharge for Instream Flow** (enter data as applicable)		**Delivered to Another Entity for Additional Treatment** (enter data as applicable)		
				Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Name of other entity
Add additional rows as needed														
Tapia WRF, Place ID 266940	Yes	5,804	7,910	Tertiary	4,922	Tertiary	104	Tertiary	2,884		0		0	
Total		5,804	7,910		4,922		104		2,884		0		0	

DWR NOTES:
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.
IPR: Indirect Potable Reuse would have the treatment level of its end use requirement in the Level of Treatment drop-down.
Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.

NOTES: Volume of wastewater collected is for LVMWD Service Area only and does not include inflows from TWSD

6.2.4.3 Recycled Water System Description

The recycled water distribution system begins at the TWRF, which is owned by the Joint Powers Authority (JPA) of LVMWD and TWSD. The JPA also owns and operates a complex distribution system, consisting of pipelines, pump stations, tanks and reservoirs, and associated appurtenances to deliver the recycled water to areas of Los Angeles and Ventura Counties. Recycled water uses are mainly landscape irrigation and golf course irrigation.

6.2.4.4 Current, Potential, and Projected Recycled Water Uses

The production of recycled water is relatively constant because the collected wastewater from LVMWD and TWDS are steady throughout the year. On the other hand, demands on the recycled water system vary on a seasonal basis. Demands during summer peaks can be several times higher than typical spring and fall demands. Historically, recycled water demands have significantly exceeded recycled water availability in the summer months, even with the utilization of supplemental groundwater water. As a result, potable water has also been needed to supplement the recycled water supply to meet irrigation demands. Since 2021, the amount of supplemental imported water has averaged approximately 270 AFY. In 2025, the District added approximately 54 AF of potable water to the recycled water.

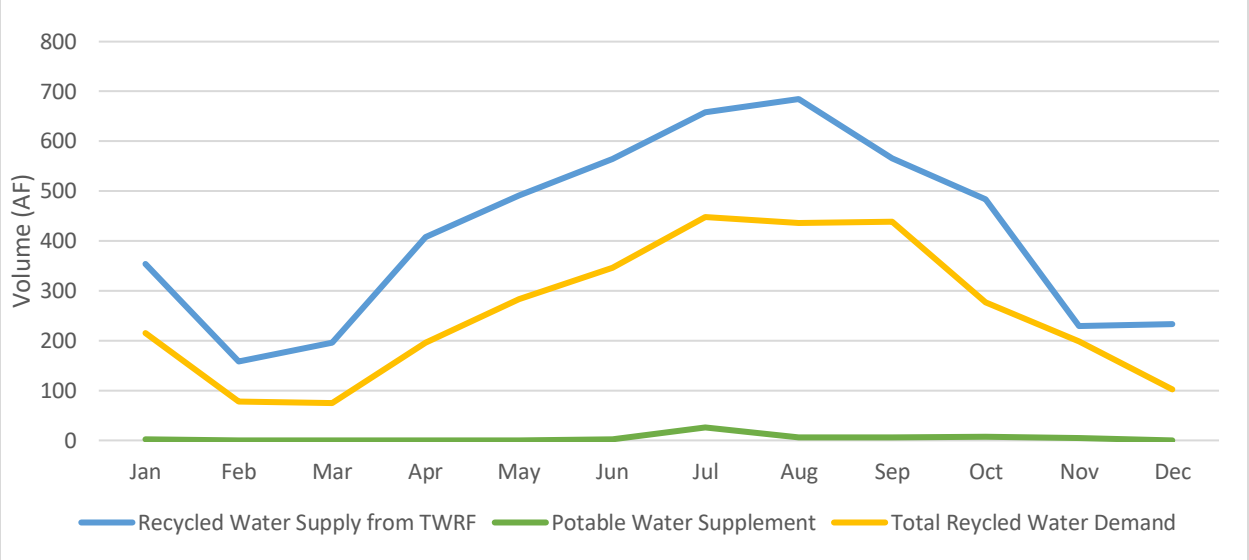
The capacities of the supplemental potable water sources connected to the recycled water system are summarized in Table 6-E.

Table 6-E. Supplemental Potable Water Capabilities for the Recycled Water System

Reservoir	Capacity (gpm / AFY)
Cordillera Tank	1,200 gpm / 1,937 AFY
Reservoir No. 2	2,100 gpm / 3,390 AFY
Morrison tank	1,300 gpm / 2,098 AFY
Total	**4,600 gpm / 7,425 AFY**

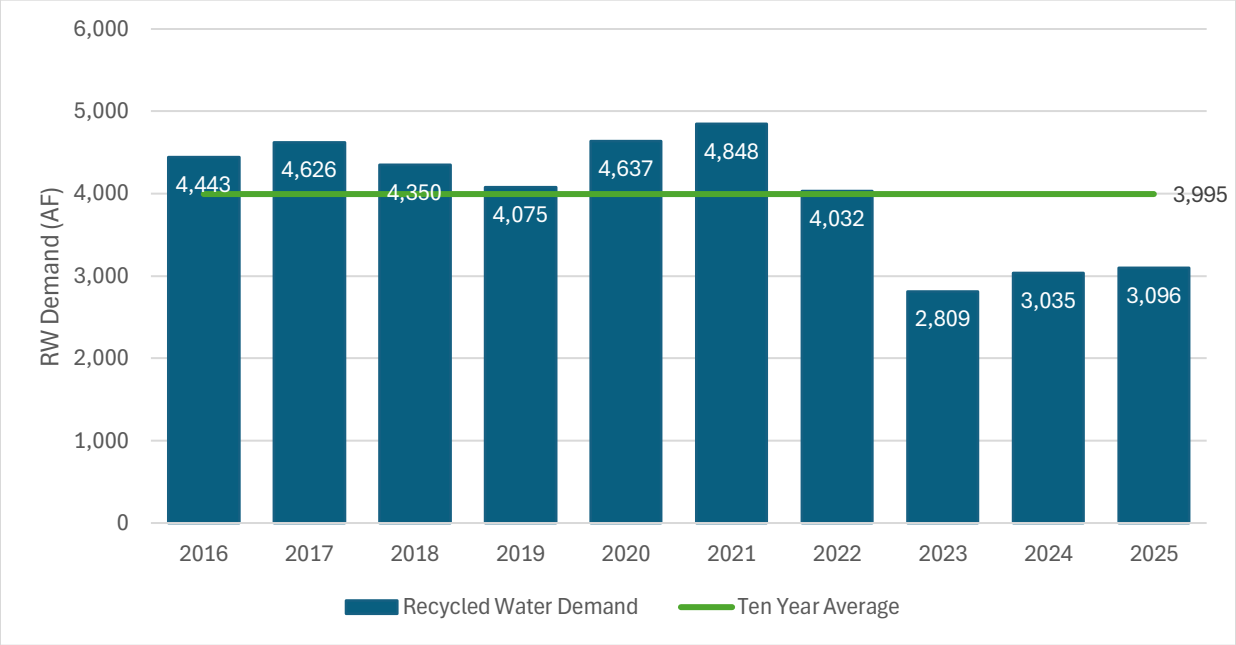
See Figure 6-9 for the seasonal variation of recycled water demands versus recycled water supply. Since the extracted groundwater is treated at the TWRF, the supplemental groundwater volume is accounted for within the recycled water supply from the TWRF volume. The recycled water supply volume includes the water recycled within and outside the LVMWD service area, as reported in Submittal Table 6-3. This difference in supply versus purchased recycled water (demand) is due to internal use, losses, and other non-billed uses.

Figure 6-9: 2025 Recycled Water Demand Seasonal Variation



The recycled water deliveries to LVMWD customers since 2016 are shown in Figure 6-10. The average demand over the past ten years is approximately 3,995 AFY. Since 2021, recycled water uses has declined. LVMWD expects recycled water uses to continue to decline and level off based on conservation measures.

Figure 6-10: Historical Recycled Water Demands



As described further in Chapter 7, LVMWD does not currently plan to expand its recycled water system, anticipates continued declines in recycled water use due to conservation measures, and is implementing infrastructure improvements expected to reduce system losses. To take a conservative approach in

projecting future recycled water demands, LVMWD's projected recycled water use is expected to remain constant at 3,465 AF. LVMWD expects that any new demands that may arise in the future will be for landscape irrigation use.

The "Other" use type represents dual-plumbed customer accounts. Dual-plumbed accounts are served by two separate meters: one for potable water and one for non-potable recycled water. In 2025, there were three dual-plumbed accounts within LVMWD's service area with both a potable water meter and a recycled water meter used for indoor use (i.e. sanitation). These accounts collectively consumed a total of 2.52 AF of recycled water in 2025.

Submittal Table 6-5 provides a comparison of the projections from the 2020 UWMP to the actual use in 2025. While the Regional Water Quality Control Board (RWQCB) has permitted TWRF tertiary treated water for spray landscape irrigation, agriculture, and industrial uses, recycled water uses by LVMWD's customers are almost exclusively for landscape and golf course irrigation within LVMWD's service area.

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area
Water Code Section 10633 (c),(d),(e)

☐	Check box if recycled water is not used and is not planned for use within the service area of the supplier. The supplier will only complete the column on "Potential Recycled Water Use" and submit an accompanying narrative on the feasibility of that potential recycled water use.
Name(s) of Facility/ies Producing (Treating) the Recycled Water (OPTIONAL) :	
Name of Supplier Operating the Recycled Water Distribution System (OPTIONAL) :	
Volume of Supplemental Water Added in 2025 (OPTIONAL) :	
Source of 2025 Supplemental Water (OPTIONAL) :	

Use Type **Drop down list**	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop down list	Additional Information (as needed)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)	**Potential Recycled Water Use** Volume	**Potential Recycled Water Use** Narrative page number (OPTIONAL)
Add additional rows as needed										
Landscape irrigation (exc golf courses)	Non-Potable		2,901	3,119	3,119	3,119	3,119			
Golf course irrigation	Non-Potable		193	344	344	344	344			
Other (Description Required)	Non-Potable		3	3	3	3	3			
		Subtotal Potable	0	0	0	0	0	0	0	
		Subtotal Non-Potable	3,096	3,465	3,465	3,465	3,465	0	0	
		Total	3,096	3,465	3,465	3,465	3,465	0	0	0

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.
Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.
Potential recycled water use: a description of the feasibility of these uses must be included in the narrative.
Multiple Producers: If you have multiple recycled water producers, submit a separate table for each.

NOTES:

Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual

Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual Water Code Section 10633(e)		
☐	Check the box if recycled water was not used in 2025 nor previously projected for use in 2020. Proceed to the next table.	
Use Type Drop Down list	2020 Projection for 2025 (AF)	2025 Actual Use (AF)
Add additional rows as needed		
Industrial use	4,075	2,901
Golf course irrigation	601	193
Other (Description Required)	1	3
Total	4,677	3,096
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure reported in Submittal Table 2-3 **Additional Guidance:** See Appendix M, Section M.21 for detailed guidance on this table.		
NOTES:		

6.2.4.5 Action to Encourage and Optimize Future Recycled Water Use

Opportunities for expanding both recycled water supply and demand are limited. Past recycled water planning efforts have already connected nearly all major potential customers, including schools, parks, and golf courses, to the existing recycled water system. Additionally, LVMWD's potable water customer base is primarily residential, as shown in Section 4.2.1, which do not receive recycled water for use. Opportunities for new recycled water use are further restricted because the service area is nearly built out. The amount of recycled water that can be produced is also constrained by wastewater flows from the LVMWD service area. While small developments are expected in future decades, these projects are not anticipated to generate substantial recycled water demands.

The 2014 Recycled Water Master Plan evaluated infrastructure improvements needed to reach remaining small potential customers and to address capital replacement needs. These improvements would support optimization of the existing system but are not expected to yield major increases in recycled water demand or supply.

Methods to expand future recycled water use is shown in Submittal Table 6-6. Currently, the District is emphasizing recycled water conservation during summer months due to limited supply and does not currently plan to expand the recycled water distribution system.

A key component of optimizing recycled water use is maximizing beneficial use during periods when recycled water production exceeds demand. This most commonly occurs from April through November, when the District is prohibited from discharging excess tertiary-treated water to Malibu Creek because of seasonal permit restrictions. Historically, excess supply during these months has presented operational challenges. However, by 2030, the Pure Water Project is anticipated to be operational, enabling excess recycled water to be further treated for indirect potable reuse, specifically surface water supply augmentation at the Las Virgenes Reservoir.

The District and its JPA partner, TWSD, have been undertaking an effort for seasonal storage of recycled water, which entails long-range plans to beneficially use all of the JPA's recycled water and to effectively discontinue discharges to Malibu Creek. In July of 2015, a Plan of Action to discontinue discharges to Malibu Creek was approved by the JPA Board of Directors. As a drought response measure, the temporarily made recycled water available at no cost to residential customers, allowing them to fill sealable containers (up to 300 gallons per visit) at the Rancho Las Virgenes Composting Facility after completing a brief training.

Submittal Table 6-6 Retail: Methods to Encourage Future Recycled Water Use

Submittal Table 6-6 Retail: Methods to Encourage Future Recycled Water Use Water Code Section 10633(f)			
☑	Check the box if the Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in the UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use (AF)
Add additional rows as needed			
		Total (AF)	0
		Unit Conversion to AF	0
DWR NOTES: **Units of measure** (AF, CCF, MG) MUST remain consistent with units reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3. **The unit conversion to Acre Feet** addresses the Water Code's requirement that this value be provided in acre-feet.			
NOTES:			

6.2.5 Desalinated Water Opportunities

The California UWMP Act requires a discussion of potential opportunities for use of desalinated water (Water Code Section 10631[h]). LVMWD has evaluated opportunities for using desalinated sea water and desalinated brackish groundwater in future supply options. Desalination options considered by LVMWD are described below.

6.2.5.1 Seawater Desalination

Historically, LVMWD did not consider the implementation of a seawater desalination program practical or economically feasible due to the topography of LVMWD's service area not being conducive to pumping desalinated water from the ocean. In the past, LVMWD considered providing financial assistance to other retailers and/or teaming with MWD to provide financial assistance in the construction of other retail water purveyor's seawater desalination facilities in exchange for SWP supplies.

More recently, District has undertaken a Water Supply Diversification Study, scheduled to be completed in early 2026, as part of the District's pursuit to diversify its water supply portfolio. During the drought in 2021-2023, the District had its allocation of the SWP reduced by 74% by MWD. In response, the District is analyzing supplemental water supply alternatives, including ocean desalination as well as potable reuse, groundwater banking, augmentation of the PWP with urban/storm runoff, and water exchanges with other

water utilities. LVMWD has initiated a pilot program in partnership with OceanWell to assess an emerging seawater desalination technology with the potential to reduce traditional cost and environmental constraints. The OceanWell pilot program is testing a submerged desalination system that uses natural hydrostatic pressure to drive reverse osmosis, which may reduce energy demands and eliminate surface brine discharges associated with conventional desalination facilities. While the pilot program is exploratory and not intended to provide near-term supply, it is being used to evaluate the technical feasibility and long-term potential role of this technology as part of a diversified and climate-resilient water supply portfolio.

6.2.5.2 Desalinated Brackish Groundwater

Groundwater from the Thousand Oaks Area basin underlying the LVMWD service area is currently delivered to the TWRF for treatment and subsequent use in the recycled water system. These groundwater supplies are characterized by elevated TDS concentrations, reaching as high as 2,800 mg/l in some areas in addition to high iron and manganese concentrations. Currently, a conversion of this groundwater use for potable supplies is not considered a feasible option. No other opportunities for desalination of local brackish groundwater currently exist.

6.2.6 Water Exchanges and Transfers

UWMPs must describe any existing, planned, or potential future water exchanges and transfers. The information contained in this section informs the water supply volumes incorporated into Submittal Table 6-8 Retail: Water Supplies- 2025 Actual and Submittal Table 6-9 Retail: Water Supplies- Projected.

6.2.6.1 Exchanges

As mentioned in Chapter 2, LVMWD constructed an interconnection with Calleguas Municipal Water District (CMWD) in 2025. This interconnection enables delivery of potable water from one agency to the other if imported water supplies are interrupted and would enable LVMWD to receive water from CMWD to support winter refill of the Las Virgenes Reservoir. Based on a 2024 interconnection capacity analysis, the Calleguas interconnection has an estimated capacity of 12.5 cfs.[5] Furthermore, this additional water serves as an alternative to purchasing water from MWD during summer months. Overall, this interconnection increases the reliability of the potable water systems for both agencies.

In July 2025, LVMWD entered into a water storage and exchange agreement with Irvine Ranch Water District (IRWD) to improve drought-year supply reliability through groundwater banking. Under this program, LVMWD may store up to 6,000 AF of imported water in IRWD's groundwater banking facilities during wetter periods and recover it during dry or critically dry years, subject to agreed-upon exchange ratios, losses, and cost-sharing provisions.[6]

[5] LVMWD Interconnection Capacity Analysis Technical Memorandum, Kennedy Jenks (2024)

[6] Water Storage and Exchange Program with Irvine Ranch Water District
https://d2kbkoa27fdvtw.cloudfront.net/lvmwd/c7fc2420f657917177dfe66b6cb9f4810.pdf

6.2.6.2 Transfers

No transfers are currently planned.

6.2.6.3 Emergency Interties

For emergency circumstances, LVMWD utilizes interconnections with both LADWP and CMWD. The interconnection with LADWP was enabled through an agreement with MWD and LADWP and is mainly used to provide supply during planned and unplanned MWD outages. LADWP provides supply at two distinct connections: one at Kittridge Street and one at Germain Street with maximum capacities of 9,000 gpm and 1,350 gpm, respectively.

6.2.7 Supply From Storage

LVMWD owns and operates the Las Virgenes Reservoir, located in the hills south of Westlake Village. The reservoir was created to provide reliable drinking water delivery to LVMWD customers during peak seasonal demand. In low demand seasons, LVMWD puts water into the reservoir, while in high demand seasons, LVMWD draws upon the reservoir to meet the increased demands.

In addition to serving as a seasonal storage facility, the reservoir provides emergency storage that can be used during imported water outages. Although LVMWD also has an emergency interconnection with LADWP and a new interconnection with CMWD, these cannot solely be relied on to supply the total demand of LVMWD. If imported water sources were unable to deliver water to the District, the Las Virgenes Reservoir would be the only source of supply that LVMWD could count on.

The reservoir is also a “backup” during scheduled shutdowns for maintenance, in times of drought or in the event of earthquakes and other emergencies. Las Virgenes Reservoir played an important role after the 1994 Northridge Earthquake, when service from MWD was interrupted. During interruption, water from the reservoir was distributed to customers in LVMWD’s service area.

This reservoir is filled by imported water and surface water runoff and is withdrawn or replenished as needed. Before water is pumped into the distributions system, the reservoir water is treated at the Westlake Filtration Plant (WFP) to meet State Title 22; Division 4; Chapter 17 and Division of Drinking Water requirements. The WFP can deliver approximately 18 MGD of treated drinking water and typically operates during periods of peak demand in the summer. Water is filtered using diatomaceous earth (DE). The water then goes through primary disinfection, using sodium hypochlorite. Prior to distribution, ammonia is added to produce chloramines as a secondary disinfectant to maintain water quality as it moves through the distribution pipes to consumers. During the Woolsey Fire in November 2018, the WFP and surrounding property were damaged. Since then, with the effort of LVMWD staff, insurance, and FEMA agents, the facilities and surrounding areas have been restored to include water wise and eco-friendly landscaping.

The total capacity of Las Virgenes Reservoir is approximately 9,500 acre-feet. Since its creation, the reservoir has remained at a volume of approximately 7,300 AF, but occasionally drops below 4,000 AF during dry months, and reaches over 9,000 AF when recharge water is purchased from MWD. The total typically annual fluctuation in water volume is several hundred to more than 1,000 AF.

6.2.8 Future Water Projects

LVMWD updated its Integrated Water System Master Plan (IWSMP) in 2014. Analysis of the potable water system resulted in recommended improvements including piping, storage, and pumping improvements to enhance system operations and reliability. With the implementation of the projects outlined in the IWSMP, LVMWD will improve its potable water infrastructure to provide more reliable potable water services, but these projects are not expected to increase supplies or result in new supplies.

The JPA governing the recycled water facilities has determined that no further expansion of the recycled water system will be pursued at this time in order to reserve available treatment and conveyance capacity for the Pure Water Program. As a result of this policy decision, LVMWD does not expect any growth in recycled water demand into the future.

As mentioned previously, the Pure Water Project is being developed by the District in which excess tertiary treated recycled from TWRF, that normally would be disposed of during months of low recycled water demand, will go through further advanced water treatment methods to reach indirect potable reuse standards. This advanced treated water will be blended and stored within the Las Virgenes Reservoir and treated further at the WFP prior to distribution in the potable water system. As summarized in Submittal Table 6-7, the Pure Water Project is expected to provide an additional future water supply of 3,100 AFY.

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs **Water Code Section 10631(f)**							
☐	Check the box if there are no expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Proceed to the next table.						
☐	Check the box if some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.						
	Provide page location of narrative in the UWMP						
Name of Future Projects or Programs	Joint Project with other suppliers?		Additional Description (as needed)	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Planned Implementation Year	Planned for Use in Year Type **Drop Down List**	Expected Increase in Water Supply to Supplier (This may be a range) (AF)
	Drop Down List (yes/no)	If Yes, Supplier Name					
Add additional rows as needed							
Pure Water Project	Yes	Triunfo Water and Sanitation District	Las Virgenes Reservoir	Potable	2030	All Year Types	3,100
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure reported in Submittal Table 2-3.							
NOTES:							

6.2.9 Summary of Existing and Planned Sources of Water

6.2.9.1 Description of Supplies

As mentioned previously, the District relies on four sources for water supply that have been developed to provide increased water reliability and efficient water use to help meet the water demand of the LVMWD service area into the future. The existing and planned sources of water within the LVMWD service area is as follows:

- During 2025, imported potable water accounted for 75% of total supply (potable and recycled) for LVMWD. The largest imported supply is from MWD. The District also purchases water from Ventura County Waterworks District's (VCWWD) No. 17, VCWWD No. 8, and the City of Los Angeles Department of Water and Power (LADWP). LVMWD has an established connection with Calleguas Municipal Water District (CMWD), but did not purchase any water from this agency in 2025.
- During 2025, recycled water from the TWRF and supplemental imported potable water accounted for 25% of supply to the District
- Groundwater from the Thousand Oaks Area Basin, which is only used to supplement the recycled water supplies.
- Surface water runoff into the Las Virgenes Reservoir.

LVMWD has developed these water resources to provide increased water reliability and efficient water use to help meet the water demand of the LVMWD service area into the future.

6.2.9.2 Quantification of Supplies

Submittal Table 6-8 shows the actual water supplied to the LVMWD system for each supply source in 2025.

Submittal Table 6-8 Retail: Water Supplies- 2025 Actual

Submittal Table 6-8 Retail: Water Supplies — Actual Water Code Section 10631(b)				
Water Supply		**2025**		
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Actual Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed				
Purchased or Imported Water	MWD	Potable	15,177	
Purchased or Imported Water	Ventura County Waterworks District No. 8	Potable	14	
Purchased or Imported Water	Ventura County Waterworks District No. 17	Potable	89	
Purchased or Imported Water	City of Los Angeles Department of Water and Power	Potable	2	
Purchased or Imported Water	Calleguas Municipal Water District	Potable	0	
Supply from Storage	Las Virgenes Reservoir	Potable	437	
Recycled Water	TWRF	Non-Potable	4,976	
		Subtotal Potable	15,720	0
		Subtotal Non-Potable	4,976	0
		Total	20,696	0
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3. **Total Entitlement:** e.g. Water Right, Groundwater Allocation, Contracted Amount.				
NOTES:				

Submittal Table 6-9 shows projected supplies for each supply source for 2030 to 2050. Projected supplies are based on the difference in reliable volumes of local supplies and projected demands in Section 4.2.6 yielding a required imported water volume. Imported water projections are based on the information derived from the reliability of MWD's supplies discussed in Section 7.2.

Submittal Table 6-9 Retail: Water Supplies- Projected

Submittal Table 6-9 Retail: Water Supplies — Projected
Water Code Section 10631 (b)

Water Supply			Projected Water Supply (Report to the Extent Practicable)									
			2030		2035		2040		2045		2050 (opt)	
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed												
Purchased or Imported Water	(a)	Potable	13,125		11,896		11,759		12,631			
Supply from Storage	Pure Water Project - Las Virgenes Reservoir	Potable	3,100		3,100		3,100		3,100			
Recycled Water	(b)	Non-Potable	3,465		3,465		3,465		3,465			
		Subtotal Potable	16,225	0	14,996	0	14,859	0	15,731	0	0	0
		Subtotal Non-Potable	3,465	0	3,465	0	3,465	0	3,465	0	0	0
		Total	19,690	0	18,461	0	18,324	0	19,196	0	0	0

DWR NOTES:
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.
Total Entitlement: e.g. Water Right, Groundwater Allocation, Contracted Amount.

NOTES:
(a) Purchased or imported water set equal to total potable water demand volumes reported in Submittal Table 4-2.
(b) Recycle water set equal to non-potable water demand volume reported in Submittal Table 4-2 and Submittal Table 6-4.

6.3 Energy Use

Per Water Code 10631.2. (a) an UWMP shall include, to the extent possible, an estimate of energy used to extract, divert, convey, treat, and distribute water supplies. The most recent energy data available used to estimate energy consumption and energy intensity for the LVMWD potable water system is from FY 2018, shown below in Table 6-G. Energy data for FY 2025 was not available at the time of this UWMP.

Table 6-F. LVMWD Potable System Estimated Energy Intensity FY2018

Facility Description	Annual Energy Consumption (kWh)
Agoura Pump Station	24,888
Argos Sectionalizing Valve	192
Box Canyon Pump Station	90
Conduit Pump Station	137,662
Cornell Pump Station	537,933
Equestrian Tank	272
JBR Pump Station	7,896
Jed Smith Pump Station	428,618
Kimberly Pump Station	65,754
Latigo Canyon Tank	36
Lower Oaks Booster	193,412
Lower Oaks Tank	582
LV-2 Pump Station	329,095
Morrison Pump Station	3,549
Morrison Tank	312
Mulwood P/R Station	172
Oakridge Pump Station	17,916
Seminole Pump Station	690,814
Seminole Tank Irrigation	248
Three Springs Pump Station	54,950
Upper Twin Lakes Pump Station	49,619
Upper Twin Lakes Tank	190
Warner Pump Station	551,764
Westlake P/R Station	172
Westlake Filter Plant	404,256
Westlake Pump Station	472,213
Woolsey Tank	212

Facility Description	Annual Energy Consumption (kWh)
Total	**3,972,817**
Energy Intensity	
LVMWD Potable System Energy Consumption (kWh)	3,972,817
LVMWD Potable System Volume (AF)	20,506*
Estimated System Energy Intensity (kWh / AF)	**194 kWh/AF**
Notes: *LVMWD Potable System Volume (AF) is taken from Historical Imported Water Supply shown in Table 6-C for 2018.	

Chapter 7. Water Service Reliability and Drought Risk Assessment

Assessing water service reliability is the fundamental purpose of the UWMP. Reliability reflects a Supplier's ability to meet customer water needs under varying hydrologic, regulatory, and climate conditions. This chapter evaluates the factors that may affect the District's projected supplies and demands.

Chapter 7 synthesizes information from across the UWMP to provide a basis for decisions related to supply management, demand management, and future project development. It also presents the District's Water Service Reliability Assessment (WSRA) and Drought Risk Assessment (DRA), which together evaluate the District's ability to meet demands during normal, single-dry, and multiple-dry year drought conditions, as required by the Water Code.

7.1 Constraints on Water Sources Considerations

As required by the Act, this section identifies and describes constraints on the LVMWD's water supply sources that affect supply availability and reliability under normal, single-dry, multiple-dry year drought conditions. In 2025, the water conditions that the region faces are primarily shaped by hydrologic variability, Sacramento-San Joaquin Bay-Delta (Bay-Delta) operational constraints, and water quality challenges. These constraints are summarized below:

- **Hydrologic Variability:** Over the last decade, dramatic swings in annual hydrologic conditions have impacted water supplies available from the SWP (see Section 6.2.6.1). During the most recent drought from 2020 to 2022, MWD experienced SWP Table A allocations of 20 percent, 5 percent, and 5 percent over the three-year period the lowest three-year sequence of allocations in the history of the SWP. As a result, MWD has been building dry-year storage reserves, water banking, and transfers to help manage the wide swings in SWP allocations.
- **Bay-Delta Operational Constraints:** The SWP water that LVMWD receives from MWD originates from the San Joaquin Bay-Delta (Bay-Delta) and is transferred through the 444-mile-long California Aqueduct. With approximately 30 percent of Southern California's water supply transported across the Bay-Delta, its declining ecosystem has led to reduction in water supply deliveries. Operational constraints will likely continue until a long-term solution to the problems in the Bay-Delta is identified and implemented.
- **Water Quality Challenges**: The majority of the imported water supply to LVMWD travels hundreds of miles from Lake Oroville in the Sierras via the SWP, which is then treated and conveyed to the District by MWD. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and various contaminants, which can contribute to the constituents in MWD's water sources. Contaminants such as algae toxins, PFAS, and constituents of emerging concern have historically had a significant impact on the MWD's water supply conditions; however, to date, Metropolitan has not identified any water quality risks that cannot be mitigated. According to MWD's 2025 UWMP, an increase in the salinity of water resources may be a water quality issue that could potentially affect water management strategies and supply reliability in the future. More information is provided in the LVMWD 2024 Water Quality & Consumer Confidence Report.

7.2 Water Service Reliability Assessment

Water Code Section 10635(a) requires every urban water supplier to assess the reliability of its water service to customers during normal, single-dry, and multiple-dry year drought conditions over a 20-year planning horizon, in five-year increments. The WSRA integrates the demand and supply analysis from Chapter 4 and Chapter 6 to compare total projected water demands and supplies available under these various drought conditions.

It is the goal of LVMWD to deliver a reliable and high-quality water supply for customers, even during dry periods. Based on conservative water supply and demand assumptions over the next 20 years, in combination with conservation of non-essential demand during certain dry years, LVMWD successfully achieves this goal.

7.2.1 WSRA Year-Type Characterization

As described above, the WSRA is evaluated using three year-types to reflect variability in hydrologic conditions and associated effects on water supply availability: normal-year, single-dry year, and five-consecutive-year drought conditions. This section further describes the three year-types and defines the available supply volume during each of these year-types.

7.2.1.1 Types of Years

The three year-types, as defined by the DWR, are described below:

- **Normal Year.** This condition represents the water supplies a Supplier considers available during normal conditions. This could be a single year or averaged range of years that most closely represents the average water supply available to the Supplier. DWR uses the terms average and normal interchangeably when addressing the water year type.
- **Single Dry Year.** The single driest year used for this analysis was 2022. The single dry year is the year-type that represents the lowest water supply available to the Supplier.
- **Five-Consecutive-Year Drought.** The five-consecutive year drought period used for this analysis was 2021 through 2025. This period represents the five-year historical sequence with the lowest water supply for the Supplier.

Optional Submittal Table 7-1 provides the District's characterization of normal, single-dry, and consecutive dry year conditions. This table summarizes the representative base years selected for each required year-type and quantifies the volume of supplies available under those conditions.

Optional Submittal Table 7-1R: Basis of Water Year Data (Reliability Assessment)

***Optional* Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)**			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	**Available Supplies if Year Type Repeats**	
		☐	Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP]
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (AF)	**% of Average Supply**
Average Year	2025	15,720	100%
Single-Dry Year	2022	14,682	93%
Consecutive Dry Years 1st Year	2021 to 2025	20,546	131%
Consecutive Dry Years 2nd Year	2021 to 2025	14,682	93%
Consecutive Dry Years 3rd Year	2021 to 2025	15,288	97%
Consecutive Dry Years 4th Year	2021 to 2025	15,618	99%
Consecutive Dry Years 5th Year	2021 to 2025	15,720	100%
DWR NOTES: Supplier may use multiple versions of Submittal Table 7-1 R if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Submittal Table 7-1 R, in the "Note" section of each submittal table, state that multiple versions of Submittal Table 7-1 R are being used and identify the particular water source that is being reported in each submittal table. **Units of measure (AF, CCF, MG**) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table reports the units of measure reported in Submittal Table 2-3.			
NOTES:			

7.2.1.2 Sources of Water Data

The District's average water year was determined to be 2025 based on review of the Districts historical water supply data and update of the District's average rainfall total for years 2015-2025.

Single- and multiple-dry year projections were based on the lowest single-year and lowest five-consecutive-year potable water supply within the last 10 years. As shown in Table 7-A, 2022 was identified as the single year with the lowest potable water supply over the past 10 years. The period from 2021 through 2025 was identified as the lowest five-consecutive-year potable water supply over the same period. This correlates to the recent drought in 2021 through 2023, during which the District had its allocation of the SWP reduced by 74% by MWD.

As shown in Table 7-A, Las Virgenes Reservoir served as a net source of supply in 2022, 2024, and 2025, meaning withdrawals to meet demand exceeded water delivered to the reservoir during these years. For 2021 and 2023, more water was delivered to the reservoir than was withdrawn. These years are shown as "--" because recharging the reservoir does not reduce the District's total available potable water supply.

Table 7-A: Historical Potable Water Supply by Source (2021–2025)

Supplier	Additional Description	Potable Water Supply for 2021 to 2025 (AFY)				
		2021	2022	2023	2024	2025[(c)]
MWD	(a)	20,428	13,339	15,189	14,365	15,177
VCWWD No. 8	(a)	18	11	18	7	14
VCWWD No. 17	(a)	100	70	81	85	89
LADWP	(a)	0	0	0	0	2
Las Virgenes Reservoir	(b)	--	1,262	--	1,161	437
Total Available Potable Water Supply		20,546	14,682	15,288	15,618	15,720

Notes:

(a) As reported in Table 6-C.
(b) A positive value indicates the reservoir served as a net source of supply, where total withdrawals exceeded total water delivered to the reservoir during the year, as reported in Appendix E. Years where more water was delivered to the reservoir than withdrawn are shown as "--" because recharging the reservoir does not reduce the District's total available potable water supply.
(c) As reported in Submittal Table 6-8.

7.2.2 WSRA Supply and Demand Comparison

This section compares the District's projected water demands with the supplies available under normal, single-dry, and five-consecutive-dry-year conditions, as required by Water Code Section 10635(a). The

WSRA integrates the demand analysis from Chapter 4 and the supply analysis from Chapter 6 to provide a complete picture of the District's long-term water service reliability.

7.2.2.1 Normal Year

Submittal Table 7-2 is used to characterize the District's normal-year water service reliability by comparing projected normal-year supplies to projected normal-year demands over the 20-year planning horizon. This assessment provides the baseline condition for evaluating how reliably the District can meet customer demands in years with typical hydrologic conditions.

For normal year conditions, the following projected supply availability assumptions were applied:

- **Recycled water:** LVMWD's projected recycled water use is expected to remain constant at 3,465 AF due to current customer demand trends and a major pipeline replacement project which will address water losses due to leaks.
- **Supply from Storage:** The Pure Water Project, expected to be operational by 2030, will treat excess recycled wastewater supply to indirect potable reuse standards to augment surface water supply in the Las Virgenes Reservoir. The projected supply from the Pure Water Project of 3,100 AF was assumed to remain constant for years 2030-2050.
- **Imported Water:** Assumes demand projections based on actual 2025 water use per Chapter 4 minus the estimated potable water that the Pure Water Project will supply.

Submittal Table 7-2 Retail: Normal Year Supply and Use Comparison

Submittal Table 7-2 Retail: Normal Year Supply and Use Comparison Water Code Section 10635 (a)					
	2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
Supply totals (autofill from Submittal Table 6-9 R)	19,690	18,461	18,324	19,196	
Use totals (autofill from Submittal Table 4-2 R)	19,690	18,461	18,324	19,196	
Surplus/(shortfall)	0	0	0	0	0
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES:					

7.2.2.2 Single Dry Year

LVMWD's water supplies and demands over the 20-year planning period were analyzed in the event that a single-dry year occurs. Submittal Table 7-3 summarizes the existing and planned supplies available to meet demands during a single-dry year. For single dry year conditions, the following projected supply availability assumptions were applied:

- **Recycled water:** LVMWD's projected recycled water use is expected to remain constant at 3,465 AF due to current customer demand trends and a major pipeline replacement project which will address water losses due to leaks.
- **Supply from Storage:** The projected supply from the Pure Water Project of 3,100 AF was assumed to remain constant for years 2030-2050.
- **Imported Water:** The lowest imported water supply over the last ten years was year 2022 based on historical water supply data. This includes a 74 percent reduction on imported water from MWD. This analysis assumed the 2022 supply will remain constant for years 2030-2050.

Water demand was assumed to remain consistent with the volumes projected in Submittal Table 4-2.

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison

Submittal Table 7-3 Retail: Single Dry Year Supply and Use Comparison Water Code Section 10635(a)					
	2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
Supply totals	21,247	21,247	21,247	21,247	
Use totals	19,690	18,461	18,324	19,196	
Surplus/(shortfall)	1,556	2,785	2,923	2,050	0
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES:					

7.2.2.3 Five Consecutive Dry Years

The water supplies and demands for the LVMWD service area over the 20-year planning period were also analyzed in the event that a five consecutive dry year event occurs. Water systems are typically more vulnerable to these dry conditions of longer duration because they deplete water storage reserves in local and state reservoirs and in groundwater basins.

Submittal Table 7-4 summarizes the existing and planned supplies available to meet demands during multiple-dry years. For five consecutive year conditions, the following projected supply availability assumptions were applied:

- **Recycled water:** LVMWD's projected recycled water use is expected to remain constant at 3,465 AF due to current customer demand trends and a major pipeline replacement project which will address water losses due to leaks.
- **Supply from Storage:** The projected supply from the Pure Water Project of 3,100 AF was assumed to remain constant for years 2030-2050.
- **Imported Water:** The imported supply during each year of five-consecutive-year period with the lowest imported water supply over the last ten years (2021-2025) was assumed to remain constant for years 2030-2050.

Water demand was assumed to remain consistent with the volumes projected in Submittal Table 4-2.

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Use Comparison Water Code Section 10635(a)						
		2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
First year	Supply totals	27,111	27,111	27,111	27,111	
	Use totals	19,690	18,461	18,324	19,196	
	Surplus/(shortfall)	7,421	8,649	8,787	7,915	0
Second year	Supply totals	21,247	21,247	21,247	21,247	
	Use totals	19,690	18,461	18,324	19,196	
	Surplus/(shortfall)	1,556	2,785	2,923	2,050	0
Third year	Supply totals	21,853	21,853	21,853	21,853	
	Use totals	19,690	18,461	18,324	19,196	
	Surplus/(shortfall)	2,162	3,391	3,529	2,656	0
Fourth year	Supply totals	22,183	22,183	22,183	22,183	
	Use totals	19,690	18,461	18,324	19,196	
	Surplus/(shortfall)	2,493	3,721	3,859	2,987	0
Fifth year	Supply totals	22,285	22,285	22,285	22,285	
	Use totals	19,690	18,461	18,324	19,196	
	Surplus/(shortfall)	2,595	3,824	3,962	3,089	0
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.						
NOTES:						

7.2.3 WSRA Description of Management Tools and Options

This section summarizes the water management tools and options that are currently implemented, or planned for implementation, to support water service reliability and maximize the use of local water resources while minimizing reliance on imported supplies.

LVMWD attends regular meetings with MWD staff. MWD will continue their ongoing Water Surplus and Drought Management (WSDM) supply demand tracking process, which is compiled into a monthly Board of Directors reporting. LVMWD will continue to track MWD reporting tools.

MWD anticipates presenting a completed Annual Assessment by June of each year. This assessment can trigger any recommended shortage stage. LVMWD staff uses the information provided by MWD to prepare the DWR Annual Water Supply and Demand Assessment, due annually by July 1st, as well as

the MWD Local Production Survey and Local Supply Inventory, due annually on June 20. The DWR report evaluates comprehensive supply and demand, including imported water, reclaimed water, and demand by use type, to identify potential shortages and corresponding actions. The MWD report is used to develop their UWMP and focus solely on local production, such as groundwater, reclaimed water, and forecasted Pure Water Project yields.

As described in Section 1.4.1.2, the District recently had its allocation from MWD reduced by 74% during the 2021-2023 drought. In response, the District is undertaking a Water Supply Diversification Study, scheduled to be completed in early 2026, as part of the District's pursuit to diversify its water supply portfolio. Alternative water supplies currently being analyzed by the Study include ocean desalination, potable reuse, groundwater banking, augmentation of the Pure Water Project with urban or storm runoff, and water exchanges with water utilities other than MWD.

7.3 Drought Risk Assessment

The DRA evaluates water shortage risk based on the driest five-consecutive-year historic hydrologic sequence and assumes the drought period begins in the year immediately following adoption of the UWMP. In accordance with Water Code Sections 10612 and 10635(b), the DRA assesses the reliability of each water supply source and compares total available water supplies to projected water use during the drought period.

7.3.1 DRA Data, Methods, and Basis for Water Shortage Conditions

The DWR encourages suppliers to use the same five-year sequence for both their WSRA and DRA. Therefore, the following supply availability assumptions were applied:

- **Recycled water:** LVMWD's projected recycled water use is expected to remain constant at 3,465 AF due to current customer demand trends and a major pipeline replacement project which will address water losses due to leaks.
- **Supply from Storage:** Since the Pure Water Project is not projected to become operational until 2030, the projected supply from the Pure Water Project of 3,100 AF was only assumed available for year 2030.
- **Imported Water:** The imported supply during each year of five-consecutive-year period with the lowest imported water supply over the last ten years (2021-2025) was assumed to remain the same for years 2026-2030.

Water demand was assumed to remain consistent with the volumes projected in Submittal Table 4-2.

7.3.2 DRA Individual Water Source Reliability

This section evaluates the reliability of each water supply source during the five-consecutive-year drought scenario assessed in the DRA. For each drought year, the expected reliability of individual water sources are characterized to describe anticipated availability under prolonged dry conditions.

7.3.2.1 Non-Potable Water Supply

Due to high levels of iron and manganese found in the groundwater, groundwater extraction from the Thousand Oaks Area Groundwater Basin is solely used to augment recycled water supplies. Based on the current conditions of the Thousand Oaks Area Basin, the low-priority rating by DWR, and historically low levels of pumping by LVMWD, groundwater supplies are anticipated to be reliably available.

LVMWD has historically aggressively pursued the development of a recycled water system and optimizations for reuse in its service area. The District requires all non-residential landscaping located along the District's recycled water distribution main lines to be designed or converted to utilize recycled water for landscape irrigation. Recycled water master planning efforts began in the 1980s with concepts for a system to serve the region. Master Plans for the existing recycled water system were prepared in 1985, 1988, 1999, 2007, and most recently updated in 2014. Past recycled water planning efforts have now successfully connected to virtually all schools, parks, and golf courses within the service area to the existing recycled water system. The District has now expanded efforts to encourage conservation of recycled water uses. Efforts include modified rates, imposing penalties for exceedance of water budget, installing advanced meters, and enhancing outreach regarding conservation with existing recycled water customers.

7.3.2.2 Potable Water Supply

As discussed in Chapter 6, LVMWD's total 2025 potable demand was entirely supplied by imported potable water. Historically, the Las Virgenes Reservoir has been used to supplement supply during dry years. While the District also purchases water from VCWWD No. 17, VCWWD No. 8, LADWP, and CMWD, the largest imported supply is from MWD.

Over the last five years, imported supplies from agencies other than MWD account for less than three percent of LVMWD's potable water supply. Interconnections with these agencies generally provide potable water generally to two small areas in the hills west of the San Fernando Valley, Woolsey Canyon and Box Canyon, which include the cities of West Hills and Chatsworth. These areas are geographically isolated, and currently not connected to the rest of the LVMWD distribution system. It should be noted that LVMWD did not purchase any water from LADWP and CMWD in 2025.

MWD's supply capability and projected demands are presented in Table 7-A though Table 7-C. In MWD's 2025 UWMP, dated December 2025, MWD estimated supply capability and projected demands for a normal year, a single dry-year, and for five consecutive years.

Projected supply surpluses for MWD, based on the capability of current programs, range from 13% to 60% of projected supply. With the inclusion of supplies under development, potential surpluses also range from 13% to 60% of projected supply. Tables 7-A through 7-C show that the region can provide reliable water supplies under both the single driest year and the multiple dry years.

Table 7-B: MWD Normal Year Supply Capability and Projected Demands (1922-2021 Hydrology)

Forecast Year	2030	2035	2040	2045	2050
Capability of Current Programs	3,762,000	3,720,000	3,664,000	3,624,000	3,718,000
Demands	1,503,000	1,516,000	1,544,000	1,563,000	1,581,000
Surplus	2,259,000	2,204,000	2,120,000	2,061,000	2,137,000
Percent Surplus	60.05%	59.25%	57.86%	56.87%	57.48%
Programs Under Development	0	0	0	0	0
Potential Surplus	2,259,000	2,204,000	2,120,000	2,061,000	2,137,000
Percent Potential Surplus	60.05%	59.25%	57.86%	56.87%	57.48%

Table 7-C: MWD Single Dry Year Supply Capability and Projected Demands (1977 Hydrology)

Forecast Year	2030	2035	2040	2045	2050
Capability of Current Programs	2,701,000	2,675,000	2,631,000	2,605,000	2,699,000
Demands	1,634,000	1,653,000	1,679,000	1,697,000	1,714,000
Surplus	1,067,000	1,022,000	952,000	908,000	985,000
Percent Surplus	39.50%	38.21%	36.18%	34.86%	36.49%
Programs Under Development	0	0	0	0	0
Potential Surplus	1,067,000	1,022,000	952,000	908,000	985,000
Percent Potential Surplus	39.50%	38.21%	36.18%	34.86%	36.49%

Table 7-D: MWD Drought Lasting Five Consecutive Water Years Supply Capability and Projected Demands (1922-2017 Hydrology)

Forecast Year	2030	2035	2040	2045	2050
Capability of Current Programs	2,082,400	2,118,100	2,043,900	2,003,400	1,989,900
Demands	1,602,000	1,668,000	1,689,000	1,712,000	1,731,000
Surplus	480,400	450,100	354,900	291,400	258,900
Percent Surplus	23.07%	21.25%	17.36%	14.55%	13.01%
Programs Under Development	0	0	0	0	0
Potential Surplus	480,400	450,100	354,900	291,400	258,900
Percent Potential Surplus	23.07%	21.25%	17.36%	14.55%	13.01%

It is important to note that under some conditions, MWD may choose to implement the Water Supply Allocation Plan (WSAP) to preserve storage reserves for a future year, instead of using the full supply capability. This can result in impacts on the retail level even under conditions where there may be adequate supply capabilities to meet demands. MWD's likelihood of having adequate supply capability to meet projected demands, without implementing the WSAP, is dependent on its storage resources.

Per the MWD's 2025 UWMP Update, MWD's core water supplies include estimated water supplies from the Colorado River and the SWP for the current year. Imported core supplies vary from year to year and are influenced by annual weather and hydrology, as well as demand by other higher priority users and operational and regulatory factors.

Figure 7-1: 2025 UWMP Core Water Supplies

Source	Core Supply
Colorado River	Colorado River Basic Apportionment
	Higher Priority Water Use Adjustment to Colorado River Basic Apportionment
	IID/MWD Conservation Program
	PVID Fallowing Program (minimum)
	Bard Water District Seasonal Fallowing Program
	Quechan Seasonal Fallowing Program
	Quechan Diversion Forbearance Program
	Lower Colorado Water Supply Project
	Exchange with SDCWA (SDCWA/IID Transfer and Coachella & All-American Canal Lining)
	Exchange with the United States (Coachella Canal Lining)
State Water Project	MWD SWP Table A
	SWP Article 21 Interruptible Supplies
	SWP Port Hueneme Lease of Ventura Table A
	Desert Water Agency/Coachella Valley District/Metropolitan Water Exchange and Advance Delivery Programs
In-Region	San Gabriel Valley Municipal Water District Program

MWD has invested significantly in the development of a diverse resource mix to ensure continued reliability of its supplies. In addition, MWD has undertaken numerous planning initiatives, including an update to the Integrated Water Resources Plan, the Water Surplus and Drought Management Plan, the Water Supply Allocation Plan, and the Seismic Risk Assessment and Mitigation Plan.

The Las Virgenes Reservoir also serves a "backup" during scheduled shutdowns for maintenance, in times of drought, or in the event of earthquakes and other emergencies. Las Virgenes Reservoir played an important role after the 1994 Northridge Earthquake, when service from MWD was interrupted. During interruption, water from the reservoir was distributed to customers in LVMWD's service area. This reservoir assures reliable drinking water delivery to LVMWD customers during peak seasonal demand and times of drought or emergency. Depending on the starting reservoir storage level, the Las Virgenes Reservoir can supply a maximum of 4,500 acre-feet or less, equating to around 3 months demand.

As discussed in Chapter 6, LVMWD also entered into a water storage and exchange agreement with IRWD in 2025. Under this program, LVMWD may store imported water in IRWD's groundwater banking

facilities during wetter periods and recover it during dry or critically dry years. According to this agreement, this program can supply up to 6,000 AF for delivery in dry water years. [7]

The Pure Water Project is anticipated to be operational by 2030, in which tertiary treated recycled from TWRF, that normally would be disposed of during months of low recycled water demand, will go through further advanced water treatment methods to reach indirect potable reuse standards. This advanced treated water will be blended and stored within the Las Virgenes Reservoir, increasing the reservoir's water supply reliability.

7.3.3 DRA Total Water Supply and Use Comparison

This Section includes a comparison of total water supplies and projected water use for each year of a five-consecutive-year drought scenario that begins in 2026. See Submittal Table 7-5 for the total water supply and use comparison for the DRA.

Since the Indoor Residential Water Use Standard established under SB 1157 (2022) decreases from 47 gallons per capita per day (gpcd) to 42 gpcd effective January 1, 2030 (see Section 4.2.5.2), interim demand reductions were incorporated into the planning analysis for years 2027 through 2029. Specifically, Level 1 response actions from the Water Shortage Contingency Plan (WSCP) were applied, including an assumed 20 percent reduction in total potable water demand during that period. See Section 8.4 for further details regarding LVMWD's WSCP response actions.

Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment

Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment Water Code Section 10635(b)(3)	
2026	**Total**
Total Water Use (AF)	19,395
Total Supplies (AF)	24,011
Surplus/Shortfall w/o WSCP Action	4,616
2027	**Total**
Total Water Use (AF)	19,577
Total Supplies (AF)	18,147
Surplus/Shortfall w/o WSCP Action	(1,430)
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	3,222
Revised Surplus/(shortfall)	1,792
2028	**Total**
Total Water Use (AF)	19,762

[7] Water Storage and Exchange Program with Irvine Ranch Water District
https://d2kbkoa27fdvtw.cloudfront.net/lvmwd/c7fc2420f657917177dfe66b6cb9f4810.pdf

Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment Water Code Section 10635(b)(3)	
Total Supplies (AF)	18,753
Surplus/Shortfall w/o WSCP Action	(1,009)
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	3,259
Revised Surplus/(shortfall)	2,250
2029	**Total**
Total Water Use (AF)	19,949
Total Supplies (AF)	19,083
Surplus/Shortfall w/o WSCP Action	(866)
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	3,297
Revised Surplus/(shortfall)	2,431
2030	**Total**
Total Water Use (AF)	19,690
Total Supplies (AF)	22,285
Surplus/Shortfall w/o WSCP Action	2,595
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES:	

Chapter 8. Water Shortage Contingency Plan

As part of its UWMP, Water Code Section 10632 requires Suppliers to prepare and adopt a Water Shortage Contingency Plan (WSCP). The WSCP aligns with the MWD WSCP to ensure continuity, collaboration, and efficiency. The WSCP also draws upon lessons learned from the 2012-2016 drought, California's driest period on record, as well as the more recent drought 2021-2023. The following discussion presents the various stages and basis for implementation.

8.1 Water Supply Reliability Analysis

The primary source of water supply for LVMWD has been water imported from MWD. The imported water is primarily treated water from the Sacramento-San Joaquin River Delta in Northern California, which is conveyed via State Water Project (SWP) facilities. In 2025, LVMWD supplied a total of 15,714 AF from imported water purchased from MWD, which was 84 percent of the total water supply including recycled water. Groundwater and recycled water are discussed further in Chapter 4. Additionally, seismic risks are summarized herein and described in the districts' Hazard Mitigation Plan (Appendix F)

8.2 Annual Water Supply and Demand Assessment Procedures

As an urban water supplier, LVMWD must prepare and submit an Annual Water Supply and Demand Assessment. The following information provides the procedures LVMWD will undertake to complete and approve the Annual Assessment.

8.2.1 Decision-Making Process

LVMWD will prepare their Annual Assessment to be presented to their Board of Directors for approval and submission to DWR by July 1. This presentation will also include appropriate triggers for recommendations regarding specific shortage response actions as a result of the assessment.

8.2.2 Data and Methodologies

The following provides a description of the key data inputs and methodologies that will be used in the Annual Assessment.

Current Year Unconstrained Customer Demand

LVMWD will need to evaluate expected water needs for the coming year or "unconstrained demand" per the Water Code Section 10632. It is anticipated that customer water needs will be evaluated based on billing records as used in Chapter 4 analysis in combination with weather, prior year conditions, and other factors.

Current Year Available Supply

LVMWD will evaluate anticipated supplies for the current year, while anticipating that the following year will be dry. LVMWD will continue to review MWD's planned water supplies for making decisions involving water shortage responses.

Infrastructure Consideration

Throughout each year, LVMWD and MWD regularly carry out preventive and corrective maintenance of facilities. MWD plans and performs shutdowns to inspect and repair pipelines and facilities and support capital improvement projects. These shutdowns involve a high level of planning and coordination within MWD, as well as with member agencies, other affected organizations, contractors, and the community. For planned MWD outages, water for LVMWD is either provided through the Las Virgenes Reservoir and Westlake Filtration Plant, LADWP Interconnections (Kittridge and Germain), or a combination of both.

Evaluation Criteria

LVMWD will utilize the MWD Annual Assessment process and monthly WSDM supply-demand reporting to evaluate for their annual assessment for imported water supplies. LVMWD and MWD will monitor emerging supply and demand conditions throughout the year and take appropriate actions consistent with the flexibility and adaptability inherent to the Water Shortage Contingency Plan.

Water Supply

Based on MWD being the primary water source for LVMWD, the district will rely upon MWD's evaluation of their water supply sources as part of their annual water supply and demand assessment.

8.3 Six Standard Water Shortage Stages

As required by CWC §10632(a)(3)(A), the WSCP is framed around six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

In 2016, LVMWD created a WSCP that established four stages of escalating response to a water shortage caused by droughts and/or emergencies. Each stage may be triggered by a declaration from federal or state authorities, MWD, or LVMWD to address events that result in a water shortage. The table below cross-references LVMWD's shortage levels with the six standard UWMP shortage levels.

Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels CWC 10632(a)(3)(B)

Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels Water Code Section 10632(a)(3)(B)				
	Check the box if the Supplier uses the Standard six levels of water shortage. Proceed to the next table.			
Standard Shortage Levels	**Percent Shortage Range**		**Suppliers Shortage Levels**	**Percent Shortage Range**
1	Up to 10%	→	1 Water Shortage Alert	0 to 10%
2	Up to 20%	→	2 Water Shortage Warning	10 to 20%
3	Up to 30%	→	3 Water Shortage Emergency	20 to 50%
4	Up to 40%	→		
5	Up to 50%	→		
6	>50%	→	4 Critical Water Shortage Emergency	over 50%
NOTES:				

8.4 Shortage Response Actions

The following section specifies the types of shortage response actions that may be undertaken before and during a shortage declaration. LVMWD will implement response actions in support of, and in conjunction with actions taken or requirements dictated by MWD. The table below provides a summary of the shortage stage and the suite of response actions MWD and LVMWD may take.

Table 8-A: Shortage Stages and Response Actions

Shortage Stage	Shortage Percentage		Response Actions	
		Trigger	**Actions**	**Shortage Met**
1	Up to 10%	• Federal, state or local disaster declaration that may impact water supplies • State or MWD declaration due to drought or system maintenance • LVMWD Board of Directors determination • Unplanned LVMWD water system maintenance	**MWD** • Take from storage • Execute Flexible Supplies • Implement Water Supply Allocation Plan (WSAP) **LVMWD** • Take from storage • Initiate public information campaign with large water users, cities, and County • Commence enforcement of conservation measures	**MWD** • 0 to 100% met by storage • 0 to 100% met by Flexible Supplies • 0 to 50% of total base demand met by WSAP implementation **LVMWD** • 0 to 100% met by short-term storage (3 months max.) and/or Distant Groundwater Banking • 0 to 20% met by demand reduction • 0 to 50% met by water shortage allocation and/or storage
2	Up to 20%	See Stage 1 triggers. The difference is the severity and/or maintenance repair time.	**MWD** • Take from storage • Execute Flexible Supplies • Implement Water Supply Allocation Plan **LVMWD** • Take from storage • Initiate public information campaign with large water users, cities, and County • Commence enforcement of conservation measures	**MWD** • 0 to 100% met by storage • 0 to 100% met by Flexible Supplies • 0 to 50% of total base demand met by WSAP implementation **LVMWD** • 0 to 100% met by short-term storage (3 months max.) and/or Distant Groundwater Banking • 0 to 20% met by demand reduction • 0 to 50% met by water shortage allocation and/or storage

Shortage Stage	Shortage Percentage		Response Actions	
		Trigger	**Actions**	**Shortage Met**
3	Up to 50%	• Federal, state or local disaster declaration that may impact water supplies • State or MWD determination due to drought or significant system failure • State outdoor irrigation restriction; and/or • MWD Water Supply Allocation Plan (5-50% of baseline allocation) • LVMWD Board of Directors determination • Unplanned LVMWD water system failure or emergency (Westlake Filtration Plant, Dam and/or Backbone System)	**MWD** • Take from storage • Execute Flexible Supplies • Implement Water Supply Allocation Plan **LVMWD** • Take from storage • Intensify public information campaign • Expand enforcement of conservation measures • Implement State and MWD required reductions • Install flow restrictors on meters as necessary (increase the rate of flow restrictor installations based on severity of shortage and available staff resources) • Provide regular media, city councils, and County briefings • Activate emergency connections with mutual aid agencies	**MWD** • 0 to 100% met by storage • 0 to 100% met by Flexible Supplies • 0 to 50% of total base demand met by WSAP implementation **LVMWD** • 0 to 100% met by short-term storage (3 months max.) and/or Distant Groundwater Banking • 0 to 20% met by demand reduction • 0 to 50% met by water shortage allocation and/or storage
4	>50%	• See Stage 3 triggers • Sacramento to Delta/SWP failure • Natural or human-caused catastrophe disrupting delivery of water to, or within the service area • Severe LVMWD water system failure (Westlake Filtration Plant, Dam and Backbone System)	**MWD** • Take from storage • Execute Flexible Supplies • Implement Water Supply Allocation Plan **LVMWD** • Take from storage • Activate Emergency Operations Center and implement crisis plan • Implement State/MWD required reductions • Install flow restrictors on meters as necessary (increase the rate of flow	**MWD** • 0 to 100% met by storage • 0 to 100% met by Flexible Supplies • 0 to 50% of total base demand met by WSAP implementation **LVMWD** • 0 to 100% met by short-term storage (3 months max.) and/or Distant Groundwater Banking • 0 to 20% met by demand reduction • 0 to 50% met by water shortage allocation and/or storage

Shortage Stage	Shortage Percentage		Response Actions	
		Trigger	**Actions**	**Shortage Met**
			restrictor installations based on severity of shortage and available staff resources) • Terminate potable water supplement to the recycled water system • Recall all temporary meters and activate water fill stations	

8.4.1 Supply Augmentation

LVMWD has the following supply augmentation measures as listed in Submittal Table 8-2 and described below.

Submittal Table 8-2: Retail: Supply Augmentation and Other Actions

Submittal Table 8-2 Retail: Supply Augmentation and Other Actions Water Code Section 10632(a)(4)(A),(C) and (E)				
No	Is the Supplier completing this table using the standard six levels? (yes/no)			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)	
Add additional rows as needed				
3 and 4	Stored Emergency Supply	Percentage	0 to 100%	Short-term action (3 month max.) from Las Virgenes Reservoir
1-4	Stored Supply during WSAP period via Distant Groundwater Banking	Percentage	0 to 100%	850 AF/YR for up to 3 years*
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.				
NOTES: *amount may increase if LVMWD purchases more groundwater from Irvine Ranch Water District (IRWD) or others.				

Stored Emergency Supply

LVMWD can supply up to 100 percent of their customer demands from Las Virgenes Reservoir. However, this is a short-term action (a maximum of 3 months) and would only be used during a Stage 3 or 4 shortage. Groundwater that is stored through Irvine Ranch Water District in the Central Valley or with others may be used anytime MWD activates the WSAP.

8.4.2 Demand Reduction

LVMWD implements many conservation programs and initiatives annually including public outreach. LVMWD's demand reduction actions are listed in Submittal Table 8-3: Retail: Demand Reduction Actions and discussed in more detail below. In the absence of any water shortage (Shortage level 0), LVMWD maintains a number of water conservation measures. As described in subsequent sections, enforcement of these measures is scaled up as severity increases. Taken collectively, LVMWD expects these demand reduction measures to reduce the shortage gap by 0 to 20 percent.

Submittal Table 8-3: Retail: Demand Reduction Actions

No	Is the Supplier completing this table using the standard six levels? (yes/no)				
Shortage Level	Demand Reduction Actions **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	How much is this going to reduce the shortage gap? Volume or Percentage Drop down	How much is this going to reduce the shortage gap? Shortage Gap Reduction Value (May be a range) (AF)	Additional Explanation or Reference (OPTIONAL)	Penalty, Charge, or Other Enforcement? **For Retail Suppliers Only** Drop Down List
0 thru 4	Landscape - Limit landscape irrigation to specific times	Percentage	0-20%*	Between hours of 10 AM and 5 PM	Yes
0 thru 4	Landscape - Restrict or prohibit runoff from irrigation	Percentage	0-20%*		Yes
0 thru 4	Landscape - Prohibit certain types of landscape irrigation	Percentage	0-20%*	Irrigation may not occur during periods of rain or in the 48 hours following measurable rainfall	Yes
0 thru 4	Other - Prohibit use of potable water for washing impervious surfaces	Percentage	0-20%*		Yes
0 thru 4	Other - Require hoses equipped with shut off nozzle	Percentage	0-20%*	Landscape hose equipped with shut off nozzle required for car washing	Yes
1 thru 4	Implement or Modify Drought Rate Structure or Surcharge	Percentage	0-20%*		Yes
4	Landscape - Prohibit all landscape irrigation	Percentage	0-20%*	Outdoor water use only allowed for public health and safety purposes	Yes
0-4	CII - Other CII restriction or prohibition	Percentage	0-20%*	Install flow restriction devices as needed	Yes
0 thru 4	CII - Restaurants may only serve water upon request	Percentage	0-20%*		Yes
0 thru 4	CII - Lodging establishment must offer opt out of linen service	Percentage	0-20%*		Yes
4	Other water feature or swimming pool restriction	Percentage	0-20%*	Restrict use of water features, filling swimming pools, outdoor water use only allowed for public health and safety purposes	Yes
1 thru 4	Expand Public Information Campaign	Percentage	0-20%*	Water Conservation Programs	No
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES: * When taken collectively, the demand reduction measures will reduce the shortage gap up to 20%; these have not been assessed on an individual basis.					

Landscape Demand Reductions

The LVMWD Board has adopted the following water conservation measures as it relates to landscape demand reduction:

- Irrigation not allowed between the hours of 10 a.m. and 5 p.m.
- Irrigation may not occur during periods of rain or in the 48 hours following measurable rainfall.
- Irrigation may not run off the property into streets, gutters or onto adjacent properties.
- Using potable water to wash down sidewalks, parking areas and driveways is not permitted.
- A shut off nozzle is required on hoses used for home car washing.
- Fountains or water features must use a recirculating system.

These actions listed above are water use restrictions as of December 2025. All of these measures would be in effect under Stages 0 through 4. As the water shortage increases, so would LVMWD patrol and enforcement of these measures.

Additionally, under a Stage 3 shortage, irrigation may be limited to the indoor gpcd requirement plus one day per week and the customer outdoor water budgets used for billing purposes may be reduced 50%. There is one landscape measure that only applies to Stage 4 though and that is the prohibition of all landscape water use except in the case of public health and safety purposes. Finally, as a last resort, the District pioneered the use of flow restrictors for particularly egregious water users as part of stepping up enforcement actions. Flow restrictors are installed on water services for the most egregious water users at all times, even when a water shortage stage has not been activated; however, the quantity of restrictors installed may increase depending on the severity of the water shortage and available staff resources.

Commercial Demand Reductions

The LVMWD Board has adopted the following water conservation measures as it relates to commercial demand reduction:

- Hotels and motels must give multi-night guests the option to retain towels and linens during their stay.
- Restaurants may only serve water upon request.

All of these measures would be in effect under Stages 1-4. As the water shortage increases, so would LVMWD patrol and enforcement of these measures.

Special Water Features Demand Reductions

The LVMWD Board has adopted a water conservation measure as it relates to special water features demand reductions: terminate filling or refilling of pools and fountains, which applies to Stage 4 Shortage Levels.

Other Demand Reductions

LVMWD's primary method for demand reduction is through a variety of water conservation programs such as the Irrigation Efficiency Retrofit Program[8] (which promotes weather-based irrigation controllers), Landscape Transformation Program[9] and Design Assistance, Native Garden kits, annual education workshops, and the Rain Barrel Discount Program. Weather-based irrigation controllers reduce water use by automatically adjusting irrigation schedules based on real-time weather data. Landscape transformation encourages customers to transition from water-intensive grass to climate appropriate landscaping, and rain barrels help store water from wet periods for use during dry periods. The District also leverages its Advanced Metering Infrastructure (AMI) and the Watersmart customer water use portal which can also help reduce demand. Based on the LVMWD Comprehensive Water Conservation Plan Fiscal Years 2022-2024, LVMWD was able to report water savings of 30 percent when compared to water usages in 2020. More information on these programs can be found in UWMP Chapter 9 or on the District's website.

2023 Resource Conservation Achievements

- 2023 achieved 30% overall water conservation (2023 vs. 2020)
- 2023 achieved 14% recycled water conservation (2023 v. 2020)
- Installed 493 Rachio irrigation controllers
- Hosted nine workshops attended by 203 unique (non-repeat) customers
- Distributed 149 native plant kits to participating residents
- Launched the Irrigation Efficiency Retrofit Program (75 customer applications)
- Issued 117 rain barrel vouchers
- Awarded Prop.1, Round 2 IRWM Grant ($123,800)
- Awarded DWR Urban Community Drought Relief Grant Funding – IEUA Partnership ($504,771)
- Launched the Water Hero Customer Recognition Program

8.4.3 Operational Changes

During all water shortage stages, LVMWD would decrease line flushing to the extent possible without triggering water quality issues to reduce water demand. In addition, LVMWD would implement the following under a Stage 4 Critical Water Shortage Emergency:

- Terminate potable water supplement to the recycled water system
- Install more flow restrictors on meters as necessary for the most wasteful water users
- Recall all temporary meters and active water fill stations

[8] https://www.lvmwd.gov/irrigation-retrofit

[9] https://yoursmartyard.org/lvmwd-yardzen

8.4.4 Additional Mandatory Restrictions

LVMWD does not have additional mandatory restrictions outside of those listed in the Demand Reduction Measures section.

8.4.5 Emergency Response Plan

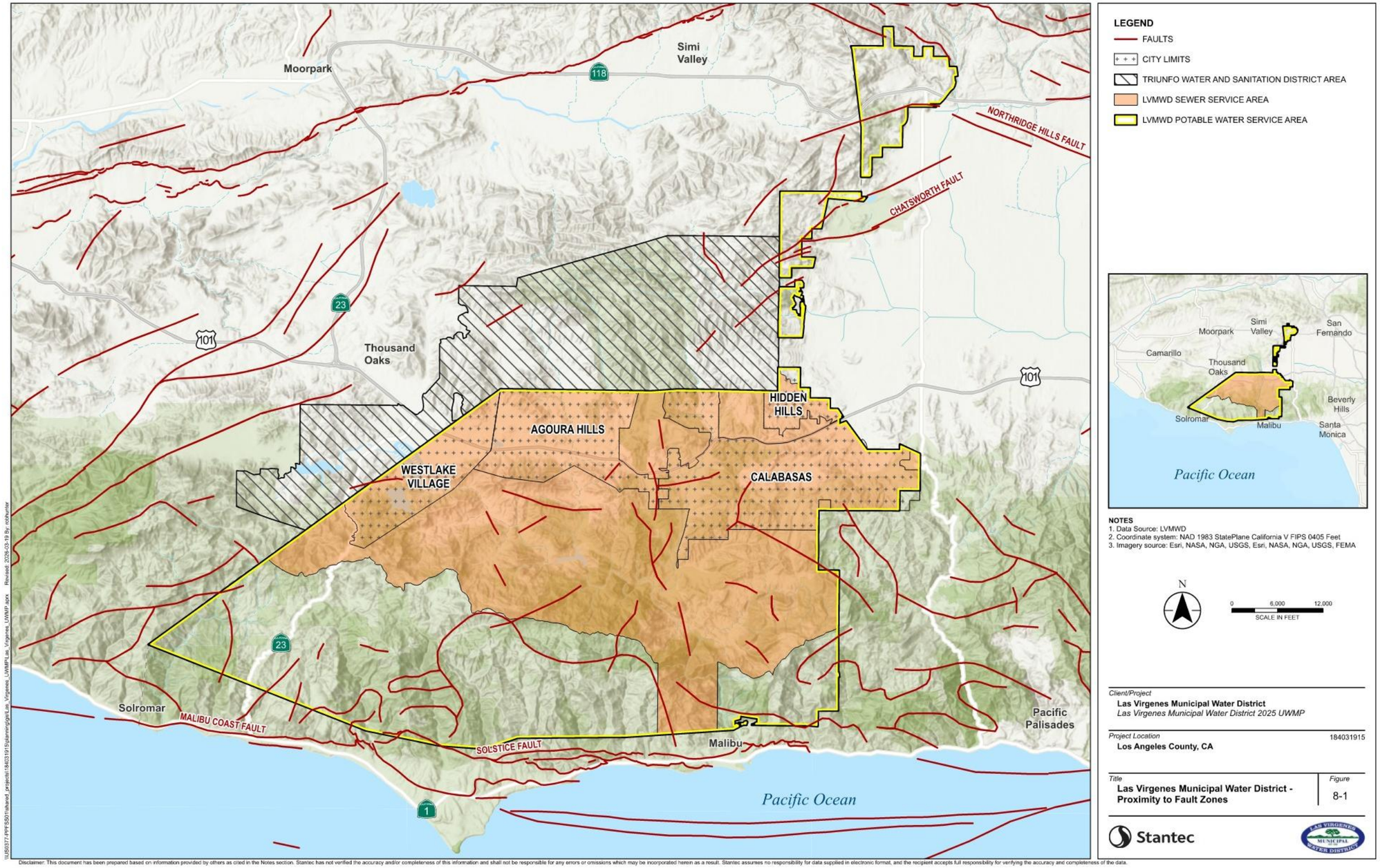
The Emergency Response Plan (ERP) defines an emergency and has plans, procedures, policies, and agreements for various emergencies. These include water contamination, power outage, earthquake, and water supply interruption, among others and may trigger a Level 4 Water Shortage, in addition, MWD is the primary contact during a major emergency throughout Southern California. If the MWD interties are not available, LVMWD has two interties with LADWP that can be used in emergency situations as well as a recently completed intertie with Calleguas Municipal Water District.

8.4.6 Seismic Risk Assessment and Mitigation Plan

The Malibu Coast fault system includes the Malibu Coast, Santa Monica, and Hollywood faults. The system begins in the Hollywood area, extends along the southern base of the Santa Monica Mountains, and passes offshore a few miles west of Point Dume.

The Malibu Coast fault system runs south of the LVMWD service area while the Northridge Hills fault and the Chatsworth fault run north of the LVMWD service area as shown in Figure 8-1: Being in close proximity to the Malibu Coast fault system, the Northridge Hills fault, and the Chatsworth fault makes LVMWD's facilities prone to liquefaction, surface faulting, and landslides. This is further described in the 2025 Las Virgenes Municipal Water Hazard Mitigation Plan (see UWMP Appendix F).

Figure 8-1: LVMWD Proximity to Fault Zones



Although LVMWD has a connection to the LADWP system and an intertie with Calleguas, which can be used during MWD outages, following a major earthquake, the Las Virgenes Reservoir may be the only source of supply that LVMWD could rely on.

A catastrophic event, such as an earthquake damaging the State Water Project (SWP) aqueducts that transport imported water supplies could result in an unplanned interruption in MWD supplies, which LVMWD depends on. In recognition of the possibility of such unplanned events, MWD has invested in emergency storage facilities located within and outside of the region to facilitate continued supplies. In the event of a SWP outage, water stored in surface water reservoirs and groundwater basins under MWD's emergency storage program would be made available to meet demands by MWD member agencies, which includes LVMWD. In the case of extreme water shortages within the MWD service area, MWD will implement the Water Supply Allocation Plan (WSAP). The WSAP provides methodologies for allocating supply to each of MWD's retail and wholesale customers on an equitable needs-basis, and establishes surcharges for excess water use. The WSAP was originally adopted by the MWD Board in 2008 and was revised in 2014 and 2020. These efforts increase the reliability of supplies on a region-wide basis, including the LVMWD service area, even under unexpected circumstances, such as catastrophic supply interruption.

8.4.7 Shortage Response Action Effectiveness

LVMWD's historical water use data demonstrates that the District's shortage response actions have been highly effective in reducing demand during drought conditions. As shown in the ten-year historical water use trends, total potable water use declined substantially during recent drought periods, reflecting both strong customer responsiveness and the effectiveness of the District's conservation programs, allocation frameworks, and enforcement measures. These reductions were achieved while maintaining public health and safety and without long-term rebound increases in demand following drought recovery. The District's demonstrated ability to rapidly curtail water use during dry years provides confidence that the shortage response actions outlined in this Water Shortage Contingency Plan will achieve the intended demand reductions when implemented.

LVMWD's primary method for demand reduction is through a variety of water conservation programs, public engagement and increasing enforcement. The district estimates that the suite of demand reduction activities would reduce total demand between 0 and 20%. This is a conservative estimate based on LVMWD experience, regional conservation programs, and estimates from MWD. The 2018-2020 Comprehensive Water Plan reported water savings of 34 percent when compared to 2013, demonstrating a comprehensive trend of permanent water savings. More information on these programs can be found in UWMP Chapter 9 or on the District's website.

8.5 Communication Protocols

LVMWD has several communication tools and methods already enacted to engage customers, the public, elected officials, and other agencies. The following communication tools are used in varying degrees at all water storage levels:

- LVMWD website[10]
- Bill stuffers
- Email listserv
- "The Current Flow" newsletter
- Conference presentations
- Local TV ads and programs
- Printed media (flyers, bulletins)
- Booths at local events
- Facility tours
- Newspaper ads and editorials
- Speakers Bureau
- K-12 classroom events
- Social medial (various)
- Everbridge alerts
- Watersmart Customer Portal

LVMWD's website is one of the primary means of communication and is regularly updated. It includes information about billing and emergencies, as well as water conservation resources. Much of the website content is replicated on various social media platforms and printed media. Content for all external communication is approved by the Director of External Affairs.

The District recognizes that not all customers use or have access to the internet and use alternative methods such as billing stuffers and newspaper ads to communicate with their customers. LVMWD has begun to use translated subtitles on some important video work to ensure that those messages can be understood by Spanish-only speakers.

In the event of an emergency, the District General Manager would contact LVMWD Directors and the Communications Manager to begin the emergency response plan, as previously discussed. The District would also use the Everbridge system to communicate to both internal staff and external customers.

The tools and methods outlined above augment and compliment the efforts by MWD. Both entities have extensive communication and outreach campaigns as outlined in their WSCPs. To ensure the collaboration and continuity of these outreach efforts, staff currently attends regular meetings with MWD. If a water shortage is declared, LVMWD anticipates these meetings will increase in frequency.

8.6 Compliance and Enforcement

Section 3-4.406 of the LVMWD Code outlines enforcement actions for violations of water conservation measures. These actions are summarized in Table 8-B. LVMWD customers are encouraged to report water conservation violations through use of the LVMWD hotline.

Table 8-B: Penalties and Charges

Violation Level	Penalties and Charges
First Violation	The customer shall be notified in writing. The notice shall include a warning that further violations could result in stricter penalties.
Second Violation	A second violation within a twelve-month period is punishable by a fine of up to $100.

[10] https://www.lvmwd.gov/

Third Violation	A third violation within a twelve-month period is punishable by a fine of up to $200.
Fourth Violation	A fourth violation within a twelve-month period is punishable by a fine up to $500.
Fifth Violation	A fifth violation within a twelve-month period may result in the installation of a flow restrictor or termination of service.

LVMWD also employs the use of Administrative Penalties for wasteful water use for landscaping. To enforce water budgets and discourage excessive consumption, escalating financial penalties are applied when usage exceeds 200% of the assigned water budget:

- 1st Violation: Warning notice on the bill.
- 2nd Violation: $2.50 per unit (748 gallons) over 200%.
- 3rd Violation: $5.00 per unit over 200%; possible flow restriction device installation.
- 4th Violation: $7.50 per unit over 200%; flow restriction remains possible.
- 5th and Subsequent Violations: $10 per unit over 200%; flow restriction remains possible.

Customers may appeal within 15 days and defer payment during review. Penalties may be waived for billing errors, health/safety needs, or leaks per the District's Leak Adjustment Policy.

8.7 Legal Authorities

The district's Administrative Code describes the legal authority on which LVMWD will implement this WSCP and is described below.

8.7.1 Legal Authorities

The Water Shortage Contingency Plan establishes four stages of escalating response to a water shortage caused by droughts and emergencies. Each stage may be triggered by a declaration from Federal or State authorities, MWD, or the District, to address events that result in a water shortage. The Administrative Code authorizes the General Manager to implement the appropriate actions necessary to achieve the reduction target. LVMWD adopted the WSCP with Resolution No. 2481 on January 12, 2016. This Resolution amended Section 3-4.407 of the LVMWD Code and repealed Resolution No. 2478.

8.7.2 Declaration of Water Shortage

LVMWD shall declare a water shortage emergency condition to prevail within the area served by LVMWD whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.

MWD has stated its legal authorities within their 2020 and 2025 UWMPs.

8.7.3 Proclamation of Local Emergency

Las Virgenes Municipal Water District (LVMWD) maintains active and collaborative relationships with all local jurisdictions within its service area to comply with California Government Code Section 8558 and the

Emergency Services Act. This service area includes the cities of Agoura Hills, Calabasas, Hidden Hills, Westlake Village, as well as the unincorporated areas of western Los Angeles County. In the event of a local emergency, LVMWD is prepared to promptly coordinate with each city council and the Los Angeles County Office of Emergency Management to support emergency proclamations, ensuring that water supply services remain uninterrupted and emergency responses are fully integrated. Coordination protocols include maintaining up-to-date contact lists for city and county emergency management personnel. These measures guarantee that local officials and operational staff work together effectively during critical incidents under each jurisdiction's authority.

8.8 Financial Consequences of a Water Shortage Contingency Plan

LVMWD's water sales make up about 60% of total operating budget ratio, according to the 2024-2026 Adopted Budget. LVMWD designed their rates around water budgets. This structure proved successful during the 2012-2016 drought, since LVMWD was able to avoid both financial difficulties and imposing "drought rates". Additionally, LVMWD's use of Administrative Penalties for wasteful water use, creates a strong economic incentive to reduce water use, while generating additional revenue for the District during shortages. Costs to customers can escalate significantly with continued non-compliance.

8.8.1 Financial Impacts and Mitigation Action

Through its budgeting, financial planning, and rate studies, the District aims to ensure sufficient reserves to weather any financial impacts on managing a water shortage. Potable, recycled, and sanitation enterprise reserves all exceed reserve policy levels. The Rate Stabilization Fund and Operating Funds Cash Requirements exceed District policies and compliance requirements. LVMWD is evaluating additional ways to ensure fixed costs are covered by fixed revenues through its Draft Rate Study, conducted in 2025. This plan proposes reallocating MWD fixed costs to a proposed monthly 'readiness to serve' charge. This will increase financial and rate stability for LVMWD and increase fixed revenue recovery to 36%, ensuring more accurate pass-through of MWD costs.

8.8.2 Reporting Cost of Compliance with Excessive Water Use Prohibition During Drought Emergency

Under California Water Code, retail water suppliers must report the cost of compliance with Section 366, which mandates prohibiting excessive water use by individually metered or submetered residential customers during specified drought emergencies. These emergencies include a Governor-declared statewide drought, a Governor-declared local drought, or a locally declared water shortage requiring mandatory reductions under the supplier's Water Shortage Contingency Plan (WSCP). To comply, suppliers must implement one of two measures: adopt rate structures that discourage excessive use or enact ordinances defining and prohibiting excessive water use. While reporting the actions taken to enforce these measures is not required in the WSCP or Urban Water Management Plan (UWMP), Section 10632(a)(8)(C) requires suppliers to include the cost of compliance in their WSCP.

LVMWD's rate structure is designed to discourage excessive water use through a combination of tiered pricing and conservation incentives. Tiered Potable Water Rates are used where residential customers

pay progressively higher rates as their consumption moves through four tiers. The structure makes high-volume use significantly more expensive, encouraging customers to stay within lower tiers. The District also uses Budget-Based Water Rates which are tailored to household size and property characteristics. Customers who exceed their budgeted allocation move into higher tiers, facing higher per-unit costs. This approach aligns with the state's "Making Conservation a California Way of Life" mandate. LVMWD also employs the use of Administrative Penalties for wasteful water use. To enforce water budgets and discourage excessive consumption, escalating financial penalties are applied when usage exceeds 200% of the assigned water budget.

8.9 Monitoring and Reporting

LVWMD will utilize their SmartMeter/ AMI program to gather monthly data. LVMWD staff will then analyze the data and generate reports which will be included as part of the Annual Assessment.

8.10 WSCP Refinement Procedures

The WSCP will be reviewed as part of the Annual Assessment. The WSCP may also be reviewed in the event that MWD makes substantial changes to their WSCP. To update the WSCP, LVMWD staff would make the necessary changes and go through an internal review process. LVMWD would then go before the Board for a final review and adoption.

8.11 Special Water Feature Distinction

As discussed in the Demand Reduction section, LVMWD will impose restrictions on special water features under a Stage 4 shortage. At Stage 4, outdoor water use will only be allowed for public health and safety purposes.

8.12 Plan Adoption, Submittal, and Availability

The LVMWD WSCP was developed and included in the 2025 UWMP and shall be made available to its purveyors and any city or county within which it provides water supplies no later than 30 days after adoption. Below is a description of how the WSCP will be adopted, submitted, implemented, and amended. The information provided is similar to the UWMP adoption, submittal and implementation process provided in UWMP Chapter 10.

Not later than 30 days after filing a copy of its plan with the Department of Water Resources (DWR), the urban water supplier and the DWR shall make the plan available for public review during normal business hours. The adopted 2025 UWMP and WSCP for the District will be made publicly available on the District's website https://www.lvmwd.com/your-water/urban-water-management-plan.

Chapter 9. Demand Management Measures

9.1 Demand Management Measures for Retail Suppliers

In 2018, two important legislative actions were passed that require water agencies to implement additional conservation efforts. AB 1668 and SB 606 build on previous state efforts to make water conservation a way of life in California and create a new foundation for long-term improvements in water conservation and drought planning. These legislative actions provided the long-term direction of state conservation efforts and have important implications for the District as it implements conservation programs to achieve state mandated conservation requirements.

SB 606 and AB 1668 established guidelines for efficient water use and a framework for the implementation and oversight of the new standards. System water loss legislation under SB-555 also required urban retail water providers to achieve water loss standards for minimizing system water loss (i.e. pipeline leaks). AB 1572 is being implemented as a demand management measure that permanently eliminates potable water use for non-functional turf irrigation at commercial, industrial, and institutional properties, resulting in sustained reductions in landscape water demand.

In order to assist with the implementation of these directives, they have been collectively included into a regulatory and implementation framework called *Making Conservation a California Way of Life*. The framework establishes tightening conservation standards through 2045 and a unique, Urban Water Use Objective (annual water budget) for every urban retail water supplier. The overall budget is a sum of standard-based budgets for a subset of water uses, including residential indoor and outdoor use, real water losses, and commercial, institutional, and industrial landscapes. Failure to comply with unique water budgets can escalate in monetary fines beginning in 2027.

9.1.1 Implementation over the Past Five Years

The purpose of the Demand Management Measures (DMM) section of this UWMP is to describe the DMMs that LVMWD (a) has implemented over the past five years (since 2020) to meet its urban water use reduction targets and (b) plans to implement to meet its urban water use reduction targets. The UWMP Act and Water Code require descriptions of the following DMMs:

- Water waste prevention ordinances
- Metering
- Conservation pricing
- Public education and outreach
- Programs to assess and manage distribution system real loss
- Water conservation program coordination and staffing support
- Other demand management measures

Narrative descriptions of LVMWD's DMMs are provided below and include conservation measures already in place as well as those that are being considered to improve the efficiency of water use within LVMWD.

9.1.2 Implementation to Achieve Water-Use Targets

As described in Chapter 5, LVMWD achieved their SB X7-7 target as reported in the 2020 UWMP. The following sections describe the Demand Management Measures which will be implemented or extended to achieve compliance with urban water-use objectives and annual reporting as defined under 23 CCR Sections 965 through 978.

9.1.3 Required Demand Management Measures

9.1.3.1 Water Waste Prevention Ordinances

Section 3-4.202 of Article 2 of the LVMWD Administrative Code, addresses penalties for wasteful water use. These penalties were adopted in 2015 and were amended in 2019 and in 2023. As described in that section, District customers are not allowed to use water wastefully or negligently and shall not knowingly permit leaks.

Water use budgets are established for each customer of LVMWD. The district employs the use of Administrative Penalties for wasteful water use for landscaping. To enforce water budgets and discourage excessive consumption, escalating financial penalties are applied when usage exceeds 200% of the assigned water budget:

- 1st Violation: Warning notice on the bill.
- 2nd Violation: $2.50 per unit (748 gallons) over 200%.
- 3rd Violation: $5.00 per unit over 200%; possible flow restriction device installation.
- 4th Violation: $7.50 per unit over 200%; flow restriction remains possible.
- 5th and Subsequent Violations: $10 per unit over 200%; flow restriction remains possible.

Customers may appeal within 15 days and defer payment during review. Penalties may be waived for billing errors, health/safety needs, or leaks per the District's Leak Adjustment Policy.

In 2021, LVMWD also updated the Water Shortage Contingency Plan, which is updated herein. See Chapter 8 of this UWMP.

9.1.3.2 Metering

Currently, all connections within LVMWD's service area are metered and customers are billed according to the amount of water used. LVMWD will continue to install meters on all new connections.

In November 2022, Las Virgenes Municipal Water District completed its Advanced Metering Infrastructure (AMI) project implementation, replacing approximately 21,000 meters with smart meters. This meter upgrade program enables near real-time water use monitoring and leak detection and notification through automated continuous consumption alerts, significantly improving customer response to conservation

efforts. The program is estimated to save 1,000–1,500 acre-feet of water annually, primarily through reduced leaks and more efficient customer usage. Currently 36 percent of District customers are registered for the Watersmart customer portal. Even customers who are not formally registered but have an active email receive continuous consumption alerts resulting in improved water conservation outcomes.

9.1.3.3 Conservation Pricing

In an effort to encourage water use reduction, LVMWD implemented a budget-based water billing structure in 2015. Each customer is provided with a personalized water budget, which is designed to meet their specific indoor and outdoor water needs.

For residential customers, budgets are based on 1) indoor use 2) outdoor use and 3) special adjustments based on household needs. The indoor need is based on providing each person in the household with a standard volume of water (California standard is 47 gallons per day per person). The outdoor need is based on irrigated area and local weather and is variable on a monthly basis as weather changes. For commercial customers, individual budgets are based on each customer's historical usage. Customers are then charged based on their efficiency relative to their budget (by tier). A summary of the tiers, tier descriptions, and related 2025 rates for single- and multi-family residential customer classes is provided in Table 9-A.

Table 9-A: Quantity Rates and Tier Level

Tier Name/Description (Residential and Irrigation[b])		**Customer Rates ($/HCF)[a]**
Tier 1	Efficient Indoor (Indoor Water Budget)	$4.76
Tier 2	Efficient Outdoor (Outdoor Water Budget)	$5.69
Tier 3	Inefficient (101-150% of Budget)	$6.51
Tier 4	Excessive (Over 150% of Budget)	$7.92

In addition to the budget-based commodity charges, District water rates also include a "Readiness to Serve Charge", which is a fixed rate depending on the meter size, and per unit elevation charges to offset pumping costs. Elevations charges differ by zone, with customers at higher elevations paying higher costs per unit of water.

9.1.3.4 Public Education and Outreach

Public Information Program

LVMWD maintains an intensive outreach commitment to customers regarding water conservation benefits and practices. LVMWD engages in numerous public information programs, including ongoing public tours of district facilities preceded by a presentation on conservation. Specialized tours are provided to leadership from local cities, state and local elected officials, local environmental group volunteers, and K-12 and college students. LVMWD provides expert speakers to service clubs, homeowner associations,

chambers of commerce and other organizations on a variety of topics, including water conservation, water efficient plant selections, climate impacts on water supply and more.

Las Virgenes–Triunfo's Pure Water pilot project includes a demonstration facility and a complementary sustainability garden designed for education and outreach. The demonstration facility, completed in 2020, allows operators to manage advanced purification processes (micro/ultrafiltration, reverse osmosis, and UV advanced oxidation) and gain hands-on experience in system optimization, troubleshooting, and compliance under real-world conditions. Surrounding this facility is the 7,700 sq ft Pure Water Sustainability Garden in Calabasas, featuring interactive "outdoor classroom" garden rooms equipped with interpretive signage and QR-coded content. The garden highlights water-wise landscaping techniques, native plant biodiversity, stormwater management, and sustainable irrigation, serving as a live teaching tool to engage and inspire the public and reinforce the importance of local recycled water use. Together, these components support both technical preparedness and community education, laying a strong foundation for broader acceptance and understanding of the upcoming advanced water purification facility.

LVMWD utilizes multiple media outlets to encourage water conservation and educate its customers, including social media, its website, cable television, "auto dial" telephone messages, news releases, newsletters, paid ads in local newspapers, and portions of the Water Quality Report dedicated to conservation messaging. LVMWD's General Manager is periodically featured on several television newscasts, a radio program and multiple cable television productions speaking on the topic of water conservation.

The LVMWD website provides a substantial amount of water conservation resources and information. The website includes detailed tips and guidance on conserving water, both indoors and outdoors, including videos on how to check for leaks, irrigate properly, utilize the WaterSmart platform, and save water. In addition, the website is used to advertise initiatives to further reduce potable water use. For example, the website advertises that any resident of LVMWD or Triunfo Water and Sanitation District can obtain free compost from the Rancho Las Virgenes Community Composting Facility every Saturday. The soil amendment improves soil conditions and results in reduced watering needs. Additional content includes rebates, water-wise plants, daily watering index, sign-ups for water-wise gardening classes and facility tours and conservation advisories.

LVMWD also publishes a podcast series and quarterly newsletter to educate the public in water reuse and water conservation. LVMWD's Full Circle Podcast serves as an educational platform to engage the community on water issues, conservation strategies, and the importance of sustainable water management. By explaining complex topics like water recycling and drought resilience in an accessible format, the podcast helps listeners understand how individual actions contribute to regional water security. This outreach effort promotes conservation by fostering awareness, encouraging behavioral changes, and building public support for innovative water solutions. The District's newsletter, "The Current Flow", provides LVMWD customers with updates on conservation, rebates, environmental stewardship, easy to use water-saving ideas, landscaping tips and more. The newsletter is mailed to customers and is also available on the LVMWD website and in hard copy at LVMWD. Water conservation information is also included in the LVMWD annual water quality consumer confidence report. Social media outlets, including X (formerly Twitter), Instagram and Facebook, are also used for public outreach.

At community events occurring throughout the District's service area, LVMWD promotes awareness of water conservation issues through an informational outreach booth, often accompanied by its mascot "Little Drop." Among the many events where LVMWD has encouraged water conservation are the following:

- Great Race Agoura
- Calabasas Earth Day
- City of Thousand Oaks Arbor Day
- City of Westlake Village Earth Day
- International Women's Day
- Agoura Hills Concerts in the Park
- Calabasas Class 5K
- Reyes Adobe Days Festival
- Ladyface Mountain Film Festival
- Westlake City Celebration
- ASM Jacqui Irvin's Safety Fair
- Calabasas Pumpkin Festival
- Calabasas Environmental Forum
- City of Westlake Village Holiday Sing-Along

Further efforts include the donation of water-topic books and other resources to local libraries, and presentations scheduled at local city council meetings, all of which are carried out on public access television. LVMWD also conducts point of purchase advertising in conjunction with its rebate programs.

School Education Programs

The District has supported a concerted effort to support a robust K-12 education program focused on teaching students the importance of water as a limited natural resource. LVMWD's primary outreach is conducted with Las Virgenes Unified School District, which serves approximately 10,500 students. Additional outreach is made to Oak Park Unified School District, private schools, and home-schooled students. Beyond supporting field trips, the LVMWD board annually budgets for $107,000 direct financial support to the Las Virgenes Unified School District Science Team and Water-related curriculum for 4th and 5th grade students. The funding supports specialized science teachers and curriculum on water sources, supply reliability, conservation and environmental stewardship, reaching approximately 1,500 students annually. The District also provides on-site immersive programming centered on promoting greater awareness of water use with activities such as assemblies and hands-on succulent planting.

9.1.3.5 Programs to Assess and Manage Distribution System Real Loss

A Water Loss Audit was produced and validated for the 2024 calendar year. The audit was based on the water system balance methodology established by the American Water Works Association (AWWA) Manual 36. The results showed that LVMWD's unaccounted water losses (real and apparent losses) were approximately 11%.

The District regularly utilizes visual inspection of distribution routes and aerial surveys of 8 miles of pipeline traversing rugged terrain to detect leaks. Additionally, LVMWD has enrolled in a pilot program using ASTERRA Satellite Leak Detection to investigate identified points of interest. This system uses satellites flown over the service area which feed into an algorithm to find locations with possible leaks. The District has applied to MWD's Municipal Leak Detection and Repair Grant Pilot Program to fund the training of staff with newer equipment and a contractor for boots-on-the-ground leak detection services. In 2026, the contractor will investigate a subset of the distribution system per year, with the goal of covering the whole system over a period of years. Investigation of specific locations will also be balanced with points of interest identified by ASTERRA, frequent breaks in certain areas, and results of the pipeline condition assessment study. The results of the pipeline condition assessment study will help inform the creation of the pipeline replacement program, with the goal of identifying and replacing the most at-risk pipelines in advance of breakage.

9.1.3.6 Water Conservation Program Coordination and Staffing Support

Water conservation is one of the primary methods LVMWD uses to reduce total customer demand. In order to achieve those goals, the District launched several conservation efforts targeting the most wasteful water users and inefficient outdoor water use.

Irrigation Efficiency Retrofit Program

The Las Virgenes Municipal Water District's Irrigation Efficiency Retrofit Program (IERP) offers fully funded upgrades for customer irrigation systems to reduce outdoor water waste and maximize water efficient best practices. Following a free Water-Efficient Home Survey conducted by WaterWise professionals, eligible participants receive professional installation services that may include replacing aging nozzles with high-efficiency sprinkler nozzles, conversion from spray to drip irrigation, capping of unnecessary heads, and installation of weather-based "smart" irrigation controllers with full programming support—now available at no cost and valued at up to $1,500 for residential users (and up to $3,000 for commercial/HOA customers). The commercial program includes professional irrigation leak repairs. The program operates on a first-come, first-served basis, with a one-retrofit-per-customer policy and eligibility contingent on a functioning existing system. Key exclusions include trenching, new system installations, mixed-equipment zone retrofits, and major repairs.

Sustainable Landscapes Workshop Series

The Sustainable Landscape Workshop Series is an educational program designed to help residents create water-efficient, environmentally friendly landscapes. These workshops typically cover topics such as drought-tolerant plant selection, soil health, efficient irrigation practices, and landscape design principles that reduce water use while enhancing aesthetics and biodiversity. The series holds 4-8 yearly workshops covering topics such as:

- Turf Removal
- Lawn Alternatives
- Native Garden Maintenance
- Firescaping
- Drip Irrigation

- Pollinator-friendly Gardens
- California-friendly Landscaping
- Garden Design
- Turf Replacement Program (rebate program how-to)

Native Garden Kit Rebate

LVMWD has partnered with TreePeople to offer customers discounted Native Garden Kits. Kits contain 10 one-gallon California native plants, a planting and maintenance guide, and a 'plant-by-numbers' site map. LV customers are eligible to receive a $50 instant rebate for up to five kits.

Drought Relief Landscape Program

LVMWD's Drought Relief Landscape Program is a funded initiative under the State's Urban Community Drought Relief Grant designed to help residents quickly replace high-water-use turf with drought-tolerant landscaping. The program covers turf removal and installation of native, climate-appropriate plants across residential and public properties within its service area, aiming to remove approximately 110,000 ft² of turf.

9.1.3.7 Other Demand Management Measures

Rebate Programs

LVMWD has been offering and promoting water conservation rebates in coordination with MWD as part of the SoCal WaterSmart rebates program, including the following:

- High Efficiency Toilet (HET)
- High Efficiency Clothes Washer (HECW)
- Flow Monitor/Leak Detection Devices
- Weather-Based Irrigation Controller (WBIC)
- Rotating Sprinkler Heads
- Rain Barrel
- Cistern
- Soil Moisture Sensor System
- Premium High-Efficiency Toilets
- Ultra-Low and Zero Water Urinals
- Plumbing Flow Control Valves
- Large Rotary nozzles
- In-stem Flow Regulators
- Soil Moisture Sensor Systems
- Connectionless Food Steamers
- Air-cooled Ice machines
- Cooling Tower Conductivity Controllers
- Cooling Tower pH Controllers

- Dry Vacuum Pumps
- Laminar Flow Restrictors
- Turf Removal

Chapter 10. UWMP Adoption, Submittal, and Implementation

10.1 Plan Completion Timeline

The 2025 LVMWD UWMP consists of water use and planning data for calendar year 2025. The District is reporting on a calendar year basis.

10.2 Notice of Plan Preparation

The Water Code states that cities and counties must be notified that the Supplier will be reviewing the UWMP and considering amendments to the plan at least 60 days prior to the public hearing.

Table 10-1 provides a summary of cities and counties that were provided with both the 60-Day Notice and Notice of Public Hearing by email. The notification letters are included in Appendix A.

Submittal Table 10-1: Retail: Notification to Cities and Counties

Submittal Table 10-1 Retail: Notification to Cities and Counties Water Code Section 10621(b) and 10642		
City Name	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
Add additional rows as needed		
County Name **Drop Down List**	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
Add additional rows as needed		
NOTES:		

10.3 Notice of Public Hearing

Public hearings are required for both the UWMP and the WSCP prior to their adoption. Prior to holding the public hearing and adoption meeting for this UWMP and WSCP, a Notice of Public Hearing was published twice in a local newspaper, with a week between each notice. A copy of the public notice is included in Appendix B.

Submittal Table 10-1 above shows notifications of the public hearing.

10.4 Public Hearing and Adoption

As part of the public hearing, the District provided information on its baseline values, water use targets, and implementation plan required in the Water Conservation Act of 2009. The public hearing on the UWMP took place before the adoption of the UWMP, but on the same day as the adoption. The public hearing and board adoption were held at the District office on [Anticipated in May 2026]. The District has formally adopted the UWMP. A copy of the District's adoption resolution is included in Appendix C, along with the agenda for the public hearing.

10.5 Plan Submittal

10.5.1 Submitting a UWMP and WSCP to DWR

The District's 2025 UWMPs will be submitted to DWR within 30 days of adoption and by July 1, 2026. UWMP submittal will be done electronically through the WUE Data Portal, an online submittal tool that will be updated for 2025 UWMPs and available in adequate time for UWMP submittal.

10.5.2 Electronic Data Submittal

The District will submit the UWMP, including the WSCP, and associated Submittal Tables data, and other information electronically using the WUEdata portal.

10.5.3 Submitting a UWMP, Including WSCP, to the California State Library

No later than 30 days after adoption, the District will submit a file on compact disk (CD) or a hard copy of the adopted 2025 UWMP, including the adopted WSCP, to the California State Library at:

California State Library Government Publications Section
Attention: Coordinator, Urban Water Management Plans
P.O. Box 942837
Sacramento, CA 94237-0001

If delivered by courier or overnight carrier to the State Library, the District will use the following street address instead of the P.O. Box:

California State Library Government Publications Section
Attention: Coordinator, Urban Water Management Plans
900 N Street
Sacramento, CA 95814

10.5.4 Submitting a UWMP to Cities and Counties

No later than 30 days after adoption, the District will submit a copy of the adopted 2025 UWMP, including the WSCP, to any city or county to which the District provides water (see Cities and Counties listed on Submittal Table 10-1 R). This will also satisfy Water Code Section 10635(b).

10.6 Public Availability

Not later than 30 days after filing a copy of its plan with DWR, the District will make the plan available for public review during normal business hours. The plan will also be available on the District's website.

10.7 Notification to Public Utilities Commission

LVMWD is not regulated by the California Public Utilities Commission.

10.8 Plan Implementation

The District will implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in this plan.

10.9 Amending an Adopted UWMP or WSCP

10.9.1 Amending a UWMP or WSCP

If the District amends an adopted UWMP or WSCP, each of the steps for notifications, public hearing, adoption, and submittal will also be followed for the amended plan.

10.9.2 Submitting Revised UWMP or WSCP

If the District revises their UWMP or WSCP after DWR has accepted the 2025 UWMP or WSCP, the District will submit to DWR an electronic copy through the WUEdata portal of its revised UWMP or WSCP within 30 days of its adoption.

10.10 California DWR Review of Submitted Plans

After the UWMP has been submitted, DWR will review the plan using the provided checklist (Appendix D) and determine whether the UWMP addresses the requirements of the Water Code. The DWR reviewer will contact the Supplier as needed during the review process. Upon completion of the Plan review, DWR will issue a letter to the Supplier with the results of the review.

Appendices

Appendix A Notification Letters

HEADQUARTERS
4232 Las Virgenes Road
Calabasas, CA 91302
(818) 251-2100
Fax (818) 251-2109

WESTLAKE
FILTRATION PLANT
(818) 251-2370
Fax (818) 251-2379

TAPIA WATER
RECLAMATION FACILITY
(818) 251-2300
Fax (818) 251-2309

RANCHO LAS VIRGENES
COMPOSTING FACILITY
(818) 251-2340
Fax (818) 251-2349

www.LVMWD.com

March 11, 2026

Attention:
Kristine McCaffrey & Ian Prichard
General Manager, Deputy General Manager
Calleguas Municipal Water District
2100 E. Olsen Road
Thousand Oaks, CA 91360-6800

Dear Ms. McCaffrey and Mr. Prichard,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

This letter serves as notification that Las Virgenes Municipal Water District (LVMWD) is currently preparing its 2025 Urban Water Management Plan (UWMP) and 2025 Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code. The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. The WSCP is a planning document that provides a plan of action to be followed at various levels of a water shortage. An updated UWMP and WSCP are necessary for LVMWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

The 2025 UWMP and WSCP will include an update of anticipated water demands in the LVMWD service area. LVMWD invites all stakeholders and the public to participate in the process and provide comments on any elements of the UWMP or WSCP, including assumptions about future population, future water demand, future water supplies, and upcoming water conservation programs.

A draft of LVMWD's 2025 UWMP and WSCP will be available for review prior to the public hearing, which is tentatively scheduled for June 16, 2026. We anticipate that a draft UWMP and WSCP will be available for public review starting in late March 2026 at https://www.lvmwd.gov/urban-water-management-plan and LVMWD will hold a public hearing subsequent to the 60-day review period and prior to adoption of the final UWMP. The exact day and time of the meeting will be announced on the above website link when the agenda has been finalized. All interested parties are invited to attend.

If you would like more information or have any questions, please contact Cindy Chau, MPH, at 818-251-2168 or via email at cchau@lvmwd.gov.

Regards,

Cindy Chau

Cindy Chau, MPH
Management Analyst II
Las Virgenes Municipal Water District

LAS VIRGENES MUNICIPAL WATER DISTRICT
EST. 1958

Dedicated to Providing High-Quality, Reliable Water Service in a Cost- Effective and Environmentally Sensitive Manner

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Calabasas, CA 91302
(818) 251-2100
Fax (818) 251-2109

WESTLAKE
FILTRATION PLANT
(818) 251-2370
Fax (818) 251-2379

TAPIA WATER
RECLAMATION FACILITY
(818) 251-2300
Fax (818) 251-2309

RANCHO LAS VIRGENES
COMPOSTING FACILITY
(818) 251-2340
Fax (818) 251-2349

www.LVMWD.com

MEMBER AGENCY OF THE
METROPOLITAN WATER
DISTRICT
OF SOUTHERN CALIFORNIA

March 11, 2026

Attention:
Charmaine Yambao
Director of Public Works/City Engineer
City of Agoura Hills
30001 Ladyface Court
Agoura Hills, CA 91301

Dear Ms. Yambao,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

This letter serves as notification that Las Virgenes Municipal Water District (LVMWD) is currently preparing its 2025 Urban Water Management Plan (UWMP) and 2025 Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code. The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. The WSCP is a planning document that provides a plan of action to be followed at various levels of a water shortage. An updated UWMP and WSCP are necessary for LVMWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

The 2025 UWMP and WSCP will include an update of anticipated water demands in the LVMWD service area. LVMWD invites all stakeholders and the public to participate in the process and provide comments on any elements of the UWMP or WSCP, including assumptions about future population, future water demand, future water supplies, and upcoming water conservation programs.

As part of this effort, we are using your jurisdiction's most recently available Housing Element to estimate future population growth and water demand. If your agency has a more current or updated Housing Element than what is publicly available online, we would appreciate it if you could share that information with us.

A draft of LVMWD's 2025 UWMP and WSCP will be available for review prior to the public hearing, which is tentatively scheduled for June 16, 2026. We anticipate that a draft UWMP and WSCP will be available for public review starting in mid-March 2026 at https://www.lvmwd.gov/urban-water-management-plan and LVMWD will hold a public hearing subsequent to the 60-day review period and prior to adoption of the final UWMP. The exact day and time of the meeting will be announced on the above website link when the agenda has been finalized. All interested parties are invited to attend.

If you would like more information or have any questions, please contact Cindy Chau, MPH, at 818-251-2168 or via email at cchau@lvmwd.gov.

Regards,

Cindy Chau

Cindy Chau, MPH
Management Analyst II
Las Virgenes Municipal Water District

March 11, 2026

Attention:
Curtis Castle and Michael Klein
Public Works Director/City Engineer, Community Development Director
City of Calabasas
100 Civic Center Way
Calabasas, CA 91302

Dear Mr. Castle and Mr. Klein,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

This letter serves as notification that Las Virgenes Municipal Water District (LVMWD) is currently preparing its 2025 Urban Water Management Plan (UWMP) and 2025 Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code. The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. The WSCP is a planning document that provides a plan of action to be followed at various levels of a water shortage. An updated UWMP and WSCP are necessary for LVMWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

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If you would like more information or have any questions, please contact Cindy Chau, MPH, at 818-251-2168 or via email at cchau@lvmwd.gov.

Regards,

Cindy Chau

Cindy Chau, MPH
Management Analyst II
Las Virgenes Municipal Water District

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MEMBER AGENCY OF THE
METROPOLITAN WATER
DISTRICT
OF SOUTHERN CALIFORNIA

March 11, 2026

Attention:
Michael Ackerman
City Engineer
City of Hidden Hills
6165 Spring Valley Road
Hidden Hills, CA 91302

Dear Mr. Ackerman,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

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Regards,

Cindy Chau

Cindy Chau, MPH
Management Analyst II
Las Virgenes Municipal Water District

March 11, 2026

Attention:
Tatiana Holden & Travis Hart
Interim Public Works Director/City Engineer,
Interim Assistant Public Works Director
City of Malibu
23825 Stuart Ranch Road
Malibu, CA 90265-4861

Dear Ms. Holden and Mr. Hart,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

This letter serves as notification that Las Virgenes Municipal Water District (LVMWD) is currently preparing its 2025 Urban Water Management Plan (UWMP) and 2025 Water Shortage Contingency Plan (WSCP) in accordance with the Urban Water Management Planning Act of the California Water Code. The Act requires urban water suppliers supplying more than 3,000 acre-feet of water annually or providing water to more than 3,000 customers to update their UWMP every five years. The UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. The WSCP is a planning document that provides a plan of action to be followed at various levels of a water shortage. An updated UWMP and WSCP are necessary for LVMWD to remain eligible for state drought water bank assistance and is a requirement of state grant and loan funding programs.

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Regards,

Cindy Chau

Cindy Chau, MPH
Management Analyst II
Las Virgenes Municipal Water District

March 11, 2026

Attention:
Ron Fuchiwaki
Director of Public Works
City of Simi Valley, Waterworks District No. 8
2929 Tapo Canyon Road
Simi Valley, CA 93063

Dear Mr. Fuchiwaki,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

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MEMBER AGENCY OF THE
METROPOLITAN WATER
DISTRICT
OF SOUTHERN CALIFORNIA

March 11, 2026

Attention:
Kristen Asp
Planning Director
City of Westlake Village
31200 Oak Crest Drive
Westlake Village, CA 91361

Dear Ms. Asp,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

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Regards,

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MEMBER AGENCY OF THE
METROPOLITAN WATER
DISTRICT
OF SOUTHERN CALIFORNIA

March 11, 2026

Attention:
Jeff Gorell
Supervisor Second District
County of Ventura
2100 E. Thousand Oaks Blvd., Suite E
Thousand Oaks, 91362

Dear Mr. Gorell,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

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March 11, 2026

Attention:
Amy J. Bodek & Dennis Slavin
Director and Chief Deputy Director, Department of Regional Planning
LA County Planning
320 West Temple Street
Los Angeles, CA 90012

Dear Ms. Bodek and Mr. Slavin,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

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MEMBER AGENCY OF THE
METROPOLITAN WATER
DISTRICT
OF SOUTHERN CALIFORNIA

March 11, 2026

Attention:
Mai Hattar & David Sumi
Chief Engineer/Group Manager, Engineering Services,
Senior Resource Specialist, Water Resource Management Group
The Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

Dear Ms. Hattar and Mr. Sumi,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

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MEMBER AGENCY OF THE
METROPOLITAN WATER
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OF SOUTHERN CALIFORNIA

March 11, 2026

Attention:
Jeff Palmer
Assistant Agency Director, Water and Sanitation
Public Works Ventura County
800 South Victoria Avenue L#1600
Ventura, CA 93009-1600

Dear Mr. Palmer,

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MEMBER AGENCY OF THE
METROPOLITAN WATER
DISTRICT
OF SOUTHERN CALIFORNIA

March 11, 2026

Attention:
Mark Norris & David Rydman
General Manager, Operations Manager
Triunfo Water and Sanitation District
370 N Westlake Blvd Suite 100
Westlake Village, CA 91362

Dear Mr. Norris and Mr. Rydman,

Reference: Notice of Preparation of Las Virgenes Municipal Water District (LVMWD) 2025 Urban Water Management Plan and Water Shortage Contingency Plan Availability and Public Comment Period

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Cindy Chau, MPH
Management Analyst II
Las Virgenes Municipal Water District

Appendix B Public Notification

Appendix C Adoption Resolution & Hearing Agenda

Appendix D DWR Checklist

Table Appendix D: Urban Water Management Plan Checklist

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and overview	n/a	Chapter 1
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the Supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a Supplier may also choose to include a simple description at the beginning of each chapter.	Plan preparation	n/a	Chapter 1
x	x	Section 2.1	10620(b)	Every person that becomes a Supplier shall adopt UWMP within one year after it has become a Supplier.	Plan preparation	n/a	Section 2.1
x	n/a	Section 2.5	10644	Supplier shall report the Public Water Systems number, volume of delivered water, and number of connections that are included in this UWMP.	Plan preparation	2-1	Chapter 2
x	x	Section 2.5	10644	Supplier shall report if this UWMP is an individual UWMP and whether the Supplier belongs to a regional UWMP or regional alliance.	Plan preparation	2-2	Chapter 2
x	x	Section 2.5	10644	Supplier shall report whether the data is in fiscal or calendar years and the units of measure used for reporting water volumes.	Plan preparation	2-3	Chapter 2
x	x	Section 2.4	10642	Provide supporting documentation that the Supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan preparation	n/a	Section 2.4
x	x	Section 2.4.2	10620(d)(3)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other Suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan preparation	n/a	Section 2.4.2
x	n/a	Section 2.4.1	10631(h)	Retail Suppliers will include documentation that they have provided their Wholesale Supplier(s)—if any—with water use projections from that source.	Plan preparation	2-4 R	Chapter 2
n/a	x	Section 2.4.1	10631(h)	Wholesale Suppliers will provide their Suppliers with identification and quantification of the existing and planned sources of water available from the Wholesale Supplier to the Supplier during various water year types.	Plan preparation	2-4 W	n/a
x	x	Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	n/a	Chapter 3.0
x	x	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	n/a	Section 3.3
x	x	Section 3.4.1	10631(a)	Provide the current and projected service area populations for 2030, 2035, 2040, 2045 and optionally 2050.	System description	3-1	Section 3.4.1
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the Supplier's water management planning.	System description	n/a	Section 3.4.2
x	x	Section 3.5	10631(a)	Describe the land uses within the service area and include the current and projected land uses within the existing or anticipated service area affecting the Supplier's water management planning. Describe the land uses within the service area.	System description and baselines	n/a	Section 3.5
x	Optional	Sections 4.2.3 and 4.2.4	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System water use	4-1 and 4-2	Sections 4.2.3 and 4.2.4
x	Optional	Section 4.3.1	10631(d)(3)(A)	Report the distribution system water loss for each of the five years preceding the plan update.	System water use	4-5	Section 4.3.1
x	n/a	Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System water use	4-6	Section 4.3.2

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	n/a	Section 4.2.5.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the Supplier.	System water use	4-3	Section 4.2.5.4
x	n/a	Section 4.2.5.3	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System water use	4-3	Section 4.2.5.3
x	n/a	Section 4.2.5.3	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System water use	4-3	Section 4.2.5.3
x	n/a	Section 4.2.5.3	10631(d)(4)(B)(ii)	To the extent that a Supplier reports the information described in subparagraph (A), an urban water Supplier shall… Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.	System water use	4-3	Section 4.2.5.3
x	x	Section 4.2.5.6	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System water use	n/a	Section 4.2.5.6
n/a	x	Section 5.1	10608.36	Wholesale Suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their Retail Suppliers achieve targeted water use reductions.	Baselines and targets	n/a	n/a
x	n/a	Section 5.2	10608.40	Retail Suppliers shall report on their compliance in meeting their water use targets. Reporting requirements will vary depending on whether the Supplier: Was considered an urban retail water supplier in 2020, Met its 2020 target in 2020, or Was part of a merger or consolidation since 2020. Chapter 5 Subsections 5.2.1, 5.2.2, and 5.2.3 address each of these situations.	Baselines and targets	5-1	Section 5.2
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System supplies	n/a	Section 6.1
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System supplies	n/a	Sections 6.1 and 6.2
x	x	Section 6.2.2	10631(b)(4)(C)	Indicate whether groundwater is an existing or planned source of water available to the Supplier. If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	Water supplies and recycled water	6-1	Section 6.2.2
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the Supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System supplies	n/a	Section 6.2.2
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	n/a	Section 6.2.2
x	x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the Supplier has the legal right to pump.	System supplies	n/a	Section 6.2.2
x	x	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… (include) information as to whether DWR has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin…	Water supplies and recycled water	n/a	Section 6.2.2
x	x	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… describe efforts by the Supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	Water supplies and recycled water	n/a	Section 6.2.2
x	x	Section 6.2.2.	10631(b)(4)(C)	If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	System supplies	n/a	Section 6.2.2.
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System supplies	6-9	Section 6.2.2

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	Section 6.1	10631(b)	Identify and quantify the existing and planned sources of water available for 2025, 2030, 2035, 2040, 2045 and optionally 2050.	System supplies	6-8 and 6-9	Section 6.1
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System supplies	n/a	Section 6.2.7
x	n/a	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the Supplier's service area with quantified amount of collection and treatment and the disposal methods.	System supplies (recycled water)	6-2	Section 6.2.5
x	x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System supplies (recycled water)	6-3	Section 6.2.5
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the Supplier's service area.	System supplies (recycled water)	6-4	Section 6.2.5
x	x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System supplies (recycled water)	6-4	Section 6.2.5
x	x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the Supplier's service area at the end of 5, 10, 15, and 20 years, and describe the actual use of recycled water in comparison to uses previously projected.	System supplies (recycled water)	6-4 and 6-5	Section 6.2.5
x	x	Section 6.2.5	10633(f)	Describe the actions that may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System supplies (recycled water)	6-6	Section 6.2.5
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the Supplier's service area.	System supplies (recycled water)	n/a	Section 6.2.5
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	6-7	Section 6.2.6
x	x	Section 6.2.10	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water Supplier to address water supply reliability in average, single-dry, and for a period of drought lasting five consecutive water years.	System supplies	6-7	Section 6.2.10
x	x	Section 6.3 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a Supplier can readily obtain.	System suppliers, energy intensity	O-1A, O-1B, O-1C, and O2	Section 6.3 and Appendix O
x		Section 7.1	10634	Provide information on the quality of existing sources of water available to the Supplier and the manner in which water quality affects water management strategies and supply reliability.	Water supply reliability assessment	n/a	Section 7.1
x	x	Section 7.2	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the Supplier with the total projected water use over the next 20 years.	Water supply reliability assessment	7-2, 7-3, and 7-4	Section 7.2
x	x	Section 7.2.3	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water supply reliability assessment	n/a	Section 7.2.3
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water supply reliability assessment	n/a	Section 7.3
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive years.	Water supply reliability assessment	n/a	Section 7.3

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water supply reliability assessment	n/a	Section 7.3
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the Supplier with the total projected water use for the drought period.	Water supply reliability assessment	7-5	Section 7.3
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water supply reliability assessment	n/a	Section 7.3
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	n/a	Chapter 8
x	x	Chapter 8	10632(a)(1)	Provide an analysis of water supply reliability (from Guidebook Chapter 7) in the WSCP.	Water shortage contingency planning	n/a	Chapter 8
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the Supplier will use each year to determine its water reliability.	Water shortage contingency planning	n/a	Section 8.2
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the Supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water shortage contingency planning	n/a	Section 8.2
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10%, 20%, 30%, 40%, 50% shortage, and greater than 50% shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water shortage contingency planning	n/a	Section 8.3
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing WSCP that uses different water shortage levels must cross reference their categories with the six standard categories.	Water shortage contingency planning	8-1	Section 8.3
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with WSCPs that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water shortage contingency planning	8-2	Section 8.4
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water shortage contingency planning	8-3	Section 8.4
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	8-2	Section 8.4
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to State-mandated prohibitions are appropriate to local conditions.	Water shortage contingency planning	Table 8-3	Section 8.4
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water shortage contingency planning	8-2 and 8-3	Section 8.4
x	x	Section 8.4.6	10632.5	The UWMP shall include a seismic risk assessment and mitigation plan.	Water shortage contingency planning	n/a	Section 8.4.6
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water shortage contingency planning	n/a	Section 8.5
x	x	Section 8.5	10632(a)(5)(B), 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water shortage contingency planning	n/a	Section 8.5

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	n/a	Section 8.6	10632(a)(6)	Retail Supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water shortage contingency planning	n/a	Section 8.6
x	x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the Supplier to enforce shortage response actions.	Water shortage contingency planning	n/a	Section 8.7
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the Supplier will declare a water shortage emergency per Water Code Chapter 3. *Water Shortage Emergencies*.	Water shortage contingency planning	n/a	Section 8.7
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the Supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water shortage contingency planning	n/a	Section 8.7
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Section 8.8
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	Section 8.8
x	n/a	Section 8.8	10632(a)(8)(C)	Retail Suppliers must describe the cost of compliance with Water Code Chapter 3.3, *Excessive Residential Water Use During Drought*.	Water shortage contingency planning	n/a	Section 8.8
x	n/a	Section 8.9	10632(a)(9)	Retail Suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data are collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water shortage contingency planning	n/a	Section 8.9
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the WSCP to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water shortage contingency planning	n/a	Section 8.10
x	n/a	Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water shortage contingency planning	n/a	Section 8.11
x	x	Section 8.12	10632(c)	Make available the WSCP to customers and any city or county where it provides water within 30 days after adoption of the plan.	Water shortage contingency planning	n/a	Section 8.12
x	n/a	Sections 9.1	10631(e)(1)	Retail Suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand management measures	n/a	Sections 9.1
n/a	x	Sections 9.2	10631(e)(2)	Wholesale Suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and Supplier assistance program.	Demand management measures	n/a	n/a
x	n/a	Chapter 10	10608.26(a)	Retail Suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan adoption, submittal, and implementation	n/a	Chapter 10
x	x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the Supplier provides water that the Supplier will be reviewing the UWMP and considering amendments or changes to the plan.	Plan adoption, submittal, and implementation	10-1	Section 10.2
x	x	Section 10.4	10621(f)	Each urban water Supplier shall update and submit its 2025 plan to DWR by July 1, 2026.	Plan adoption, submittal, and implementation	n/a	Section 10.4
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the Supplier made the UWMP and WSCP available for public inspection, published notice of the public hearing, and held a public hearing about the UWMP and WSCP.	Plan adoption, submittal, and implementation	n/a	Sections 10.2.2, 10.3, and 10.5

Retail (x = required)	Wholesale (x = required)	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	x	Section 10.2.2	10642	The Supplier is to provide the time and place of the hearing to any city or county within which the Supplier provides water.	Plan adoption, submittal, and implementation	10-1	Section 10.2
x	x	Section 10.3.2	10642	Provide supporting documentation that the UWMP and WSCP has been adopted as prepared or modified.	Plan adoption, submittal, and implementation	n/a	Section 10.3
x	x	Section 10.4	10644(a)	Provide supporting documentation that the Supplier has submitted their UWMP to the California State Library.	Plan adoption, submittal, and implementation	n/a	Section 10.4
x	x	Section 10.4	10644(a)(1)	Provide supporting documentation that the Supplier has submitted their UWMP to any city or county within which the Supplier provides water no later than 30 days after adoption.	Plan adoption, submittal, and implementation	n/a	Section 10.4
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The UWMP, or amendments to the UWMP, submitted to DWR shall be submitted electronically.	Plan adoption, submittal, and implementation	n/a	Sections 10.4 and 10.4
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the WSCP to DWR within 30 days of adoption.	Plan adoption, submittal, and implementation	n/a	Section 10.7
x	x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its UWMP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Section 10.5
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its WSCP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	Section 10.5
x	x	Section 10.6	10621(c)	If Supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan adoption, submittal, and implementation	n/a	Section 10.6

Appendix E Water Loss Calculator

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association

? Click to access definition
+ Click to add a comment

Water Audit Report for: Las Virgenes Municipal Water District (1910225)
Reporting Year: 2020 1/2020 - 12/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

					Pcnt:	Value:	
Volume from own sources:	n/a		acre-ft/yr				acre-ft/yr
Water imported:	7	20,701.100	acre-ft/yr	3		779.500	acre-ft/yr
Water exported:	n/a		acre-ft/yr				acre-ft/yr
WATER SUPPLIED:		**19,921.600**	acre-ft/yr				

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	8	18,931.500	acre-ft/yr			
Billed unmetered:	n/a		acre-ft/yr			
Unbilled metered:	n/a		acre-ft/yr			
Unbilled unmetered:	8	0.340	acre-ft/yr		0.340	acre-ft/yr
AUTHORIZED CONSUMPTION:		**18,931.840**	acre-ft/yr			

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) **989.760** acre-ft/yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:	5	49.804	acre-ft/yr	0.25%		acre-ft/yr
Customer metering inaccuracies:	3	191.227	acre-ft/yr	1.00%		acre-ft/yr
Systematic data handling errors:	5	47.329	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **288.360** acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **701.400** acre-ft/yr

WATER LOSSES: **989.760** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: **990.100** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	406.5	miles
Number of active AND inactive service connections:	10	19,858	
Service connection density:		49	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: 7 119.0 psi

COST DATA

Total annual cost of operating water system:	10	$36,723,139	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$3.69	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	8	$1,175.85	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 72 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Water imported
2: Customer metering inaccuracies
3: Unauthorized consumption

AWWA Free Water Audit Software: Worksheet

FWAS v6.0
American Water Works Association.

Water Audit Report for: Las Viegenes Municipal Water District
Audit Year: 2021 | Jan 01 2021 - Dec 31 2021 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	n/a	0.000	Acre-ft/Yr					VOSEA
WI	Water Imported:	n	g	6	20,160.560	Acre-ft/Yr	n	g	4	volume 0.000 acre-ft/yr	WIEA
WE	Water Exported:	n	g	n/a	0.000	Acre-ft/Yr					WEEA
	WATER SUPPLIED:				20,160.560	Acre-ft/Yr					

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	8	19,631.555	Acre-ft/Yr					
BUAC	Billed Unmetered:	n	g	n/a	0.000	Acre-ft/Yr					
UMAC	Unbilled Metered:	n	g	n/a	0.000	Acre-ft/Yr					
UUAC	Unbilled Unmetered:	n	g	5	0.152	Acre-ft/Yr				custom 0.152 acre-ft/yr	
	AUTHORIZED CONSUMPTION:				19,631.707	Acre-ft/Yr					

WATER LOSSES

528.853 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	49.079	Acre-ft/Yr	0.25% default	
CMI	Customer Metering Inaccuracies:	n	g	3	198.299	Acre-ft/Yr	1.00% percent	under-registration
UC	Unauthorized Consumption:	n	g	3	49.079	Acre-ft/Yr	0.25% default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 296.456 Acre-ft/Yr

Real Losses

Real Losses: 232.396 Acre-ft/Yr

WATER LOSSES: 528.853 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 529.005 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	412.1	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	21,192		(active *and* inactive)
	Service connection density:				51	conn./mile main	
	Are customer meters typically located at the curbstop/property line?				Yes		
Lp		n	g	10			

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP	Average Operating Pressure:	n	g	8	119.0	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	7	$5.19	$/100 cubic feet (ccf)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	8	$1,144.45	$/acre-ft	$43,435,377	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Water Imported (WI)
2: Customer Metering Inaccuracies (CMI)
3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:		gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

FWAS v6.0
American Water Works Association.

Water Audit Report for: Las Virgenes Municipal Water District
Audit Year: 2022 | Jan 01 2022 - Dec 31 2022 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	n/a	0.000	Acre-ft/Yr					VOSEA
WI	Water Imported:	n	g	6	13,419.700	Acre-ft/Yr	n	g	4	volume 1,269.500 acre-ft/yr	under-registration WIEA
WE	Water Exported:	n	g	n/a	0.000	Acre-ft/Yr					WEEA
	WATER SUPPLIED:				14,689.200	Acre-ft/Yr					

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	8	13,400.598	Acre-ft/Yr					
BUAC	Billed Unmetered:	n	g	n/a	0.000	Acre-ft/Yr					
UMAC	Unbilled Metered:	n	g	n/a	0.000	Acre-ft/Yr					
UUAC	Unbilled Unmetered:	n	g	5	0.090	Acre-ft/Yr				custom 0.090 acre-ft/yr	
	AUTHORIZED CONSUMPTION:				13,400.688	Acre-ft/Yr					

WATER LOSSES

1,288.512 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	33.501	Acre-ft/Yr	0.25% default
CMI	Customer Metering Inaccuracies:	n	g	3	135.360	Acre-ft/Yr	1.00% percent under-registration
UC	Unauthorized Consumption:	n	g	3	33.501	Acre-ft/Yr	0.25% default

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 202.363 Acre-ft/Yr

Real Losses

Real Losses: 1,086.149 Acre-ft/Yr

WATER LOSSES: 1,288.512 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,288.602 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	414.9	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	21,465		(active *and* inactive)
	Service connection density:				52	conn./mile main	

Are customer meters typically located at the curbstop/property line? Yes

Lp: n g 10

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP	Average Operating Pressure:	n	g	8	119.0	psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	7	$5.82	$/100 cubic feet (ccf)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	8	$1,363.75	$/acre-ft	$34,014,271	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Water Imported (WI)
2: Customer Metering Inaccuracies (CMI)
3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:	12.8	gal/conn/day
Unit Real Losses[A]:	13.6	gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

FWAS v6.0
American Water Works Association.

Water Audit Report for: Las Virgenes Municipal Water District
Audit Year: 2023 | Jan 01 2023 - Dec 31 2023 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	n/a	0.000	Acre-ft/Yr					VOSEA
WI	Water Imported:	n	g	6	15,287.700	Acre-ft/Yr	n	g	4	volume 1,171.900 acre-ft/yr	over-registration WIEA
WE	Water Exported:	n	g	n/a	0.000	Acre-ft/Yr					WEEA
	WATER SUPPLIED:				14,115.800	Acre-ft/Yr					

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	8	12,701.731	Acre-ft/Yr					
BUAC	Billed Unmetered:	n	g	n/a	0.000	Acre-ft/Yr					
UMAC	Unbilled Metered:	n	g	n/a	0.000	Acre-ft/Yr					
UUAC	Unbilled Unmetered:	n	g	8	25.040	Acre-ft/Yr				custom 25.040 acre-ft/yr	
	AUTHORIZED CONSUMPTION:				12,726.771	Acre-ft/Yr					

WATER LOSSES

1,389.029 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	31.754	Acre-ft/Yr	0.25%	default
CMI	Customer Metering Inaccuracies:	n	g	3	128.300	Acre-ft/Yr	1.00%	percent
UC	Unauthorized Consumption:	n	g	3	31.754	Acre-ft/Yr	0.25%	default

under-registration

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 191.809 Acre-ft/Yr

Real Losses

Real Losses: 1,197.220 Acre-ft/Yr

WATER LOSSES: 1,389.029 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,414.069 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	414.5	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	22,097		(active *and* inactive)
	Service connection density:				53	conn./mile main	
	Are customer meters typically located at the curbstop/property line?				Yes		
Lp		n	g	10			

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP	Average Operating Pressure:	n	g	9	119.0	psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	7	$6.83	$/100 cubic feet (ccf)	Total Annual Operating Cost
VPC	Variable Production Cost:	n	g	8	$1,349.47	$/acre-ft	$32,607,062 $/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Water Imported (WI)
2: Customer Metering Inaccuracies (CMI)
3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:	12.8	gal/conn/day
Unit Real Losses[A]:	13.6	gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association.

Water Audit Report for: Las Virgenes Municipal Water District
Audit Year: 2024 | Jan 01 2024 - Dec 31 2024 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

WATER SUPPLIED

Water Supplied Error Adjustments — choose entry option:

VOS	Volume from Own Sources:	n	g	3	1,161.130	Acre-ft/Yr	n	g	10	volume	0.000	acre-ft/yr		VOSEA
WI	Water Imported:	n	g	6	14,456.700	Acre-ft/Yr	n	g	4	volume	1.600	acre-ft/yr	under-registration	WIEA
WE	Water Exported:	n	g	n/a	0.000	Acre-ft/Yr								WEEA
	WATER SUPPLIED:				15,619.430	Acre-ft/Yr								

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	n	g	8	13,764.157	Acre-ft/Yr			
BUAC	Billed Unmetered:	n	g	n/a	0.000	Acre-ft/Yr			
UMAC	Unbilled Metered:	n	g	n/a	0.000	Acre-ft/Yr	choose entry option:		
UUAC	Unbilled Unmetered:	n	g	8	34.912	Acre-ft/Yr	custom	34.912	acre-ft/yr
	AUTHORIZED CONSUMPTION:				13,799.069	Acre-ft/Yr			

WATER LOSSES

1,820.361 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	34.410	Acre-ft/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	3	139.032	Acre-ft/Yr	1.00%	percent	under-registration
UC	Unauthorized Consumption:	n	g	3	34.410	Acre-ft/Yr	0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 207.853 Acre-ft/Yr

Real Losses

Real Losses: 1,612.508 Acre-ft/Yr

WATER LOSSES: 1,820.361 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,855.273 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	413.6	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	22,040		(active *and* inactive)
	Service connection density:				53	conn./mile main	
	Are customer meters typically located at the curbstop/property line?				Yes		
Lp		n	g	10			

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP	Average Operating Pressure:	n	g	9	119.0	psi	

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	7	$7.32	$/100 cubic feet (ccf)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	8	$1,282.33	$/acre-ft	$38,538,259	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier III (51-70). See Dashboard tab for additional outputs. *****

go to dashboard

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

1: Water Imported (WI)
2: Customer Metering Inaccuracies (CMI)
3: Billed Metered (BMAC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:	23.0	gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

FWAS v6.1
American Water Works Association.

Water Audit Report for: Las Virgenes Municipal Water District
Audit Year: 2025 | Jan 01 2025 - Dec 31 2025 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: ACRE-FEET PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	437.260	Acre-ft/Yr	n	g	percent		VOSEA
WI	Water Imported:	n	g	15,282.900	Acre-ft/Yr	n	g	volume	10.100 acre-ft/yr	under-registration WIEA
WE	Water Exported:	n	g	0.000	Acre-ft/Yr					WEEA
	WATER SUPPLIED:			15,730.260	Acre-ft/Yr					

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	14,456.577	Acre-ft/Yr			
BUAC	Billed Unmetered:	n	g	0.000	Acre-ft/Yr			
UMAC	Unbilled Metered:	n	g	0.000	Acre-ft/Yr			
UUAC	Unbilled Unmetered:	n	g	49.166	Acre-ft/Yr	custom	49.166	acre-ft/yr
	AUTHORIZED CONSUMPTION:			14,505.743	Acre-ft/Yr			

WATER LOSSES

1,224.517 Acre-ft/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	36.141	Acre-ft/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g		146.026	Acre-ft/Yr	1.00%	percent	under-registration
UC	Unauthorized Consumption:	n	g	3	36.141	Acre-ft/Yr	0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 218.309 Acre-ft/Yr

Real Losses

Real Losses: 1,006.208 Acre-ft/Yr

WATER LOSSES: 1,224.517 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,273.683 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g		miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g			(active *and* inactive)
	Service connection density:				conn./mile main	

Are customer meters typically located at the curbstop/property line? Yes

Lp: n g 10

Average length of customer service line has been set to zero and a data grading of 10 has been applied

AOP Average Operating Pressure: n g 119.0 psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g			Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g		$/acre-ft		$/yr (optional input)

Click here to calculate carbon emissions ---> carbon

WATER AUDIT DATA VALIDITY TIER:

Click 'g' for 11 parameter(s), then complete all visible data grading questions to enable the Data Validity Score to calculate

go to dashboard

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

Based on the information provided, audit reliability can be most improved by addressing the following components:

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:		gal/conn/day
Unit Real Losses[A]:		gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Appendix F LVMWD Hazard Mitigation Plan

The 2025 Hazard Mitigation Plan can be found online at: https://www.lvmwd.gov/hazard-mitigation-plan

Appendix G Reduced Delta Reliance Reporting

1.0 Background

Under the Sacramento-San Joaquin Delta Reform Act of 2009, state and local public agencies proposing a covered action in the Delta, prior to initiating the implementation of that action, must prepare a written certification of consistency with detailed findings as to whether the covered action is consistent with applicable Delta Plan policies and submit that certification to the Delta Stewardship Council. Anyone may appeal a certification of consistency, and if the Delta Stewardship Council grants the appeal, the covered action may not be implemented until the agency proposing the covered action submits a revised certification of consistency, and either no appeal is filed, or the Delta Stewardship Council denies the subsequent appeal.

An urban water supplier that anticipates participating in or receiving water from a proposed covered action such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta should provide information in their 2015 and subsequent Urban Water Management Plans (UWMPs) that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (WR P1).

WR P1 details what is needed for a covered action to demonstrate consistency with reduced reliance on the Delta and improved regional self-reliance. WR P1 subsection (a) states that:

(a) Water shall not be exported from, transferred through, or used in the Delta if all of the following apply:

1) *One or more water suppliers that would receive water as a result of the export, transfer, or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c);*
2) *That failure has significantly caused the need for the export, transfer, or use; and*
3) *The export, transfer, or use would have a significant adverse environmental impact in the Delta.*

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a)(1) above.

(c)(1) Water suppliers that have done all the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:

A. *Completed a current Urban or Agricultural Water Management Plan (Plan) which has been reviewed by the California Department of Water Resources for compliance with the applicable requirements of Water Code Division 6, Parts 2.55, 2.6, and 2.8; watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).*

B. *Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and*
C. *Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in*

> *Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).*

The analysis and documentation provided below include all of the elements described in WR P1(c)(1) that need to be included in a water supplier's UWMP to support a certification of consistency for a future covered action.

2.0 Summary of Expected Outcomes for Reduced Reliance on the Delta

As stated in WR P1(c)(1)(C), the policy states that, commencing in 2015, UWMPs include expected outcomes for measurable reduction in Delta reliance and improved regional self-reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount of water used, or in the percentage of water used, from the Delta.

MWD reports the expected outcomes for reduced reliance on the Delta in its 2025 UWMP on a regionwide scale that includes its Member Agencies. From its 2010 baseline, both long-term Regional Self Reliance and Reduced Reliance on Supplies from the Delta Watershed are expected to increase over time.

The following provides a summary of the near-term (2030) and long-term (2045) expected outcomes for the District Delta reliance and regional self-reliance. The results show the District is measurably reducing reliance on the Delta and improving regional self-reliance, both as an amount of water used and as a percentage of water used.

2.1 Expected Outcomes for Regional Self-Reliance

- Near-term (2030) – Normal water year regional self-reliance is expected to increase by 601 TAF from the 2010 baseline; this represents an increase of almost 20 percent of 2030 normal water year retail demands (Table G-3)
- Long-term (2045) – Normal water year regional self-reliance is expected to increase by more than 1.02 MAF from the 2010 baseline, this represents an increase of more than 20 percent of 2050 normal water year retail demands (Table G-3)

3.0 Demonstration of Reduced Reliance on the Delta

The methodology used to determine the District's Delta reliance and improved regional self-reliance is consistent with the approach detailed in DWR's UWMP Guidebook Appendix C, including the use of narrative justifications for the accounting of supplies and the documentation of specific data sources. Some of the key assumptions underlying these analyses include:

- All data were obtained from the current 2025UWMP or previously adopted UWMPs and represent average or normal water year conditions.

- All analyses were conducted at the service area level, and all data reflect the total contributions of the District and in conjunction with the information provided by MWD. No projects or programs that are described in the UWMPs as "Projects Under Development" were included in the accounting of supplies.

3.1 Baseline Calculations

In order to compare current or future Delta water use, a supplier will need to calculate a baseline. The baseline is calculated in accordance with the approach detailed in DWR's UWMP Guidebook Appendix C.

The demand and water use efficiency data shown in Table G-1 were collected from the following sources:

- Baseline (2010) values – LVMWD's 2005 UWMP
- 2015 values – LVMWD's 2010 UWMP
- 2020 values – LVMWD's 2015 UWMP
- 2025 values – LVMWD's 2020 UWMP
- 2030-2050 values – LVMWD's 2025 UWMP

It should be noted that the results of this calculation differ from what the District calculated under the 2025 UWMP Chapter 3 pertaining to the Water Conservation Act of 2009 (SB X7-7) due to differing formulas.

Table G-1: Calculation of Water Use Efficiency

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Water Demands with Water Use Efficiency Accounted For	24,010	23,951	22,543	19,190	16,604	17,582	18,618	19,714
Non-Potable Water Demands								
Potable Service Area Demands with Water Use Efficiency Accounted For	24,010	23,951	22,543	19,190	16,604	17,582	18,618	19,714

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Population	75,625	77,285	71,768	76,769	82,748	87,933	93,119	98,305

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Per Capita Water Use (GPCD)	283	277	280	223	179	179	178	179
Change in Per Capita Water Use from Baseline (GPCD)		(7)	(3)	(60)	(104)	(105)	(105)	(104)
Estimated Water Use Efficiency Since Baseline		586	242	5,183	9,667	10,336	10,946	11,497

Table G-2: Calculation of Service Area Water Demands Without Water Use Efficiency

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Water Demands with Water Use Efficiency Accounted For	24,010	23,951	22,543	19,190	16,604	17,582	18,618	19,714
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline		586	242	5,183	9,667	10,336	10,946	11,497
Service Area Water Demands without Water Use Efficiency Accounted For	24,010	24,537	22,785	24,373	26,271	27,918	29,564	31,211

4.0 Water Supplies Contributing to Regional Self-Reliance

For a covered action to demonstrate consistency with the Delta Plan, WR P1(c)(1) states that water suppliers must report the expected outcomes for measurable improvement in regional self-reliance. Table G-3 shows expected outcomes for supplies contributing to regional self-reliance both in amount and as a percentage. The numbers shown in Table G-3 represent efforts to improve regional self-reliance for the District's service area.

Supporting narratives and documentation for the data shown in Table G-3 are provided below:

Water Use Efficiency

The water use efficiency information shown in Table G-3 is taken directly from Chapter 4 of LVMWD's 2025 UWMP.

Table G-3: Calculation of Supplies Contributing to Regional Self-Reliance

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Water Use Efficiency		586	242	5,183	9,667	10,336	10,946	11,497
Water Recycling								
Stormwater Capture and Use								
Advanced Water Technologies								
Conjunctive Use Projects								
Local and Regional Water Supply and Storage Projects								
Other Programs and Projects the Contribute to Regional Self-Reliance								
Water Supplies Contributing to Regional Self-Reliance	-	586	242	5,183	9,667	10,336	10,946	11,497

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Service Area Water Demands without Water Use Efficiency Accounted For	24,010	24,537	22,785	24,373	26,271	27,918	29,564	31,211

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Water Supplies Contributing to Regional Self-Reliance	-	586	242	5,183	9,667	10,336	10,946	11,497
Change in Water Supplies Contributing to Regional Self-Reliance		586	242	5,183	9,667	10,336	10,946	11,497

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045
Percent of Water Supplies Contributing to Regional Self-Reliance	0.0%	2.4%	1.1%	21.3%	36.8%	37.0%	37.0%	36.8%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		2.4%	1.1%	21.3%	36.8%	37.0%	37.0%	36.8%

5.0 UWMP IMPLEMENTATION

In addition to the analysis and documentation described above, WR P1 subsection (c)(1)(B) requires that all programs and projects included in the UWMP that are locally cost-effective and technically feasible, which reduce reliance on the Delta, are identified, evaluated, and implemented consistent with the implementation schedule. WR P1 (c)(1)(B) states that:

A. Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta

In accordance with Water Code Section 10631(f), water suppliers must already include in their UWMP a detailed description of expected future projects and programs that they may implement to increase the amount of water supply available to them in normal and single-dry water years and for a period of drought lasting five consecutive years. The UWMP description must also identify specific projects, include a description of the increase in water supply that is expected to be available from each project, and include an estimate regarding the implementation timeline for each project or program.

Chapter 6 – Future Water Projects of the District UWMP summarizes the implementation plan and continued progress in developing a diversified water portfolio to meet the District's water needs.