# Public Draft
# 2020 Urban Water Master Plan for Ventura County Waterworks District No. 1


Prepared for:
Ventura County Waterworks District No. 1

Prepared by:
Stantec Consulting Services Inc.

March 26, 2021

**PUBLIC DRAFT**
**2020 URBAN WATER MASTER PLAN FOR VENTURA COUNTY WATERWORKS DISTRICT NO. 1**

Notes:

This public draft was prepared based on Department of Water Resources 2020 Urban Water Management Plan Guidelines is subject to updates.

This is a public draft and all statements, characterizations, and values are subject to change due to public or further internal review.

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# Abbreviations

| | |
|---|---|
| AB | Assembly Bill |
| AC | Acre |
| Act | Urban Water Management Planning Act |
| AF | Acre Feet |
| AFY | Acre Feet per Year |
| AMI | Area Median Income |
| ASR | Aquifer Storage and Recovery |
| AVG | Average |
| AWWA | American Water Works Association |
| Bay-Delta | Sacramento-San Joaquin Bay-Delta |
| BDCP | Bay Delta Conservation Plan |
| BMP | Best Management Practices |
| Calleguas | Calleguas Municipal Water District |
| CASGEM | California Statewide Groundwater Elevation Monitoring |
| 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 |
| CPUC | California Public Utilities Commission |
| CRA | Colorado River Aqueduct |
| CSWRB | California State Water Resources Control Board |
| CUWCC | California Urban Water Conservation Council |
| CWC | California Water Code |
| CY | Calendar Year |
| Delta | San Joaquin River Delta |
| DMM | Demand Management Measure |
| DOF | Department of Finance |
| DRA | Drought Reliability Assessment |
| DU | Dwelling Unit |
| DWR | Department of Water Resources |
| EGMA | Epworth Gravels Management Area |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| EPM | Emergency Procedures Manual |
| ESA | Endangered Species Act |
| ET | Evapotranspiration |
| Eto | Evapotranspiration from a Standardized Grass Surface |
| FCGMA | Fox Canyon Groundwater Management Agency |
| FY | Fiscal Year |
| GIS | Geographic Information System |
| Gpcd | Gallons Per Capita Per Day |

| | |
|---|---|
| GPM | Gallons Per Minute |
| GSA | Groundwater Sustainability Agency |
| GSP | Groundwater Sustainability Plan |
| HCD | Housing and Community Development |
| HOA | Home Owners Association |
| ICS | Intentionally Created Surplus |
| IID | Imperial Irrigation District |
| IN | Inches |
| IRP | Integrated Resources Plan |
| KML | Keyhole Markup Language |
| LAFCO | Local Agency Formation Commission |
| MAF | Million Acre Feet |
| MCL | Maximum Contaminant Level |
| Metropolitan | Metropolitan Water District of Southern California |
| mgd | Million Gallons per Day |
| mg/L | Milligrams per Liter |
| MOU | Memorandum of Understanding |
| MWD | Metropolitan Water District of Southern California |
| MWELO | Model Water Efficient Landscape Ordinance |
| MWRF | Moorpark Water Reclamation Facility |
| PWA | Public Works Agency |
| RDM | Robust Decision-Making |
| RHNA | Regional Housing Needs Allocation |
| RUWMP | Regional Urban Water Management Plan |
| SB | California Senate Bill |
| SCAG | Southern California Association of Governments |
| SGMA | Sustainable Groundwater Management Act |
| SMP | Salinity Management Pipeline |
| SoCal | Southern California |
| Supplier | Urban Water Supplier |
| SWP | State Water Project |
| SWRCB | State Water Resources Control Board |
| TAF | Thousand Acre Feet |
| TDS | Total Dissolved Solids |
| TEA | Temporary Extraction Allocation |
| USBR | U.S. Bureau of Reclamation |
| UWMP | Urban Water Management Plan |
| VCWPD | Ventura County Watershed Protection District |
| VCWWD | Ventura County Waterworks District |
| 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 |
| WUCA | Water Utility Climate Alliance |
| WUEdata | Water Use Efficiency Data |

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**2020 URBAN WATER MASTER PLAN FOR VENTURA COUNTY WATERWORKS DISTRICT NO. 1**

UWMP Introduction and Lay Description

March 26, 2021

# Chapter 1 UWMP Introduction and Lay Description

## 1.1 Background and Purpose

Ventura County Waterworks District No. 1 Moorpark (VCWWD No. 1 or District) has prepared the 2020 update of its Urban Water Management Plan (UWMP) to fulfill the requirements outlined in the California Urban Water Management Planning Act (Act) and the Water Conservation Bill of 2009. The purpose of this 2020 UWMP is to provide the District, its partner agencies, and the public with an updated status and long-term water 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 Act, also known as Senate Bill X7-7 (SB X7-7), under the authorization of the District.

Notification letters sent to agencies are provided in **Appendix A**.

Public notice for the 2020 UWMP public hearing is provided in **Appendix B**.

The Adoption Resolution passed by VCWWD No. 1's Board of Directors on June 22, 2021 is provided in **Appendix C**.

## 1.2 UWMP Update and The California Water Code

This report has been prepared in compliance with California Water Code (CWC or Water Code) Sections 10610 through 10656 and Section 10608 of the 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).

These plans must be filed with the California Department of Water Resources (DWR) every five years. The 2020 plans must be submitted to DWR by July 1, 2021. 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

For 2020, the plans must also:

- Report progress toward meeting the targeted 20 percent reduction in per-capita (per-person) urban water consumption by the year 2020, and
- Discuss the use and planned use of recycled water

### 1.2.1 Changes in the Act Since 2015

Since 2015, several amendments have been made to the Act. The following is a summary of the significant changes in the Act that have occurred from 2015 to the present:

- Drought Risk Assessment and the Five Consecutive Dry-Year Water Reliability Assessment: suppliers are now required to assess water supply reliability over a five-year period from 2021 to 2025 to examine water supply reliability for five consecutive dry years (modified from a “multiyear” time period used in dry-year water reliability planning).
- Seismic Risk Analysis: suppliers are now required to address the seismic risk to their water system facilities with an analysis of the risk and mitigation strategies.
- Energy Use Information: suppliers are now required to include readily obtainable information on estimated amounts of energy for water system.
- Water Loss Reporting for Five Years: suppliers are required to include the past five years of water loss audit reports.
- Water Shortage Contingency Plan (WSCP): includes new prescriptive elements to enhance previous requirements of WSCPs.
- Consistency with Groundwater Sustainability Plans: suppliers are now required to be consistent with Groundwater Sustainability Plans completed by relevant Groundwater Sustainability Agencies.
- Lay Description: suppliers are now required to include a lay description of the UWMP’s conclusions regarding water service reliability, challenges ahead and strategies for managing reliability risks.

- Water Use Efficiency and Conservation: VCWWD No. 1 must demonstrate actual water use, as compared to the previously established 2020 target.

### 1.2.2 Water Conservation Act of 2009

In addition to changes to the Act, the California State Legislature passed Senate Bill 7 as part of the Seventh Extraordinary Session, referred to as SB X7-7, on November 10, 2009, which became effective February 3, 2010. The State of California is required to reduce urban per capita water use by 20 percent by the year 2020. Each retail supplier must determine its baseline water as well as its target water use for the year 2020. This plan will report the progress of this goal in Chapter 5.

## 1.3 Lay Description

Ventura County Waterworks District No. 1's 2020 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 VCWWD No. 1'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 the preparation of a Water Shortage Contingency Plan (WSCP).

### 1.3.1 VCWWD No. 1's Water System, Supply, and Demand

The District's water comes from three sources: imported water, groundwater, and reclaimed water. Imported water is the primary source of supply, bringing in 71 percent of all supply. The imported water comes from Metropolitan Water District (MWD) of Southern California through Calleguas Municipal Water District (Calleguas), a local wholesaler. The second largest supply (approximately 20 percent) comes from local groundwater production from District owned wells. Finally, reclaimed water brings in approximately 9 percent of all supply, through the Moorpark Water Reclamation Facility (MWRF). The MWRF is owned and operated by the District and has been in operation since 2003.

The District's potable water distribution system consists of 10 booster pumping stations, 20 pressure-reducing stations, 4 active production wells, 2 inactive wells (Wells 96 and 97), 10 imported water turnouts, 18 reservoirs and approximately 175 miles of distribution and transmission pipelines.

To help meet future demands, the District is planning two water projects. The Stockton Reservoir project will increase water storage capacity by constructing an additional reservoir along with infrastructure, and the Moorpark Desalter Project aims to lower the dependence on imported water.

Over the next twenty years, supply is predicted to continue to meet the demands of all water users in the District's service area (including single and multi-family residential, commercial, industrial, institutional, agricultural, and others). For more details on VCWWD No. 1's water system, supply, and demand, see Chapters 3-6.

### 1.3.2 Water Service Reliability and SBx7-7 2020 Target

Per Senate Bill x7-7 (SBx7-7), the 2010 UWMP required retail water suppliers to develop baseline daily per capita water use, a minimum baseline daily per capita water use, and target daily per capita water use for 2015 and 2020. The District met their 2020 target, which was to not exceed 194 gpcd of water usage, with an actual 2020 usage of 173 gpcd. See Chapter 5 for more details.

It is the goal of VCWWD No. 1 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 25 years, in combination with conservation of non-essential demand during certain dry years, VCWWD No.1 successfully achieves this goal. The basis of the water supply and demand assessment is summarized in Chapter 7.

### 1.3.3 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 draws upon lessons learned from the 2012-2016 drought, California's driest period on record. Chapter 8 provides a summary of the WSCP and the detailed WSCP is included in Appendix H.

### 1.3.4 Demand Management Measures

Chapter 9 describes VCWWD No. 1'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.

# Chapter 2 Plan Preparation

## 2.1 Plan Preparation

This chapter provides insight on how the 2020 UWMP was developed, including the basis for preparing the plan, units of measure and year calculation used, and coordination and outreach.

## 2.2 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. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems.

### 2.2.1 Public Water Systems

VCWWD No. 1 is a public water supplier that meets the definition of an urban water supplier with 11,426 municipal water service connections (as of the end of fiscal year 2020) and a total 10,019 acre-feet (AF) of water supplied to customers in their water service area in fiscal year 2020. See Table 2-1 for Public Water Systems.

**Submittal Table 2-1 Retail Only: Public Water Systems**

| Public Water System Number | Public Water System Name | Number of Municipal Connections 2020 | Volume of Water Supplied 2020 (AF) |
|---|---|---|---|
| 1 | Ventura County Waterworks District No. 1 | 11,426 | 10,019 |
| | **TOTAL** | 11,426 | 10,019 |

## 2.3 Regional Planning

The 2020 UWMP for VCWWWD No. 1 has been prepared as an individual reporting plan that only covers the service area of VCWWWD No. 1.

## 2.4 Individual or Regional Planning and Compliance

VCWWD No. 1 has developed an Individual UWMP (as opposed to a Regional UWMP) that reports solely on its service area; addresses all requirements of the CWC; and notifies and coordinates with appropriate regional agencies and constituents. VCWWD No. 1 is not a member of a Regional UWMP, nor is it a member of a Regional Alliance. See Table 2-2 for Plan Identification.

**Submittal Table 2-2: Plan Identification**

| Select Only One | Type of Plan | | Name of RUWMP or Regional Alliance *if applicable* |
|---|---|---|---|
| ☑ | **Individual UWMP** | | |
| | ☐ | Water Supplier is also a member of a RUWMP | |
| | ☐ | Water Supplier is also a member of a Regional Alliance | |
| ☐ | **Regional Urban Water Management Plan (RUWMP)** | | |

## 2.5 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. VCWWD No. 1 is a water retailer (as opposed to a water wholesaler).

### 2.5.1 Fiscal or Calendar Year

The 2020 UWMP for VCWWD No. 1 is prepared on a fiscal year basis.

### 2.5.2 Reporting Complete 2020 Data

The 2020 UWMP for VCWWD No. 1 includes complete water use and planning data for fiscal year 2020.

### 2.5.3 Units of Measure

Volumes reported in this 2020 UWMP are in acre-feet (AF) and are consistent throughout the plan. Table 2-3 shows the parameters under which the 2020 UWMP was prepared.

| Submittal Table 2-3: Supplier Identification | |
|---|---|
| Type of Supplier (select one or both) | |
| ☐ | Supplier is a wholesaler |
| ☑ | Supplier is a retailer |
| 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) | |
| *07/01* | |
| Units of measure used in UWMP (select from drop down) | |
| Unit | AF |

## 2.6 Coordination and Outreach

This section summarizes coordination and outreach efforts related to the development of this UWMP. Table 2-4 summarizes organizations contacted in the development of this UWMP and their associated level of participation. Copies of outreach correspondence can be found in Appendix A.

### 2.6.1 Wholesale and Retail Coordination

Per CWC §10631(j), an urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan.

VCWWD No. 1 has provided Calleguas Municipal Water District (Calleguas), the District's water wholesaler, with projected water use in accordance with CWC §10631 and has relied upon water supply information provided by Calleguas, as well as Metropolitan Water District of Southern California (Metropolitan), Calleguas' water wholesaler, in fulfilling its 2020 UWMP. See Table 2-4 for Water Supplier Information Exchange.

| DRAFT Submittal Table 2-4 Retail: Water Supplier Information Exchange |
|---|
| The retail Supplier will inform the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631. |
| Wholesale Water Supplier Name |
| Calleguas Municipal Water District |

### 2.6.2 Coordination with Other Agencies and the Community

Development of the 2020 UWMP was led by the VCWWD No. 1 staff. District staff provided notification to the City of Moorpark and County of Ventura Planning Departments for development of the Plan and the County Clerk for the adoption of the Plan. Stantec used the City of Moorpark Planning Department published information for land use and population information. VCWWD No. 1 staff was responsible for distribution of the Plan with assistance from Stantec.

The intent of this Plan is to focus on specific issues unique to the VCWWD No. 1 water service area (WSA). While some regional UWMP issues are introduced in this Plan, more detailed regional information is presented in Metropolitan's and Calleguas' 2020 UWMPs.

To assist VCWWD No. 1 staff in preparation of their 2020 UWMP, Stantec attended the 2020 UWMP Workshop on the 10th of February 2021 for "Preparation, Adoption and Submittal" that was facilitated by DWR.

Table 2-A lists the entities that the District or Stantec coordinated with to develop the District's 2020 UWMP. The City of Moorpark was notified of the District's preparation of an updated UWMP and public hearing for consideration of adoption of the UWMP at least 60 days prior to the public hearing.

| Submittal Table 2-A: VCWWD No. 1 Coordination and Public Involvement | | | | | |
|---|---|---|---|---|---|
| Entities | Coordination and Public Involvement Actions | | | | |
| | Used Agency Data as Information Resource | Sent and/or Available To: Copy of Draft UWMP | Commented on Draft UWMP | Sent Notice of Public Hearing | Attended Public Hearing |
| County Planning Department | Yes | Yes | | | |
| City of Moorpark Planning Department | Yes | Yes | | | |

| | | | | | |
|---|---|---|---|---|---|
| Calleguas Municipal Water District | Yes | Yes | | | |
| Fox Canyon Groundwater Management Agency | Yes | Yes | | | |
| Metropolitan Water District of Southern California | Yes | Yes | | | |
| General Public | N/A | Yes | | | |

The District also utilized information from the Final Calleguas 2020 Regional UWMP, the Metropolitan 2020 Final UWMP, and the "*Guidebook to Assist Urban Water Suppliers to Prepare a 2020 Urban Water Management Plan*" prepared by DWR in preparing the VCWWD No. 1 2020 UWMP. This UWMP details the specifics as they relate to the VCWWD No. 1 water service area and will refer to Metropolitan, Calleguas, Fox Canyon Groundwater Management Agency, and other agencies throughout.

The District's water supply planning considers the programs of local and regional water agencies. The County of Ventura Water and Sanitation Department staff manages and administers activities, projects, and programs to optimize the District's water supply.

The UWMP is intended to serve as a general, flexible, and open-ended document that is updated every five years (or more often if necessary) to reflect changes in the District's water supply trends, and conservation and water use efficiency policies. The District's 2020 UWMP, along with other regional 2020 UWMPs and other County of Ventura (County) planning documents, will be used by VCWWD No. 1 staff to guide the water use and management efforts through the year 2020. The 2020 UWMP will require an update in 2025.

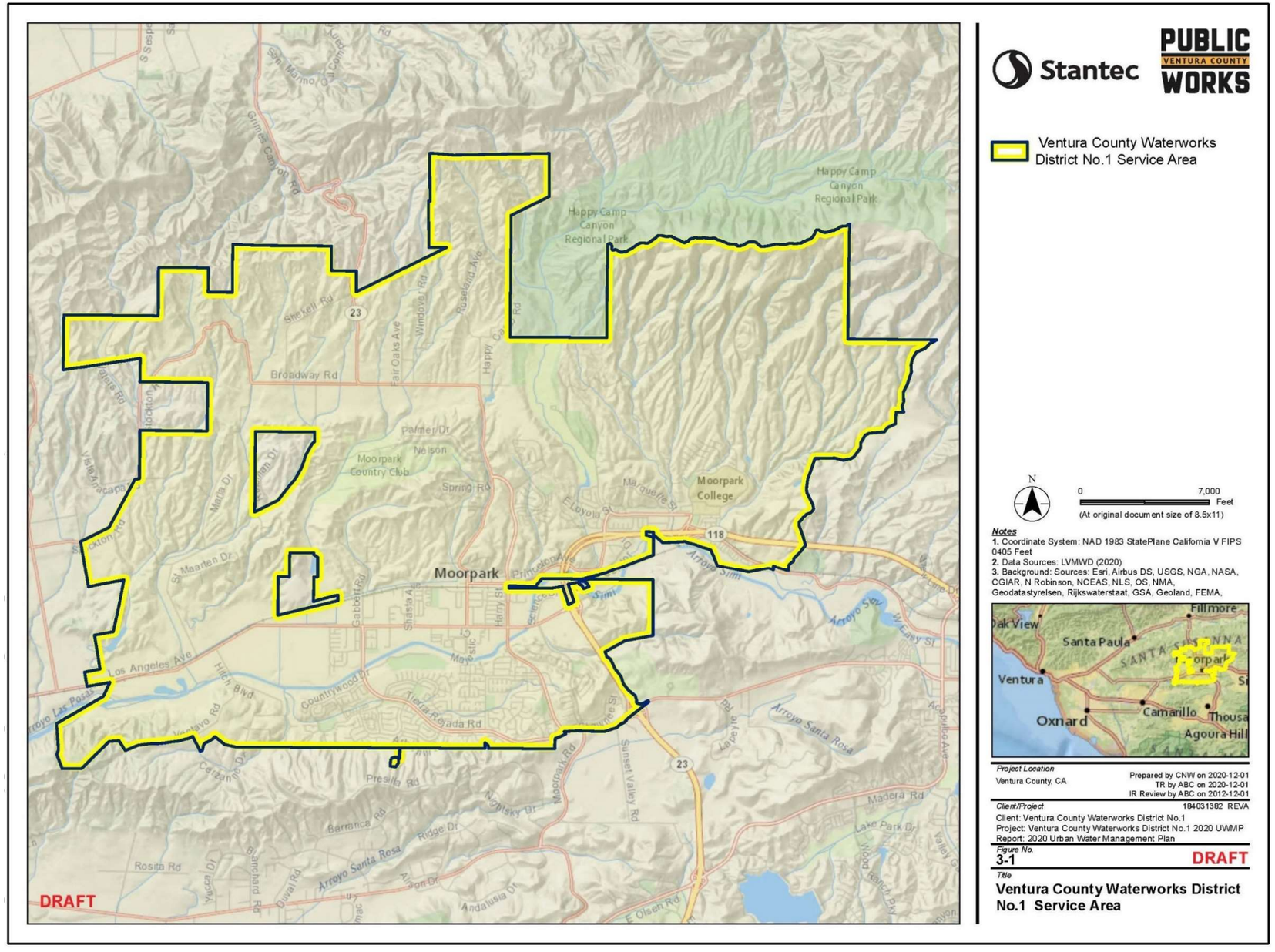
### 2.6.3 Notice to City and Counties

See Table 2-A above for City and County notice information.

# Chapter 3 System Description

## 3.1 General Description

VCWWD No. 1 is part of the Utility Services Division of the County of Ventura Public Works Agency Water and Sanitation Department and is responsible for the administration, billing, customer service, operation, maintenance, design, inspection, and construction of potable water and sanitation services in the areas of Moorpark, CA, and surrounding portion of Ventura County. The District is a retail water utility provider and is governed by the Ventura County Board of Supervisors and are represented by the Citizens' Advisory Committee for policy recommendations. The District was formed on November 22, 1921 and serves approximately 39,000 residents through 11,426 service connections, including 11,270 residential and commercial service connections and 156 agricultural service connections. The District encompasses approximately 33.7 square miles (21,567 acres) and consists of the City of Moorpark, which accounts for 12.8 square miles (38%) of the District's service area, and contiguous unincorporated areas (62%) in eastern Ventura County. The City of Moorpark is approximately five miles west of the City of Simi Valley and five miles north of the City of Thousand Oaks. A vicinity map of the District's water service area is shown on Figure 3-1.




Stantec

PUBLIC VENTURA COUNTY WORKS

Ventura County Waterworks District No.1 Service Area

N

0 7,000 Feet
(At original document size of 8.5x11)

**Notes**
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: LVMWD (2020)
3. Background: Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA,




*Project Location*
Ventura County, CA

Prepared by CNW on 2020-12-01
TR by ABC on 2020-12-01
IR Review by ABC on 2012-12-01

*Client/Project*
184031382 REVA
Client: Ventura County Waterworks District No.1
Project: Ventura County Waterworks District No.1 2020 UWMP
Report: 2020 Urban Water Management Plan

*Figure No.*
3-1
DRAFT

*Title*
**Ventura County Waterworks District No.1 Service Area**

***Figure 3-1**: VCWWD No. 1 Water Service Area*

### 3.1.1 Water System Description

VCWWD No. 1 receives its water from three sources. Approximately 71 percent of its supply is imported potable water from the Metropolitan Water District (MWD) of Southern California through Calleguas Municipal Water District (Calleguas), a local wholesaler. The imported water is primarily State Water Project (SWP) water from the Sacramento-San Joaquin River Delta in Northern California that has been treated at MWD's Joseph Jensen Filtration Plant. The second largest supply (approximately 20 percent) comes from local groundwater production from District owned wells. Since 2003, the District has been utilizing the Moorpark Water Reclamation Facility (MWRF) for additional supply (for irrigation only and accounts for approximately 9 percent of overall water supply). The MWRF is owned and operated by the District. Approximately 1.5 mgd of effluent is treated to tertiary levels to meet California Code of Regulations Title 22 requirements and delivered for irrigation uses.

The District's potable water distribution system consists of 10 booster pumping stations, 20 pressure-reducing stations, 4 active production wells, 2 inactive wells (Wells 96 and 97), 10 imported water turnouts, 18 reservoirs and approximately 175 miles of distribution and transmission pipelines. Figure 3-2 shows the location of all VCWWD No. 1 system facilities and respective pressure zones.

In addition to the MWRF, the District's recycled water distribution system consists of 7 pumps, 2 tanks (one recycled water tank, one 5-thousand-gallon hydropneumatic tank), and approximately 8 miles of distribution main pipelines.

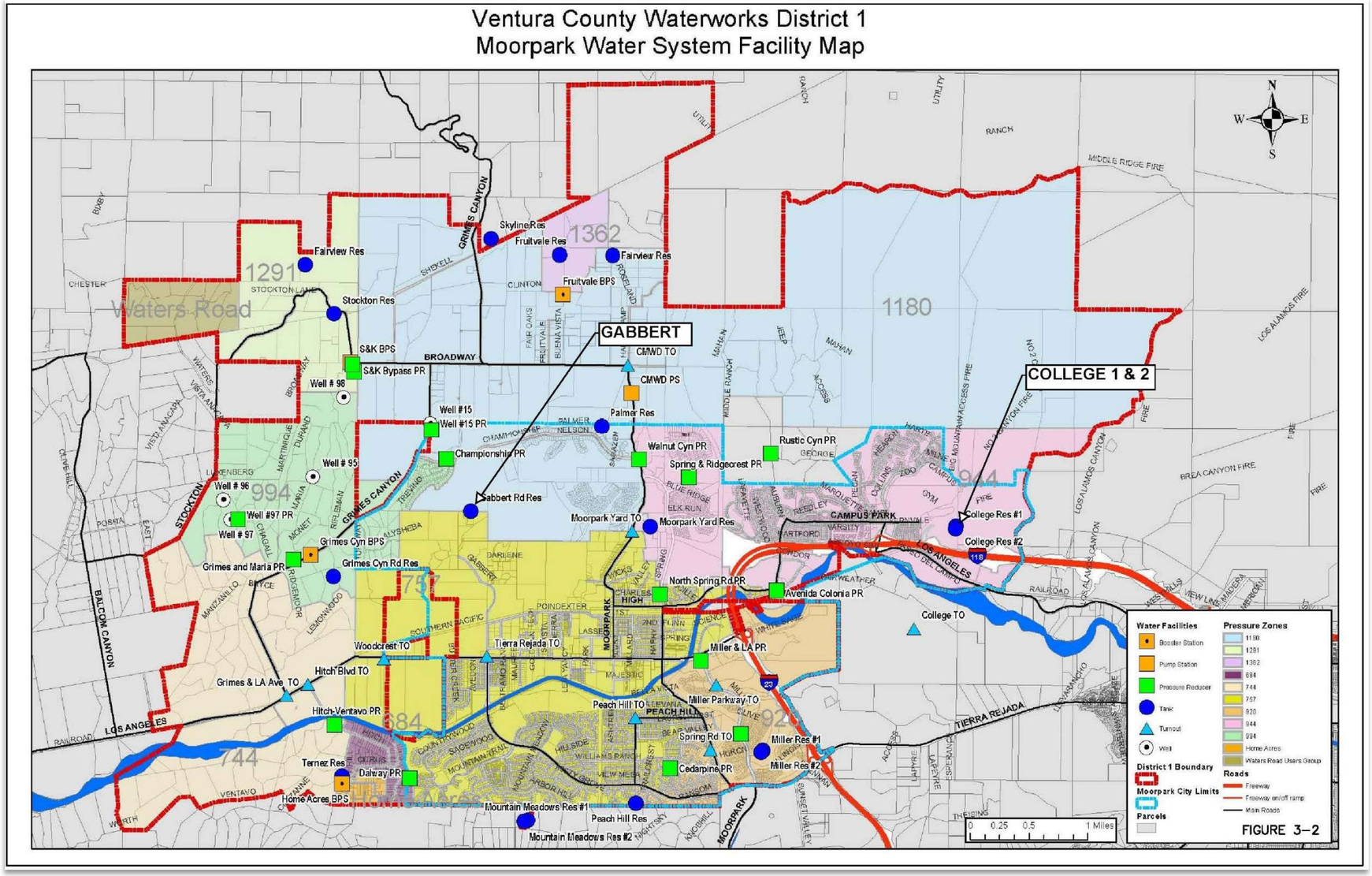



*Figure 3-2: VCWWD No. 1 Water System Facilities*

VCWWD No. 1 pumps groundwater from the East Las Posas Subbasin (ELP) via the four active wells owned and operated by the District. The ELPGB is managed and protected by Fox Canyon Groundwater Management Agency (FCGMA), an independent special district separate from the County of Ventura and any city government and is responsible for managing and protecting both confined and unconfined aquifers within its boundaries. The groundwater is chlorinated at the well sites and two wells are treated for high iron and manganese before being pumped into the potable water distribution system (Well Nos. 15 and 20).

The MWRF was originally constructed as a secondary treatment plant in 1965. In September 2003, pursuant to permit R4-2002-2008, the recycled water distribution system and tertiary treatment production facilities were completed and began supplying Title 22 recycled water for irrigation. Presently, there are thirteen (13) active recycled water customers, including the plant itself. See Section 6 for a summary of recycled water customers.

### 3.1.2 Recently Completed Projects

#### 3.1.2.1 Coating and Repair – District 1 Reservoirs (5)

This project includes the coating and repair of 5 reservoirs in District one including: Moorpark Yard Reservoir, S&K Reservoir No. 2, Gabbert Reservoir, Fairview Reservoir, and Palmer Reservoir. The project was completed at the end of 2020 and all reservoirs have been put back into service.

### 3.1.3 Facilities in Construction

#### 3.1.3.1 Coating and Repair – College 1 & 2 and Gabbert Reservoirs

This project includes the coating and repair of Gabbert Reservoir, College Reservoir 1, and College Reservoir 2.

### 3.1.4 Projects in Design

#### 3.1.4.1 Stockton Reservoir – VCWWD No. 1 (Moorpark)

Currently in the design phase, the Stockton Reservoir project will replace the existing 0.5-million-gallon storage reservoir. The existing reservoir is in the 994-pressure zone in the northwest portion of the District and is at the end of its useful service life. The new Stockton Reservoir will be a 1.0-million-gallon steel tank located in the vicinity of the existing tank.

#### 3.1.4.2 Moorpark Desalter – VCWWD No. 1 (Moorpark)

To reduce dependence on imported water, the District is in the planning phases of the Moorpark Desalter Project. This multi-million-dollar project will include constructing production water wells in the shallow aquifer and extracting the brackish groundwater, which is high in salts and dissolved solids. Once extracted, this groundwater will be filtered through a membrane treatment process and disinfected, resulting in treated water which will meet State drinking water quality standards. The treated water will

then be delivered to the District's water distribution system. The brine waste from the treatment process will then be discharged into the Calleguas Municipal Water District's Salinity Management Pipeline to be transported to the Pacific Ocean.

## 3.2 Service Area Boundary Maps

The District boundary encompasses the City of Moorpark and surrounding agricultural lands in the valley area of the Arroyo Las Posas and State Highway 118 to the east and the Santa Clara River Valley to the north as shown in **Figure 3-1**: VCWWD No. 1 Water .

## 3.3 Service Area Climate and Terrain

### 3.3.1 Service Area Climate

The District's service area resides in a "Subtropical-Mediterranean" climate. This is described as a semi-arid environment with mild winters, warm summers, and light to moderate rainfall. The climate for the District is consistent with coastal Southern California. The region lies in the semi-permanent, high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The average monthly maximum temperature of 83°F occurs in August, and the average monthly minimum temperature of 41 °F occurs in January and December. The average annual maximum temperature for the service area is 78°F and the average annual minimum temperature is 49 °F.

The District's service area receives approximately 11 inches of rainfall annually with most of annual rainfall occurring in the months of December through March using approved data from Ventura County Watershed Protection District (VCWPD) precipitation stations 126A and 508 located in the City of Moorpark for water years 2009 through 2015. The average annual evapotranspiration of the area is around 55.1 inches[1]. For comparison, data collected by the VCWPD for nearby Evapotranspiration Station #227 at Lake Bard, 3 miles from the District's service area, shows an average evapotranspiration of 65.23 inches[2]. See Table 3-A for a summary of climate characteristics for the District's service area.

**Submittal Table 3-A: VCWWD No. 1 - Climate Characteristics**

| | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Avg. or Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Avg. Max Temp. (°F)** | 69 | 69 | 71 | 74 | 75 | 77 | 81 | 83 | 82 | 79 | 74 | 69 | 75.3 (avg) |

[1] California Irrigation Management Information Systems https://cimis.water.ca.gov/App_Themes/images/etozonemap.jpg

[2] VCWPD Hydrologic Data Server https://www.vcwatershed.net/hydrodata/php/getstation.php?siteid=227

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Avg. Min. Temp. (°F)** | 41 | 43 | 44 | 46 | 50 | 53 | 57 | 56 | 55 | 50 | 44 | 41 | 48.3 (avg) |
| **Avg. Rainfall (in)** | 1.49 | 1.98 | 1.67 | 0.55 | 0.17 | 0.03 | 0.11 | 0.01 | 0.10 | 0.78 | 0.98 | 3.06 | 10.93 (avg) |
| **Standard Monthly ETo (in)** | 2.17 | 2.80 | 4.03 | 5.10 | 5.89 | 6.60 | 7.44 | 6.82 | 5.70 | 4.03 | 2.70 | 1.86 | 55.14 (total) |

Sources:

Temperatures: http://www.weather.com/weather/monthly/l/USCA0728:1:US

Precipitation for Moorpark Station 126A: http://vcwatershed.net/hydrodata/php/getstation.php?siteid=126A#top

Precipitation for Moorpark Station 508: http://vcwatershed.net/hydrodata/php/getstation.php?siteid=508#top

Evapotranspiration: CIMIS Reference Evapotranspiration Zones – Zone 9 for Moorpark area:

https://cimis.water.ca.gov/App_Themes/images/etozonemap.jpg

### 3.3.2 Service Area Terrain and Soils

The District is within the VCWPD. Most of the area is within a four-mile-wide valley and encompasses portions of hills to the north and south with ranges in elevation from 400 feet to 1,700 feet.

Within the valley, the soils in this area consist mainly of silty and sandy loam, which were formed from weathered alluvium, derived primarily from weathered sedimentary bedrock deposited as alluvial fans. The hills mostly have moderate to steep slopes, ranging from 30 to 50 percent, and consist mainly of gravelly loam formed from weathered sandstone.

## 3.4 Service Area Population and Demographics

### 3.4.1 Service Area Population

The District encompasses approximately 33.7 square miles (21,567 acres) and consists of the City of Moorpark, which accounts for 12.8 square miles (38%) of the District's water service area, and contiguous unincorporated areas (62%) in eastern Ventura County. The DWR Population Tool developed for use on the 2020 UWMP estimates a water agency's water service area population by creating a trend line of the persons per connection from 2000 to 2010 and that trend continues through the year 2020 based on residential (single-family and multi-family) water service connections for the years 1990, 2000, and 2010 along with the water service area boundary in electronic keyhole markup language (KML) format. The Population Tool worksheets are included in Appendix D for reference.

Southern California Association of Government (SCAG) adopted Connect SoCal (2020-2045 Regional Transportation Plan/Sustainable Communities Strategy) on September 3, 2020. Connect SoCal's Demographics & Growth Forecast technical report projects growth in employment population, and households at regional, county, jurisdictional, and sub-jurisdictional levels. Population projections for the City of Moorpark were used as the basis for projecting future District WSA populations through 2045, which are shown in Table 3-1. The annual growth of the City of Moorpark between 2016 and 2045 from the technical report was used starting with the 2020 DWR population estimate of 36,625 to project the

population until 2045. The population is projected to increase 13.0% to 41,400 in the year 2045 relative to the 2020 population.

| Submittal Table 3-1 Retail: Population - Current and Projected | | | | | | |
|---|---|---|---|---|---|---|
| Population Served | 2020 | 2025 | 2030 | 2035 | 2040 | 2045*(opt)* |
| | 36,625 | 37,600 | 38,500 | 39,500 | 40,400 | 41,400 |

### 3.4.2 Other Social, Economic, and Demographic Factors

Most of the District's service area population is in the City of Moorpark. Current and future demographics, housing development, and land use in the City will have a significant impact on water use and water system planning for the District.

### 3.4.3 Economic and Housing Factors

According to the Southern California Association of Governments (SCAG) Local Profile for the City of Moorpark for 2018, there was a total of 11,346 housing units, with 8,303 (73.2%) single-detached houses, 1,518 (13.4%) were single-attached; 205 (1.8%) were 2- to 4-unit residences; 1,177 were five-plus units (10.4%); and 143 were mobile homes (1.2%).

According to 2019 census data, the City of Moorpark has a population of 36,375 persons. The poverty level is 4.2%, which is 7.6% lower than the national average. The median household income of Moorpark is $104,839 ($44,335 per capita), compared to the national average of $60,293 ($32,621 per capita) in 2018 dollars. In 2019, the City of Moorpark had an average of 3.3 persons per dwelling unit[3].

Based on the City's Housing Element, the City of Moorpark's housing needs for the period of 2014 to 2021 is 1,164 units mainly for the population at moderate to above moderate-income levels.

Based on DWRs Disadvantaged Community Mapping Tool, there are some areas designated as disadvantaged communities within the District boundary.

### 3.4.4 Demographics, Race, and Ethnicity

Based on the City's Housing Element 2014 to 2021, the Cities demographics of race and ethnicity composition differ from Ventura County in that there are lower percentages of City residents that are Hispanic/Latino and racial/ethnic minorities. The 2019 census data reflects this composition trend. See Table 3-C for a summary of the race and ethnicity composition of the City from current census data.

[3] https://scag.ca.gov/sites/main/files/file-attachments/moorpark_localprofile.pdf?1606015228

| Submittal Table 3-C: City of Moorpark 2019 Census Bureau Data | |
|---|---|
| **Race and Ethnicity** | **Percentage** |
| White alone, not Hispanic or Latino | 54.2% |
| Hispanic or Latino alone | 31.8 |
| Asian American alone | 8.1% |
| Black or African American alone | 1.6% |
| American Indian and Alaskan Native alone | 1.0% |
| Native Hawaiian and Other Pacific Islander alone | 0.7% |

## 3.5 Land Uses within Service Area

Land Use in the area reflects the Land Use Element of the City of Moorpark and County of Ventura Land Use Program. The District encompasses approximately 33.7 square miles (21,567 acres). The City of Moorpark accounts for 12.8 square miles (38%) of the District's service area. The contiguous unincorporated areas of Ventura County that are located within the service area account o for 62% and are predominantly undeveloped agricultural areas and are zoned for agriculture and open space.

### 3.5.1 Land Use within the City of Moorpark

The City of Moorpark's General Plan shows the significant land uses by area are Open Space 2, which allows for 1 dwelling unit (DU) per acre (1 DU/AC), and rural low density residential (1 DU/5 AC). There is also significant medium-low density (2 DU/AC) and medium density residential (4/DU AC) located in the northeast in the vicinity of Campus Park Drive and in the south in the vicinity of Tierra Rejada Road with lower and higher density residential intermixed. The majority of commercial, industrial, and public/institutional land uses are located in the vicinity of Los Angeles Avenue in the center of the City.

The City has a number of specific plans in various stages of completion. Specific plans approved or submitted in the City are as follows:

#### 3.5.1.1 Carlsberg Specific Plan

This approved and largely constructed specific plan is located on approximately 500 acres in the southeastern portion of the City, bounded generally by the Arroyo Simi and New Los Angeles Avenue on the north, Spring Road on the west, Tierra Rejada Road on the south, and State Highway 23 on the east. The plan includes 534 single-family homes on both sides of Miller Parkway, north of Tierra Rejada Road. The northerly portion of the site, along New Los Angeles Avenue, consists of 40 acres for commercial use, which includes the 29-acre Moorpark Marketplace. South of the Moorpark Marketplace, there are 33 acres for office/business park use, currently being developed as the Patriot Commerce Center. There is also a 29-acre school and seven acres for institutional use.

#### 3.5.1.2 Hitch Ranch - Specific Plan One

The proposed Specific Plan is in the Environmental Analysis phase and includes the development of 755 residential units (261 single-family and 494 multi-family), a six-acre public park, associated roadways and infrastructure, as well as expansive open space, detention basins, and manufactured slopes on approximately 277 acres. Hitch Ranch is generally located north of Poindexter Avenue, west of Casey Road, and extending approximately 1,700 feet to the west of Gabbert Road.

#### 3.5.1.3 Moorpark Highlands - Specific Plan Two

The approved Moorpark Highlands Specific Plan includes up to 450 single-family residential lots and one multi-family neighborhood proposed for up to 102 units, on property located north of Charles Street, along the extension of Spring Road, east of Walnut Canyon Road (SR-23), and west of Happy Camp Canyon Regional Park. The project permanently preserves 169 acres of land in a Habitat Conservation Plan, providing open space that enhances the habitat within 94 of those acres, and provides multi-use trails for access to these areas by the public. The project also includes a 7-acre park and reserves land for State Route 23 and North Hills Parkway, a potential bypass route for California State Route 118, as well as an extension of Spring Road to Walnut Canyon Road.

#### 3.5.1.4 Downtown Specific Plan

The Downtown Specific Plan area is located in the center of the city limits and contains High Street as its core. Also included in the specific plan area are other parts of Old Town Moorpark, including the residential neighborhood north of High Street, the railroad right of way south of High Street and the properties along Moorpark Avenue north of Los Angeles Avenue. The Downtown Specific Plan furthers the vision for the overall revitalization of the downtown and implements design standards, guidelines, and a strategy for business attraction and development of the city-owned parcels in the downtown.

### 3.5.2 Land Use within the County of Ventura

Service areas outside of the City of Moorpark within the County of Ventura have been designated as Agricultural and Open Space to 2040.

# Chapter 4 Customer Water Use/Water Use Characterization

This chapter describes and quantifies the District's past, current, and future potable and non-potable water use projections through at least the year 2040 (2045 is optional), to the extent that records are available, and are summarized in Table 4-3. Characterizing and analyzing records available provides a realistic prediction of future water use based upon the District's past and current water use, combined with considerations of anticipated growth, new regulations, changing climate conditions, and trends in customer water use behaviors. Examining each water use sector for a variety of factors, then aggregating the information into a comprehensive projection of customer water use, becomes the foundation for integration with the District's water supplies (Chapter 6) to assess long-term water system reliability (Chapter 7).

## 4.1 Non-Potable Versus Potable Water Use

The primary source of water supply for the District has been imported MWD water purchased through the local wholesale agency, Calleguas. The imported water, which is primarily SWP water, is treated at Metropolitan's Joseph Jensen Filtration Plant to drinking (potable) water standards. In 2020, the District supplied a total of 7,112 AF from imported water purchased from Calleguas, which was 71 percent of the total water supply including recycled water.

The District produces groundwater from the East Las Posas Groundwater Basin via four wells owned and operated by the District with a total system capacity of approximately 2,260 gpm (3,645 AFY). The groundwater is chlorinated at the well sites before being pumped into the potable water distribution system. In 2020, the District supplied a total of 1,966 AF from groundwater production, which was 20 percent of the total water supply including recycled water.

The District's Moorpark Water Reclamation Facility (MWRF) produces Title 22 recycled water via tertiary treatment facilities. The plant produced 966 AF of recycled water in 2020, which was 9% of the total water supply and sold approximately 941 AF to its thirteen customers. The plant currently has a secondary treatment capacity of 5.0 mgd (5,600 AFY) and a tertiary capacity of 3.0 mgd (3,360 AFY) but is only permitted up to 1.5 mgd (1,680 AFY). It is projected that recycled water use in the District will increase to 2,200 AFY by 2040.

The District is planning the Moorpark Desalter Project, which is a groundwater production and treatment system that is estimated to provide up to 5,000 AFY of potable water for customers in the District's water service area. As part of the project, 10 to 18 extraction wells would be constructed to extract poor-quality, brackish groundwater from a shallow aquifer in the South Las Posas Basin and pump the groundwater via a new transmission pipeline to the proposed Moorpark Desalter Plant, where the water will be treated to drinking water standards through a membrane treatment process that includes filters, low-pressure reverse osmosis, disinfection, and chemical water conditioning.

## 4.2 Past, Current, and Projected Water Use by Sector

This section discusses past, current, and projected water use in five-year increments for a period of at least 20 years, and ideally to year 2045. The water uses shall be identified by sector and based upon information provided by the District.

### 4.2.1 Water Use Sectors Listed in Water Code

To characterize the District'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 analyses. 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.

Of the 11,426 District water service connections in 2020, 10,415 were residential connections (91 percent). Of the 10,415 residential connections, 10,255 were single family (98 percent) and 160 were multi-family (2 percent). The remaining water service connections include commercial, industrial, institutional/government, and agricultural sectors (9 percent).

### 4.2.2 Water Use Sectors in Addition to Those Listed in Water Code

#### 4.2.2.1 Other

***Construction and Fire Services***

Construction services include water uses such as dust suppression, washing equipment, and others. Water used for fire services include line flushing and firefighting.

### 4.2.3 Past Water Use

Past water use for potable water service connections by customer sector are shown in Table 4-A.

**Submittal Table 4-A Retail: Use for Potable and Non-Potable Water - Historical**

| Use Type *(Add additional rows as needed)* | Additional Description *(as needed)* | Historical 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*** | | 2016 | 2017 | 2018 | 2019 |
| Single Family | | 4,423 | 4,748 | 5,430 | 4,960 |
| Multi-Family | | 392 | 413 | 416 | 385 |

| | | | | | |
|---|---|---|---|---|---|
| Commercial | | 978 | 964 | 931 | 734 |
| Industrial | | 119 | 112 | 120 | 110 |
| Institutional/Governmental | | 515 | 543 | 717 | 599 |
| Agricultural irrigation | | 1,905 | 1,758 | 2,077 | 1,723 |
| Other | Construction and Fire Services | 60 | 65 | 57 | 52 |
| | **TOTAL** | **8,392** | **8,603** | **9,748** | **8,563** |
| NOTES: Does not include losses | | | | | |

Total potable water use including unaccounted-for (lost) water has been decreasing since the 2015 UWMP update. Since 2016 the potable demands have fluctuated up to 14 percent in 2018. Per capita water use has also decreased since 2015 and is discussed further in Chapter 5. Residential water use is approximately 45 percent of the total system water use over the past five years.

### 4.2.4 Distribution System Water Losses

Distribution system water losses are the physical potable water losses 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.). This is the sum of American Water Works Association Method real losses and apparent losses.

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 Table 4-4 and all relevant AWWA reporting worksheets can be found in Appendix E:

Though a Water Loss Standard has not been adopted to date, the water loss audits are done internally each year for VCWWD No. 1 per CWC and are checked by a third party. For the past five years, VCWWD No. 1 has received an average score of 68 out of 100 on its AWWA reporting worksheets and the losses have averaged approximately 3 percent of total water usage.

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 are summarized in Section 4.2.6.

### 4.2.5 Current Water Use

Existing water service connections by customer sector are shown in Table 4-1. Residential (single-family plus multi-family) connections accounted for approximately 60 percent of total water service connections in 2020 (excludes water losses).

| Submittal Table 4-1 Retail: Demands for Potable and Non-Potable Water - Actual | | | |
|---|---|---|---|
| Use Type | 2020 Actual | | |
| **Drop down list**<br>May select each use multiple times<br>These are the only Use Types that will be recognized by the WUEdata online submittal tool | Additional Description<br>(as needed) | Level of Treatment When Delivered<br>Drop down list | Volume* |
| Add additional rows as needed | | | |
| Single Family | | Drinking Water | 5,087 |
| Multi-Family | | Drinking Water | 399 |
| Commercial | | Drinking Water | 708 |
| Industrial | | Drinking Water | 105 |
| Institutional/Governmental | | Drinking Water | 563 |
| Agricultural irrigation | | Drinking Water | 1,997 |
| Losses | | Drinking Water | 120 |
| Other Potable | Construction/Fire Water | Drinking Water | 278 |
| | | **TOTAL** | 9,257 |

### 4.2.6 Projected Water Use

In accordance with Water Code Section 10635(a), suppliers shall include an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier 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.

#### 4.2.6.1 20-Year Planning Horizon

Suppliers shall report their projected water use, in five-year increments through 2040. Suppliers are encouraged to project through 2045 to bridge the data gap between plan cycle years. Additionally, in accordance with Water Code Section 10603(d)(2), suppliers shall report their projections for each of the water use sectors identified in Section 4.2.1. Projected water uses are reported in Table 4-2.

| Submittal Table 4-2 Retail: Use for Potable and Non-Potable Water - Projected | | |
|---|---|---|
| Use Type | | Projected Water Use*<br>*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 | Additional Description (as needed) | 2025 | 2030 | 2035 | 2040 | 2045 (opt) |
|---|---|---|---|---|---|---|
| Add additional rows as needed | | | | | | |
| Single Family | | 5,222 | 5,347 | 5,486 | 5,611 | 5,750 |
| Multi-Family | | 410 | 419 | 430 | 440 | 451 |
| Commercial | | 727 | 744 | 763 | 781 | 800 |
| Industrial | | 107 | 110 | 113 | 115 | 118 |
| Institutional/Governmental | | 578 | 591 | 607 | 621 | 636 |
| Agricultural irrigation | | 2,050 | 2,099 | 2,154 | 2,203 | 2,257 |
| Losses | | 123 | 126 | 129 | 132 | 136 |
| Other Potable | | 285 | 292 | 300 | 307 | 314 |
| **TOTAL** | | 9,502 | 9,728 | 9,982 | 10,210 | 10,462 |

### 4.2.6.2 Water Year Types

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 Tables 7-1, 7-2, and 7-3. Suppliers will also have to characterize a five-consecutive-year drought which is addressed in section 4.2.7.

### 4.2.6.3 Codes and Other Considerations Used in Projections

If available, water use projections shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified. Suppliers shall cite the code, standards, ordinances, or transportation and land use plans used in making the projections. Suppliers shall also indicate whether the water use projections considered savings from these (reported in Table 4-5).

As shown in Table 4-B, through the implementation of District water conservation ordinances and measures discussed in Chapter 9, total per-capita District water use (including agricultural water use) has significantly dropped from 2005 to 2020.

**Table 4-B: Historical Per-Capita Water Use**

| | 2005 | 2010 | 2015 | 2020 |
|---|---|---|---|---|
| Total Per Capita (gpcd) | 314.4 | 257.4 | 178.1 | 173 |

The actual per capita water use of 173 gpcd is less than the 2020 SBx7-7 targets of 195 gpcd calculated for the District in this UWMP as detailed in Chapter 5. Total per capita water use water use has remained steady from 2015 to 2020 and is expected to remain constant as many of the ordinances and measures discussed in Chapter 9 provided for permanent reductions in per-capita District water use.

### 4.2.7 Characteristic Five-Year Water Use

Water Code Section 10635(b) is a new requirement for the 2020 UWMPs. A critical component of this new statutory language 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.

## 4.3 Worksheets and Reporting Tables

Suppliers are encouraged to use the DWR Planning Tool Use Worksheet to record current and projected water use as described in Section 4.2. These worksheets are structured to facilitate the supplier's completion of reporting tables. The tables are similar to those in the 2015 UWMP, with some modifications to reflect Water Code changes, the 2020 timeframe, and to provide additional flexibility to assure the tables are functionally useful for the supplier. The tables relevant to customer water use are used throughout this report.

| Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable) | | | | | | |
|---|---|---|---|---|---|---|
| | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 (opt) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R* | 9,257 | 9,502 | 9,728 | 9,982 | 10,210 | 10,462 |
| Recycled Water Demand[1] *From Table 6-4* | 941 | 1,600 | 1,800 | 2,000 | 2,200 | 2,200 |
| Optional Deduction of Recycled Water Put Into Long-Term Storage[2] | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL WATER USE** | 10,198 | 11,102 | 11,528 | 11,982 | 12,410 | 12,662 |
| NOTES: | | | | | | |

| **Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting** | |
|---|---|
| Reporting Period Start Date (mm/yyyy) | Volume of Water Loss [1,2] |
| 07/2020 | 120 |
| 07/2019 | 7 |
| 07/2018 | 70 |
| 07/2017 | 670 |
| 07/2016 | 403 |
| *[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.* ***[2] Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.* | |
| NOTES: | |

## 4.4 Water Use for Lower Income Households

Suppliers are required to include the projected water use for lower income households in their 2020 UWMP. 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.

Since the City of Moorpark accounts for approximately 97% of the water service area by population and contains most housing, SCAG data for the City of Moorpark shall be used for this UWMP. SCAG assigned an RHNA of 1,288 units to the City of Moorpark for the 2020-2045 forecast by income distribution, as summarized in Table 4-C.

**Submittal Table 4-C: City of Moorpark's 2020-2045 RHNA Assigned Units**

| Income Group | Number of Units | Percentage |
|---|---|---|
| Extremely/Very Low | 377 | 29% |
| Low | 233 | 18% |
| Moderate | 245 | 19% |
| Above Moderate | 433 | 34% |
| Total | 1,288 | 100% |

Extremely low-, very low-, and low-income households are often combined and referred to as lower-income household. The lower-income households total 610 units for the City of Moorpark. It is estimated

there are 3.3[4] people per dwelling unit with a per capita water usage of 194 gpcd[5] (not including agricultural water use). If all 610 lower-income housing units are built by 2045 the water demand increase is estimated to be 430 AFY, which is included in the water demand projections herein. In accordance with Water Code Section 10631.1, Table 4-5 confirms and indicates how future water savings estimates and lower-income household demands are included in water use projections.

| Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections | |
|---|---|
| **Are Future Water Savings Included in Projections?**<br>(Refer to Appendix K of UWMP Guidebook)<br>*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. | Chapter 9 |
| **Are Lower Income Residential Demands Included In Projections?**<br>*Drop down list (y/n)* | Yes |
| NOTES: | |

## 4.5 Climate Change Considerations

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; and
- Rising sea levels resulting in:
    - Impacts to coastal groundwater basins due to seawater intrusion;
    - Increased risk of damage from storms, high-tide events, and the erosion of levees; and
    - Potential pumping cutbacks on the SWP

[4] https://scag.ca.gov/sites/main/files/file-attachments/moorpark_localprofile.pdf?1606015228

[5] Per capita water usage is based on 2020 goal for estimation purposes.

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

Based on an analysis of the output from 32 Global Climate Models which were modified to examine projected changes in climate in Ventura County[6], the following potential impacts included:

- Changes in precipitation characteristics (intensification and concentration into winter season) may have implications for groundwater recharge and how surface water is conveyed, captured, and stored.
- Increased potential for post-fire flash flooding and/or debris flows due to more frequent short-duration, high intensity rainfall.
- Increased evaporative demand
- Increasing temperatures and more frequent extreme (hot) temperatures
- Increases in maximum temperatures and overnight minimum temperatures as well as frequency of extreme temperatures
- Wildfire season will likely extend earlier into the spring and early summer and later into the fall and early winter

Climate change will affect the water supplies and water supply reliability of Calleguas. Changes in weather resulting from increased average temperature will decrease the volume of precipitation falling as snow in California and an overall a reduction in snowpack in the Sierra Nevada and other mountain ranges in the state. A rise in sea level could exacerbate saltwater intrusion into the coastal aquifers used for water supply in the region, which could degrade the aquifer water quality to an unusable level and thus increase Calleguas' purveyors dependance on SWP water.[7] Climate change is also anticipated to cause more variability to the Colorado River, which in turn could add strain to MWD (and therefore Calleguas) deliveries as MWD supplements its supply to Calleguas from the Colorado River in times of drought or other shortage conditions.[7] Section 7.1.1.3 of Calleguas' Draft 2020 UWMP goes into further detail on climate change impacts to the wholesaler's water supply.

[6] Projected Changes in Ventura County Climate, Western Regional Climate Center, 2019, https://wrcc.dri.edu/Docs/VenturaClimate2019_lores.pdf

[7] Calleguas Municipal Water District Draft 2020 UWMP (Public Review Draft), March 2021, CMWD

### 4.5.1 MWD Planning Efforts for Climate Change Concerns

MWD recognizes additional risks and uncertainties from a variety of sources in the 2015 Integrated Resource Plan (IRP) Update, including climate change, which may result in a negative impact to water supply reliability. While it is impossible to predict the level of risk and uncertainty, the region's reliability would be more secure with a long-term plan recognizing risks and providing resources to offset risks. Some risks and uncertainties can be addressed by following the findings of the 2015 IRP Update. However, there are other risks that may take longer to manifest, such as climate change or demographic growth patterns, that impact water demands. The initial 2015 IRP analysis indicated, to address these risks, an additional 200,000 AF of water conservation and local supplies may be needed. This additional supply shall be considered when examining implementation polices and approaches as the IRP process continues. MWD is currently updating the 2020 IRP Update. However, it was not available at the time of this report preparation.

MWD has established a comprehensive technical process to identify key vulnerabilities known as the Robust Decision-Making (RDM) approach, which can show how vulnerable the region's reliability is to longer-term risks. The RDM approach can also establish indicators to monitor when critical changes may occur such as ever-changing impacts from improved Global Climate Models or housing and population growth patterns.

MWD is an active and founding member of the Water Utility Climate Alliance (WUCA), consisting of ten nationwide water providers collaborating on climate change adaptation and greenhouse gas mitigation issues. As a part of this effort, WUCA and its member agencies pursue a variety of activities on multiple fronts such as sharing individual agency actions and program implementation; supporting regional and federal efforts; and monitoring development of climate change-related research, technology, programs, and federal legislation.

WUCA published a white paper in January 2010 titled "Options for Improving Climate Modeling to Assist Water Utility Planning for Climate Change". The publication addresses Global Circulation Models, identifies key aspects for water utility planning, and provides seven initial recommendations on how climate modeling and downscaling techniques can be improved for applications in the water sector. Another WUCA white paper published in 2015, "Embracing Uncertainty: A Case Study Examination of How Climate Change is Shifting Water Utility Planning", provides practical and relevant examples on how and why to modify planning and decision-making processes to better prepare for a changing climate.

The IRP Update also explicitly reflects uncertainty in MWD's future water management environment. This involves evaluating a wider range of management strategies and planning for uncertain and evolving conditions, ultimately performing under a wide range of future conditions. Overall, MWD champions the adopted climate change policy principles by:

- Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply,

- Supporting flexible “no regret” solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and
- Evaluating staff recommendations regarding climate change and water resources under the California Environmental Quality Act (CEQA) to avoid adverse effects on the environment.

MWD has made significant efforts to implement greenhouse gas mitigation programs and policies for its facilities and operations. MWD has been a leader in efforts to increase regional water use efficiency, increasing the availability of incentives for local conservation and recycling projects, as well as supporting conservation Best Management Practices for industry and commercial businesses. MWD continues to incorporate current climate change science into its planning efforts.

# Chapter 5 SBX7-7 Baseline, Targets, and 2020 Compliance

This chapter reports the daily per capita water use targets that were developed in accordance with the Water Conservation Act of 2009, also known as Senate Bill x7-7 (SBx7-7). SBx7-7 provides regulatory framework to support a statewide reduction of urban per capita water use of 20 percent by December 31, 2020.

The previous 2015 UWMP measured the progress towards this goal by reported per capita water use and comparing it to the intermediary goal of a 10 percent reduction by December 31, 2015.The 2010 UWMP required retail water suppliers to develop baseline daily per capita water use, a minimum baseline daily per capita water use, and target daily per capita water use for 2015 and 2020.The baseline daily per capita water use could be based on one of four methods described below:

- Method 1: 80 percent of the water supplier's baseline per capita water use
- Method 2: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscape area water use; and commercial, industrial, and institutional uses
- Method 3: 3: 95 percent of the applicable state hydrologic region target as stated in the State's April 30, 2009 draft 20x2020 Water Conservation Plan
- Method 4: A best management practices (BMP) Option based on standards that are consistent with California Urban Water Conservation Council's (CUWCC) BMPs

## 5.1 Guidance for Wholesale Suppliers

This section is not applicable to the District's UWMP.

## 5.2 SB X7-7 Forms and Summary Tables

Table 5-1 shows the average baselines and confirmed 2020 targets for the District that were established in the 2015 UWMP.

**Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form**
*Retail Supplier or Regional Alliance Only*

| Baseline Period | Start Year * | End Year * | Average Baseline GPCD* | Confirmed 2020 Target* |
|---|---|---|---|---|
| 10-15 year | *2000* | *2009* | *243* | *194* |

| | | | | |
|---|---|---|---|---|
| 5 Year | *2004* | *2008* | *250* | |
| **All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)* | | | | |
| NOTES: | | | | |

## 5.3 Baseline and Target Calculations for 2020 UWMPs

### 5.3.1 Supplier Submitted 2015 UWMP, No Change to Service Area

The District's service area did not change, and they included this calculation in the 2015 UWMP, therefore the calculations from the 2015 UWMP do not need to be updated and will be used for the 2020 UWMP to report SBX7-7 compliance in 2020.

### 5.3.2 Baseline Periods

Baseline daily per capita water use is defined as a continuous 10 or 15 year base period (baseline) for water use ending no earlier than December 31, 2004 and no later than December 31, 2020.

## 5.4 Methods for Calculating Population and Gross Water Use

### 5.4.1 Calculating Population

The DWR Population Tool was used to calculate the population within the District's Service area.

### 5.4.2 Gross Water Use

Gross water use for the baseline and minimum baseline periods were calculated as part of the SBx7-7 Verification forms which is included as Appendix F.

## 5.5 2020 Compliance Daily Per-Capita Water Use (GPCD)

In 2020, the District's per capita water use was 173 gpcd which falls below the 2020 target of 194 gpcd as shown in Table 5-2. There were no adjustments applied to the 2020 gpcd and the District met the targeted reduction for 2020.

| **Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form** *Retail Supplier or Regional Alliance Only* | | | | |
|---|---|---|---|---|
| **2020 GPCD** | | | | |
| Actual 2020 GPCD* | 2020 TOTAL Adjustments* | Adjusted 2020 GPCD* *(Adjusted if applicable)* | 2020 Confirmed Target GPCD* | Did Supplier Achieve Targeted Reduction for 2020? Y/N |
| *173* | *0* | *173* | *194* | *Yes* |
| **All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)* | | | | |
| NOTES: | | | | |

## 5.6 Regional Alliance

The District is not participating in a regional alliance.

# Chapter 6 Water Supply Characterization

## 6.1 Water Supply Analysis Overview

VCWWD No. 1 receives its water from multiple sources as shown below:

- Imported Water: The primary source of its supply is imported potable water from the Metropolitan Water District (MWD) of Southern California through Calleguas Municipal Water District, a local wholesaler. The imported water is primarily State Water Project (SWP) water from the Sacramento-San Joaquin River Delta in Northern California that has been treated at MWD's Joseph Jensen Filtration Plant. In Fiscal Year 2020 (2020), VCWWD No.1's purchases from Calleguas totaled 7,112 AF.

- Groundwater: The second largest supply is from local groundwater production within the East Las Poses Groundwater Basin. Currently, the District owns and operates five wells that pump groundwater from the basin. One well is currently offline. These wells are in the north-east portion of the service area and have a capacity up to 2,170 AFY. In fiscal year 2020, the District's groundwater allocation was 2,195 AFY. Utilizing four wells in 2020, VCWWD No. 1 extracted 1,966 AF of groundwater from the East Las Posas Basin. In December 2020, through local ordinances and the Groundwater Sustainability Plan for the Las Posas Basins implemented by Fox Canyon Groundwater Management Agency (FCGMA) VCWWD No.1 was granted an a groundwater allocation of 2,195 AFY for 2020. The District has not received an official allocation for 2021.

- Reclaimed Water: Since 2003, the District has used the Moorpark Water Reclamation Facility (MWRF) to generate reclaimed water for additional supply. The MWRF is owned and operated by the District. The treatment facility has the capacity of 3.0 (3,360 AFY) but is only permitted to treat 1.5 mgd (1680 AFY) of the secondary effluent to tertiary levels to meet California Code of Regulations Title 22 requirements. The recycled water is primarily used irrigation and landscape uses. In 2020, approximately 966 AF of wastewater was treated to tertiary levels and 941 AF distributed within the District's service area for reuse.

Normal water year, single dry year, and five consecutive year droughts or more frequent and severe periods of drought (as described in the drought risk assessment) can be found in Chapter 7.

### 6.1.1 Specific Analysis Applicable to All Water Supply Sources

#### 6.1.1.1 Imported Water:

VCWWD No. 1 has a purchase agreement with Calleguas Municipal Water District with a Tier 1 water allocation amount of 10,722.5 AF (90% of 2021 Base Demand) to be purchased each year. This water is purchased from Calleguas via supplies from MWD. As shown in Table 7-A, it is anticipated that supplies from MWD will exceed future water demands from its customer base during normal-year, single-dry year,

and extended drought periods. This ensures the reliability of imported water to VCWWD No.1 will meet projected demands into the future.

#### 6.1.1.2 Groundwater:

Groundwater production in the East Las Posas Basin is managed by FCGMA, an independent special agency responsible for protecting groundwater quality and sustainability. The State Groundwater Management Act of 2014 has triggered that a specific Groundwater Sustainability Plan be developed for the Las Posas Basin to be implemented and adhered to by VCWWD No.1 and other groundwater producers pumping in the basin. The District's allocation was approved in September 2020 by the Courts in a settlement. The settlement gives the District 10.6% of the East Las Posas Basing Safe Yield. The District's allocation will be based on the established safe yield of the basin as determined by FCGMA. This allocation will be effective fiscal year 2021. The Safe Yield of the basin and District's allocation will be examined every five years and adjusted accordingly by FCGMA to meet the goals in the GSP by 2040.

#### 6.1.1.3 Recycled Water

Recycled water is produced at the Moorpark Wastewater Treatment Facility, owned and operated by VCWWD No. 1. Recycled water production is regulated by the State of California per California Code of Regulations Title 22 requirements. VCWWD No. 1 treats wastewater collected from over 10,000 customers in its service area and has the capacity (also limited to about 75% in influent flow) to treat 3.0 mgd of secondary effluent that meet Title 22 requirements at its owned and operated MWRF but is only permitted to treat 1.5 mgd. The District supplies recycled water to thirteen users throughout the service area for landscape irrigation at golf courses, agricultural irrigation, and grading and dust control uses. It is expected that recycled water can be reliably used regardless of drought or severe water conservation efforts if wastewater up to the treatment capacity is available. Wastewater in the District has historically been consistent from year to year as population has grown. It is expected, during periods of drought or conservation, that potable water use will decline. This will impact the wastewater flows. However, it is anticipated that these flows will remain well above the tertiary treatment capacity of the plant.

### 6.1.2 Other Characterizations

See Figure 3-2 for a map showing conveyance facilities, groundwater well locations, and connection to Calleguas Municipal Water District.

### 6.1.3 Optional Planning tool

The optional Planning Tool was used for Chapter 7 evaluation.

## 6.2 Narrative Sections for Supplier's UWMP Water Supply Characterizations

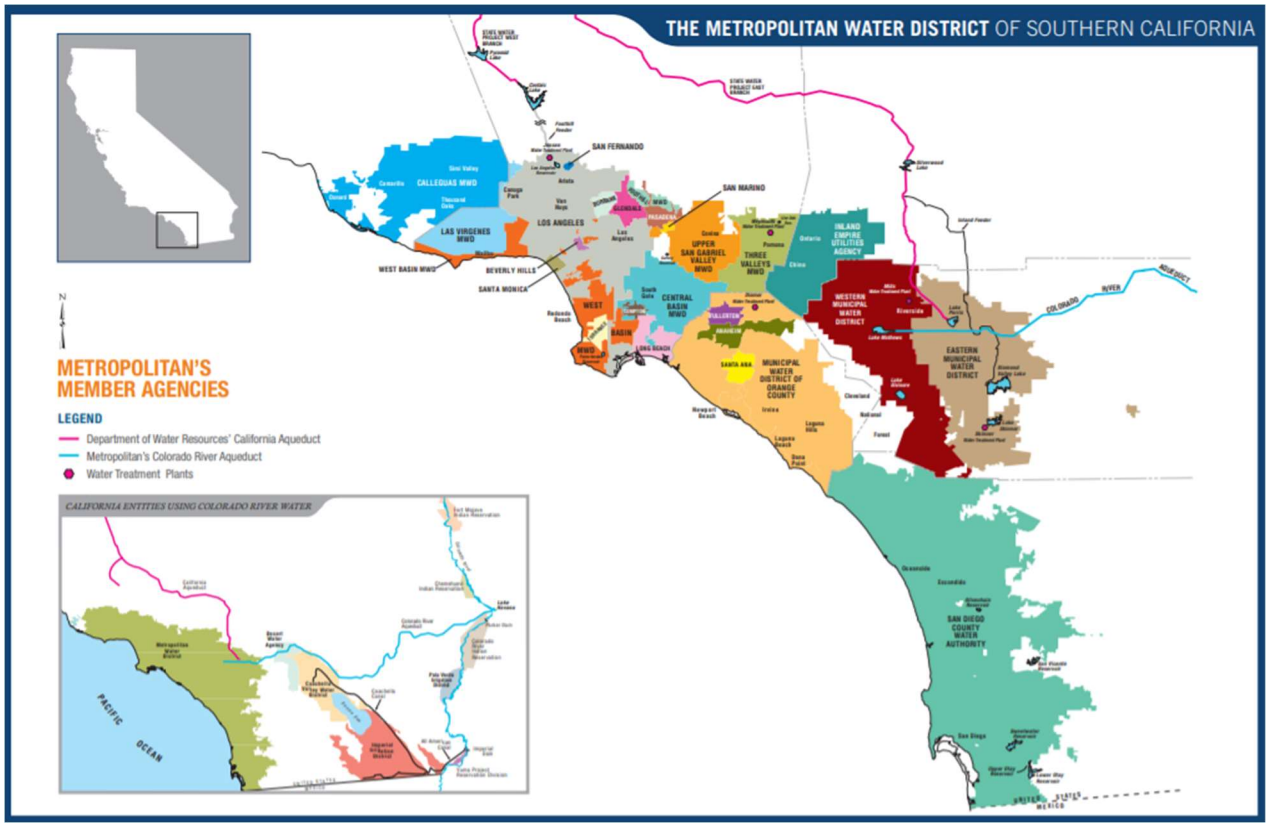
### 6.2.1 Purchased or Imported Water

In 2020, approximately 71 percent of the District's water supply came from imported potable water. This water is purchased through Calleguas Municipal Water District, a local wholesaler, partnering with

Metropolitan Water District (MWD) of Southern California. MWD treats water from the Sacramento-San Joaquin River Delta in Northern California at its owned and operated Joseph Jensen Filtration Plant. The treated water is conveyed to Southern California via the State Water Project (SWP).

#### 6.2.1.1 Metropolitan Water District of Southern California (MWD)

MWD is a wholesale water agency that was formed in 1928 and is composed of 26-member water agencies as shown in Table 6-A. As a wholesaler, MWD has no retail customers, but serves customers through member agencies which account for approximately 19 million people in six Southern California counties. MWD's service area is shown on Figure 6-1.




*Source: http://www.mwdh2o.com/Who%20We%20Are%20%20Fact%20Sheets/Member%20Agency%20Map.pdf*

*Figure 6-1: Metropolitan Water District of Sothern California Service Area*

| Submittal Table 6-A: MWD Member Cities and Agencies | | |
|---|---|---|
| City of Anaheim | City of San Fernando | Inland Empire Utilities Agency |
| City of Beverly Hills | City of San Marino | Las Virgenes Municipal Water District |

| | | |
|---|---|---|
| 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 |
| City of Pasadena | Foothill Municipal Water District | |

MWD treats sourced water from the Colorado River and the State Water Project (San- Joaquin River Delta), as well as additional supplies from water transfers, exchanges, water banking, and other projects.

#### 6.2.1.1.1 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 is located on the Colorado River along the California-Arizona boarder is approximately 242 miles from Lake Mathews. Most of this water is delivered to member agencies south of Calleguas and VCWWD No. 1 and is only used as a back-up supply for water use in Ventura County.

#### 6.2.1.1.2 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 Department of Water Resources. Water is conveyed from the Delta via the 444-mile-long California Aqueduct, part of the State Water Project (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. The SWP is managed by the Department of Water Resources (DWR) and 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 percent to 50 percent of MWD's supply. In accordance with its contract, MWD has a Table A allocation of 1,911,500 acre-feet per year. Actual deliveries have never reached this based on the availability of supplies determined by DWR. 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 Calleguas primarily through MWD's West Valley Feeder No. 2 pipeline which is capable of

conveying water at 300 cubic feet per second (cfs). Through Calleguas, this the primary source of water for VCWWD No.1 supply.

#### 6.2.1.1.3 Extended Drought Restrictions

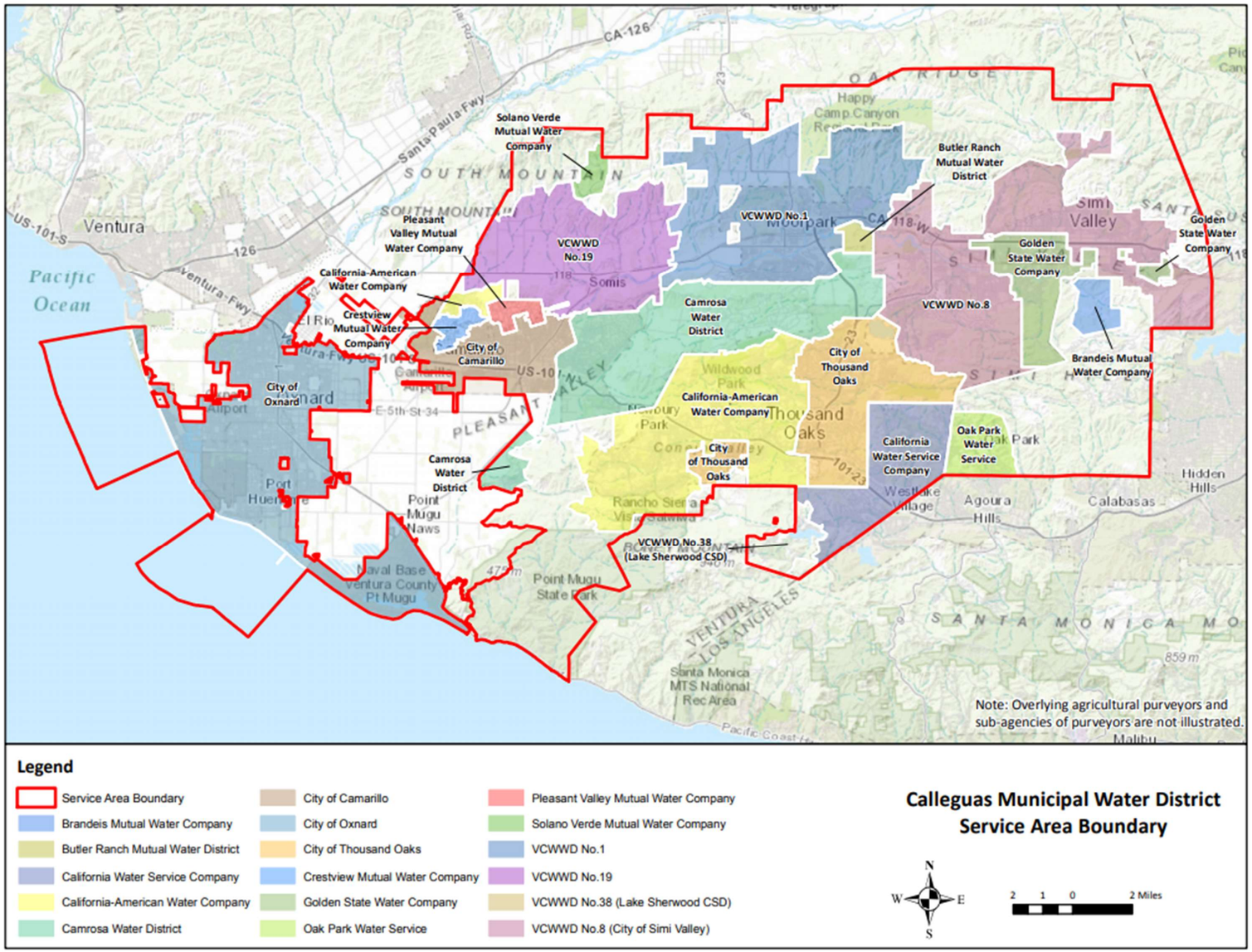
In April 2015, citing continued drought conditions and reduced allocations from the State Water Project and Colorado River, the MWD Board of Directors approved implementing their Water Supply Allocation Plan (WSAP) at a Regional Shortage Level 3 starting July 1, 2015, to cut imported water deliveries to its member agencies by 15 percent. Under a Level 3 WSAP, MWD could impose a surcharge, ranging from $1,480 to $2,960/AF of additional water for any member agency that failed to meet the 15% reduction. The allocation plan limits water usage for its 26 member agencies based on their dependency on MWD supplies, while considering local supply conditions and past water-saving actions. The Tier 1 threshold for Calleguas was set at 13.7 percent. Calleguas would pass the surcharge on to Calleguas' retail customers exceeding this water allocation threshold.

On May 10, 2016, the Metropolitan Board of Directors reduced the WSAP to a Level 2, which is a 10 percent reduction in imported water deliveries, effective immediately, due to lower demands achieved through the region's water saving efforts and improved supply conditions, particularly in Northern California; and declared there wouldn't be a WSAP implemented for fiscal year 2017. Calleguas also rescinded their surcharge in May 2016. Currently, a WSAP is not being implemented.

### 6.2.1.2 Calleguas Municipal Water District (Calleguas)

Calleguas was formed by the voters of southern Ventura County in 1953. As an independent special district, Calleguas' mission is to provide a safe, reliable water supply in an environmentally and economically responsible manner for local water purveyors in Ventura County. Named for the watershed in which it is located, Calleguas is a public agency established under the Municipal Water District Act of 1911. It is governed by a five-member board of directors elected by voters to represent each of the five geographic divisions within the District. Proposed changes in Calleguas' boundary and/or services are regulated by the Ventura Local Agency Formation Commission (LAFCO).

In 1960, Calleguas became a member agency of MWD. As a member agency, Calleguas is the fifth largest in terms of average annual water deliveries. The Calleguas water service area is shown in Figure 6-2. Calleguas receives treated water through MWD's West Valley Feeder No. 2 pipeline connection to the East Portal of Calleguas' eight-foot-diameter Perliter Tunnel. This tunnel is the only connection to MWD's water supply. The water is then conveyed to Calleguas' transmission system in Simi Valley to Lake Bard or injected into the Fox Canyon Aquifer. During planned and emergency shutdowns of imported supply, Lake Bard and the Las Posas Aquifer Storage and Recovery Project (Las Posas ASR Project) provide reliable water supplies to local water purveyors.




*Source: http://www.calleguas.com/images/about/purveyormap.pdf.pdf*

*Figure 6-2: Calleguas Municipal Water District Local Water Purveyors Map*

A list of Calleguas' local water purveyors is shown in Table 6-B.

| Submittal Table 6-B: Calleguas Mutual Water District's Local Water Purveyors | | |
|---|---|---|
| Berlywood Heights Mutual Water Company | City of Oxnard | Solano Verde Mutual Water Company |
| Brandeis Mutual Water Company | City of Pasadena | Ventura County Waterworks District No. 1 |
| Butler Ranch Mutual Water Company | City of Thousand Oaks | Ventura County Waterworks District No. 8 |
| California-American Water Company | Crestview Mutual Water Company | Ventura County Waterworks District No. 19 |
| California Water Service Company | Golden State Water Company | Ventura County Waterworks District No. 38 |
| Camrosa Water District | City of Oxnard | Zone Mutual Water Company |
| City of Camarillo | Oak Park Water Service | |

Calleguas distributes high quality drinking water on a wholesale basis to 19 local purveyors, including VCWWD No. 1, and does not directly distribute water to retail customers. These local water purveyors, including VCWWD No. 1, deliver water to area residents, businesses, and agricultural customers through their local infrastructure. These 19 Calleguas purveyors are listed in Table 6-B. Approximately three-quarters of Ventura County residents (roughly 635,000 people) depend on Calleguas for all or part of their water. Water supplied by Calleguas currently represents approximately 73 percent of the total municipal and industrial water demand within its service area. Only a small portion of the water delivered by Calleguas (approximately 5 percent) is used for agricultural purposes. Agricultural demands are generally met by other agencies or private entities using untreated surface water, recycled wastewater, and groundwater from various basins underlying the area. As of 2020, deliveries to VCWWD No. 1 accounted for 8.21 percent of Calleguas' total water deliveries. Through ten (10) turnouts connected to Calleguas, VCWWD No. 1 imported 7,112 AF of potable water in fiscal year 2020. See Figure 3-2 for a map of the connections between VCWWD No. 1 and Calleguas Municipal Water District.

#### 6.2.1.3 Imported Water Supply Quantity and Quality Challenges

The original SWP facilities, completed in the early 1970s, were designed to meet the needs of SWP contractors established at that time. It was anticipated that additional SWP facilities within the Sacramento/San Joaquin Delta (Delta) would be constructed over time to bolster long-term supply reliability. However, these additional facilities were repeatedly deferred, and stringent environmental regulations have greatly restricted water exports. As a result, the SWP is not capable of delivering full contractor entitlements on a routine basis. The focal point is the Delta, the largest estuary on the west coast, through which 60 percent of the freshwater used in the State must pass. Over 150 years of extensive modification by man, a variety of competing interests, and political gridlock have resulted in significant environmental deterioration within the Delta. In recent years, the Delta smelt, winter-run

Chinook salmon, spring-run Chinook salmon, and splittail were added as threatened or endangered species under the federal and state Endangered Species Acts (ESA). Resulting actions taken to protect the ecosystem of the Delta have placed considerable limitations on SWP operations.

SWP water is generally of high quality. Total dissolved solids (TDS) concentrations range between 250 and 350 milligrams per liter (mg/L). The quality of SWP water as a drinking water source is affected by a number of factors, most notably seawater intrusion, agricultural drainage from peat soil islands in the Delta, municipal wastewater discharges, and urban runoff. The water quality parameters of most concern are bromide and salinity. Levels of bromide in the water increase significantly as it moves through the Delta. Bromide can combine with chemicals used in the water treatment process to form bromate, which is considered to be a risk to human health at concentrations above the state and federal drinking water standards. Treated wastewater and urban runoff discharged from cities and towns surrounding the Delta also add salts to the water, which build up in local watersheds over time. Moreover, actions to protect Delta fisheries have exacerbated existing water quality problems by forcing SWP diversions to shift from the spring to the fall when bromide and salinity levels are highest. Closure of the Delta Cross Channel gates to protect migrating fish has also degraded the quality of SWP supplies by reducing the flow of higher quality Sacramento River water.

### 6.2.2 Groundwater

Groundwater has been used in Ventura County since the late 19th century, primarily for irrigation, but also for municipal and industrial water supply. With the passage of California's Sustainable Groundwater Management Act (SGMA) in 2014, prudent management of the state's critical groundwater basins is now a primary water resource concern and mandated by state law. SGMA requires adoption of groundwater water sustainability plans by January 31, 2020 for all basins defined by the state as either a high or medium priority and subject to critical overdraft, and by January 31, 2022 for all other high or medium priority basins. For more information on SGMA, see http://www.water.ca.gov/cagroundwater/index.cfm.

VCWWD No. 1's water service area overlies two groundwater basins in Ventura County, the East and South Las Posas Groundwater Basins. These basins are part of the Las Posas Valley Basin and are managed by Fox Canyon Groundwater Management Agency (FCGMA). The FCGMA was initially created to manage the groundwater in both over-drafted and potentially seawater-intruded areas within Ventura County.

#### 6.2.2.1 Basin Description

##### 6.2.2.1.1 Fox Canyon Groundwater Management Agency

The Fox Canyon Groundwater Management Agency (FCGMA) is an independent special agency created in 1983 to oversee groundwater resources within the Fox Canyon Groundwater Basin. The primary objective of FCGMA is to preserve groundwater resources for agricultural, municipal, and industrial uses in the best interests of the public and for the common benefit of all water users. Protection of water quality and quantity, along with maintenance of long-term water supply, is part of that objective (Update to the FCGMA Groundwater Management Plan, FCGMA, 2007).

FCGMA's boundary is located partially within Calleguas' service area and overlies approximately 118,000 acres. The FCGMA boundary encompasses the coastal basins that underlie the cities of Oxnard, Port Hueneme, Camarillo and Moorpark. There are seven main or significant groundwater basins within the FCGMA as shown in Figure 6-3. These groundwater basins include the Oxnard Plain, the Oxnard Plain Forebay, the Pleasant Valley, the Santa Rosa, and the Las Posas Valley Basins. The Las Posas Valley Basin is divided into the West Las Posas, East Las Posas, and South Las Posas basins. These basins generally contain two major aquifer systems, the Upper Aquifer System (UAS) and the Lower Aquifer System (LAS). These basins are part of the Transverse Ranges geologic province, in which the mountain ranges and basins are oriented in an east-west direction. Active thrust faults border the basins of the Santa Clara River, causing rapid uplift of the adjacent mountains and down-dropping of the basins. The alluvial basins are filled with substantial amounts of Tertiary and Quaternary sediments deposited in both marine and terrestrial (non-marine) settings. The basins beneath the Oxnard Plain are filled with sediments deposited on a wide delta complex formed at the terminus of the Santa Clara River and were heavily influenced by alternating episodes of advancing or retreating shallow seas that varied with world-wide sea level changes over many millions of years.

Various aquifers within these basins include the Oxnard and Mugu aquifers (UAS) and the Hueneme, Fox Canyon, and Grimes Canyon aquifers (LAS). A shallower, unconfined aquifer is also present locally underlying rivers and creeks. Underlying the Oxnard Plain and Pleasant Valley basins are sand layers of the "semi- perched zone," which may locally contain poor-quality water. This zone extends from the surface to no more than 100 feet in depth. These sands overlie confining clay of the upper Oxnard Aquifer which generally protects the underlying aquifers from contamination from surface land uses. The Semi-perched zone is rarely used for water supply. The aquifers are recharged by infiltration of streamflow and precipitation, artificial and mountain-front recharge, return flow from agricultural and residential irrigation, and in varying degrees by groundwater underflow from adjacent basins.

FCGMA's goal is to balance the groundwater supply and demand within its jurisdiction. To achieve this goal, FCGMA has adopted a number of ordinances in an effort to eliminate groundwater overdraft, and to combat the ongoing threat of seawater intrusion in the Fox Canyon aquifer. These ordinances and resolutions help to regulate, conserve, and manage the use and extraction of groundwater within the region.

Historically, both the UAS and the LAS have been in a state of overdraft, which has led to seawater intrusion. Unfortunately, water in the UAS has elevated levels of chlorides and total dissolved solids (TDS). VCWWD No. 1 and other agencies are active participants in regional efforts to put some of this water to beneficial use by developing groundwater desalter projects for groundwater recovery.

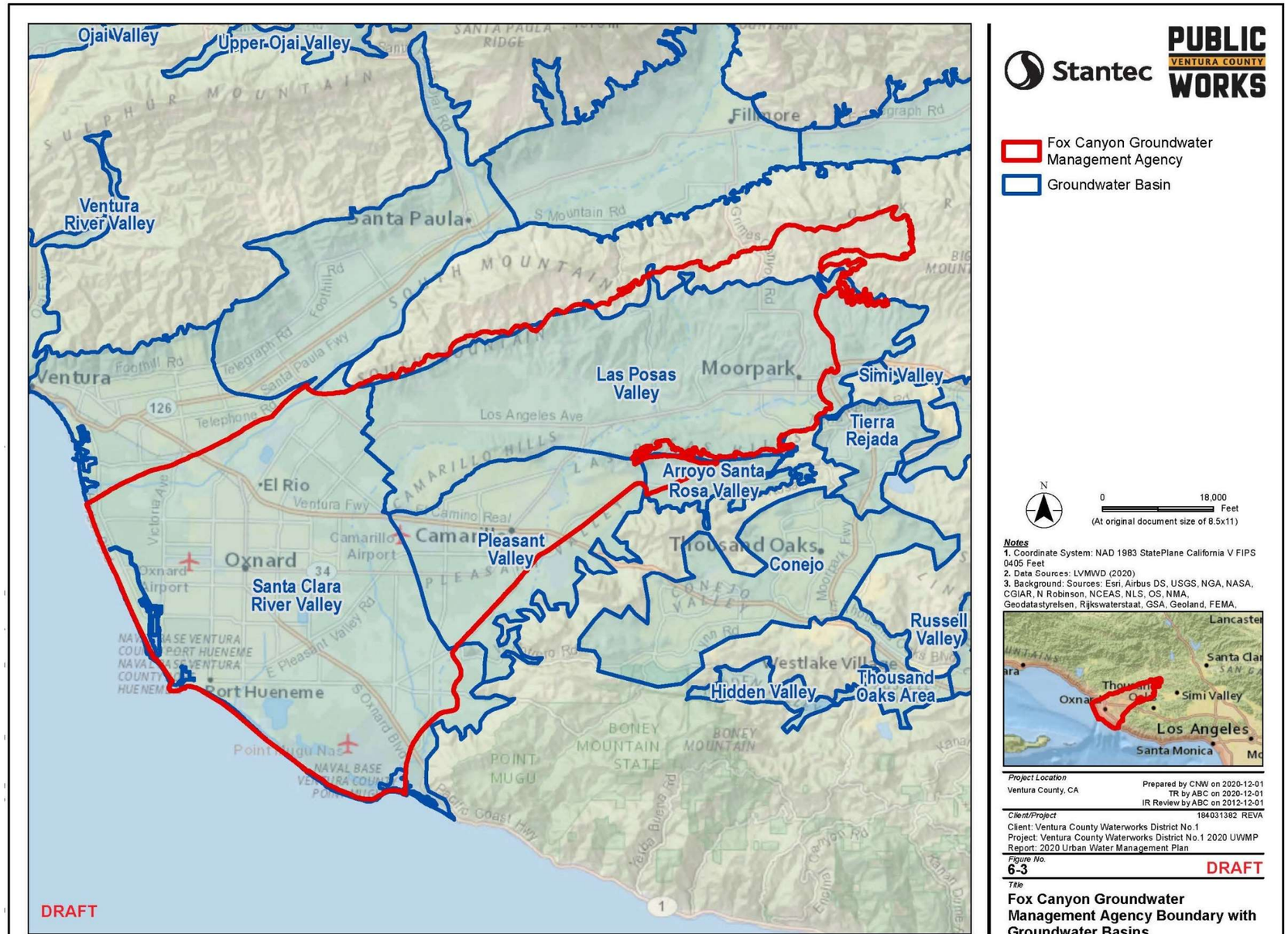






*Figure 6-3: Groundwater Basins and FCGMA Boundary*

### 6.2.2.2 Multiple Groundwater Basins

#### 6.2.2.2.1 Las Posas Valley Basin

The Las Posas Valley Basin is bounded on the south by the Camarillo and Las Posas Hills and on the north by South Mountain and Oak Ridge[8] (pg. 6.17). The Las Posas Valley Basin (State Basin No. 4-008) is not adjudicated, based on the DWR official departmental bulletins (California's Groundwater Bulletin 118 – Interim Update 2016) and is not specifically identified as a basin in critical condition of overdraft.

The Las Posas Valley Basin has been subdivided into West, East, and South basins[9] (pg. 6.11). Productive aquifers in this basin include a shallow, unconfined aquifer that is most transmissive along the Arroyo Las Posas and a lower confined aquifer system that is considered to be the equivalent of the Lower Aquifer System on the Oxnard Plain. VCWWD No. 1 has historically produced groundwater from the East Las Posas Basin and is planning a groundwater production and treatment system (Moorpark Desalter Project), discussed in 6.2.8.2, to produce groundwater from the South Las Posas Basin.

Urban development has brought increased discharges of both treated wastewater (including treated discharges from the District's Moorpark Water Reclamation Facility (MWRF) and shallow groundwater into Arroyo Las Posas, providing a year-round recharge source for the South and East Las Posas basins[10,11]. This increased percolation from the arroyo has created a recharge mound that extends northward into the East Las Posas basin, where groundwater levels have risen by 125 feet to 200 feet during the past 30 years.

##### *6.2.2.2.1.1 East Las Posas Basin*

Groundwater from the East Las Posas Basin is separated from the West Las Posas Basin by a north-trending, unnamed fault running through Somis[9] (pg. 6.11), [10] (pg. 6.11), across which groundwater levels differ

8 (CSWRB, 1954). California Department of Water Resources, 1954. Seawater intrusion: Oxnard Plain of Ventura County: Bulletin No. 63-1.

9 (Hanson, 1998), Hanson, R.T., 1998. Draft Simulation of Groundwater/Surface-Water Flow in the Santa Clara-Calleguas Basin, Ventura County, California, U.S. Geological Survey, Unpublished Water Resources Investigations Report.

[10] (CH2MHill, 1993) Technical Memorandum hydrogeology and three-dimensional groundwater flow model of the Las Posas Basin, Ventura County, California, Report to Metropolitan Water District of Southern California.

[11] (Bachman, 2002). Bachman, S.B., 2002. Water quality in the East and South Las Posas basin – problem and solutions, Report to Calleguas Municipal Water District.

by as much as 400 feet. The fault also acts as a barrier to prevent transport of saline waters from the East Las Posas basin to the West Las Posas basin[12].

The source of recharge to the East Las Posas basin has changed significantly since urban development of the Simi Valley and Moorpark areas over the last 30 years. Prior to this time, recharge was predominantly from rainfall on outcrop areas and from percolation of winter floodwater along the Arroyo Las Posas. Geochemical studies show that groundwater in the central portion of the East Las Posas basin is hundreds to thousands of years old [13] (pg. 6.12), indicating a slow rate of historical recharge along the flanks of the basin.

Groundwater pumping in the basin has resulted in falling groundwater levels in the eastern portion of the basin, away from the recharge mound. The largest drop in groundwater levels (190 feet) over the period 1973 to 1998 occurred in this region.[12] (pg. 6.12) Groundwater levels have stabilized somewhat across the basin since the late 1990s, at least in part because of the addition of in-lieu and injected recharge by Calleguas as part of the Las Posas Basin Aquifer Storage and Recovery (ASR) project.

Increasing concentrations of salts (chloride, sulfate, sodium) in the portion of the basin along the Arroyo Las Posas continue to be a problem in the East Las Posas Basin. Chloride concentrations in the shallow aquifer beneath the arroyo can reach 360 mg/L, whereas chloride concentrations in the surface waters in the arroyo are in the range of 120-180 mg/L[11] (pg. 6.11). These increased chloride concentrations in the shallow aquifer are associated with historically high groundwater levels (that apparently leach salts from previously unsaturated sediments in the shallow aquifer along the arroyo).

The District produces groundwater from the East Las Posas Groundwater Basin via five wells owned and operated by the District with a total system capacity of approximately 3,500 gpm (2,170 AFY). In 2020, there were only four wells online to produce groundwater (Well #97 was offline). The groundwater meets all State and Federal water quality standards for drinking water with the exception that treatment is required at one of the well sites (Well No. 20) to lower iron and manganese levels below the State Title 22 Secondary Maximum Contaminant Level (MCL) for these two minerals. The groundwater is chlorinated at each well site before being pumped into the potable water distribution system. Groundwater produced by the four District wells from for fiscal year 2020 is shown in any unused extraction allocation can be carried over for use in a following water year with only fifty percent of an extraction allocation available for carry over. All extractions during a water year in excess of the allocations established by the ordinance shall be subject to extraction surcharges as provided in the Agency Ordinance Code for extractions that exceed the historical and/or baseline allocation. This ordnance will take effect on October 1, 2021.

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[12] (Bachman, 1999). Bachman, S.B., 1999. Las Posas basin groundwater elevations and water quality, Joint report to Calleguas Municipal Water District and United Water Conservation District.

[13] (Izbicki, 1996b), Izbicki, J.A., 1996b. Source, Movement, and Age of Ground Water in a Coastal California Aquifer, United State Geologic Survey Fact Sheet 126-96.

The FCGMA, the groundwater sustainability agency (GSA), allocated the District a maximum 1,756 AFY for groundwater production in 2016 (Ordinance E). This was the District's groundwater allocation for FY2020. In December 2020, An Ordinance to Establish *An Extraction Allocation System For the Las Posas Valley Groundwater Basin December 14, 2020* was adopted to establish an allocation of 2,195 AFY for VCWWD No. 1 to meet the requirements outlined in the GSP. These requirements took effect on January 1, 2021. Based this Ordinance, any unused extraction allocation can be carried over for use in a following water year with only fifty percent of an extraction allocation available for carry over. All extractions during a water year in excess of the allocations established by the ordinance shall be subject to extraction surcharges as provided in the Agency Ordinance Code for extractions that exceed the historical and/or baseline allocation. This ordnance will take effect on October 1, 2021.

**Submittal Table 6-C: Ventura County Waterworks District No. 1 - Groundwater Production Wells FY2020**

| Well Facility | Production (AFY) |
|---|---|
| Well No. 15 | 634 |
| Well No. 20 | 626 |
| Well No. 95 | 143 |
| Well No. 97 | 0 (Offline) |
| Well No. 98 | 563 |
| **Total** | **1,966** |

#### *6.2.2.2.1.2 South Las Posas Basin*

The South Las Posas Basin is separated from the East Las Posas Basin by an east- trending anticline (fold) that affects all but the shallowest alluvium. This fold may affect groundwater flow between the East and South Las Posas Basins at some aquifer depths, although recharge from the South Las Posas Basin flows readily into the East Las Posas Basin at Lower Aquifer System (LAS) depths. To the south, the Springville and Santa Rosa fault zones produce disrupted and tightly folded rocks along the edge of the basin, restricting groundwater flow to the south [14]. There is a shallow alluvial aquifer that follows the trend of Arroyo Las Posas as it crosses the South Las Posas Basin; this shallow aquifer is in hydrologic connection with the underlying LAS and is the main source of recharge to the LAS.

There has been a significant change in average groundwater levels over the past 40 years in the South Las Posas Basin, with groundwater levels rising more than 100 feet during this period. The mechanism for this rise in groundwater elevations is the increased recharge from percolation beneath the Arroyo Las Posas as discharges from the Moorpark and Simi Valley wastewater treatment plants and dewatering

[14] (CSWRB, 1956). California State Water Resources Board (CSWRB), 1956. Ventura County Investigation, Bulletin 12, 2 Volumes.

wells in Simi Valley have increased year-round flow in the arroyo. The entire alluvial aquifer near the arroyo has progressively filled to the elevation of the arroyo, starting in the easternmost portion of the basin in the 1960s and moving westward through the 1990s[11]. Water from the filled alluvial aquifer has percolated into the underlying Lower Aquifer System, creating a recharge mound in the Lower Aquifer System that extends from the arroyo northward into the East Las Posas Basin.[10,12]

Salts (i.e., chloride, sulfate) in the groundwater have increased in the South Las Posas basin and the southwestern portion of the East Las Posas basin as the shallow aquifer filled along Arroyo Las Posas. These salts were leached from the shallow aquifer as groundwater levels reached record highs, saturating sediments that have been unsaturated for the historic period. These salts apparently migrated vertically with percolating groundwater into the LAS and then laterally into the main portion of the East Las Posas Basin as the recharge mound developed. Due to high salinity, this groundwater is unsuitable for drinking water purposes.

The District is planning the construction of a groundwater production and treatment system that will provide up to 5,000 AFY of potable water from the South Las Posas Basin.

#### 6.2.2.3 Other Considerations

##### 6.2.2.3.1 Groundwater Challenges to the Las Posas Valley Basin

Subsidence and seawater intrusion are both common regional groundwater challenges facing the South Coast Hydrologic Region which includes the Oxnard Plain area and the Las Posas Valley Basin.

Seawater intrusion began in the Oxnard Plain area during the 1930's and was widespread as early as the 1940s. Changes in groundwater management, including pumping reductions, shifting of pumping locations, construction of the Freeman Diversion, and the operation of the Pumping Trough and Pleasant Valley pipeline systems have significantly reduced seawater intrusion, but seawater intrusion conditions persist according to the Long Term Operation EIS, Chapter 7*, U.S. Bureau of Reclamation (USBR)*.

According to the Simulation of Ground Water-Surface Water Flow in the Santa Clara -Calleguas Basin, Ventura County, California *(USGS)*, overdraft in the basin has caused land subsidence, first measured in 1939. This was measured to be as much as 5 feet in the Las Posas Valley subbasins. Model simulations indicate that most of the land subsidence occurred after the drought of the late 1920's and during the agricultural expansion of the 1950's and 1960's. The results also indicate that subsidence occurred primarily in the upper-aquifer system prior to 1959, but in the lower-aquifer system between 1959 and 1993 owing to an increase in groundwater pumping from the lower-aquifer system.

The FCGMA maintains that the Las Posas Basins are in overdraft relative to the native water supply to the basin. This has been mitigated in some areas by non-native inflows from wastewater treatment plant discharges, urban runoff, and shallow groundwater dewatering discharges from upstream areas. Since 1992, FCGMA has incrementally reduced groundwater allocations by 25 percent.

#### 6.2.2.3.2 Groundwater Sustainability Efforts

##### *6.2.2.3.2.1 Sustainable Groundwater Management Act of 2014*

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of *AB 1739 (Dickinson)*, *SB 1168 (Pavley)*, and *SB 1319 (Pavley)*, collectively known as the *Sustainable Groundwater Management Act (SGMA)*. For the first time in its history, California has a framework for sustainable, groundwater management.

SGMA requires governments and water agencies of *high and medium priority basins* to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline.

SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California.

The SGMA adopts a strategy for managing the state's groundwater resources with the main focus on implementing sustainability plans for the majority of groundwater basins throughout the state, including many of which California's agricultural community are highly dependent. These plans can vary from simple basin-wide plans developed and implemented by individual local agencies, to multiple plans by different local agencies operating in the same basin, to state-imposed plans where no sufficient local plan does not exist. In particular, the goal of reaching a sustainable groundwater basin within 20 years by implementation of the plans may have a significant impact on groundwater users.

The SGMA also contains procedural requirements for plan development and implementation, and exempts many activities involved in that process from the environmental review requirements of the California Environmental Quality Act ("CEQA").

While the SGMA will regulate California's groundwater on a statewide basis for the first time, it does not cover every groundwater basin within the state's jurisdiction, and its impact will not be felt immediately. The statute generally does not apply low priority basins and/or adjudicated basins. Moreover, sustainability plans do not need to be implemented for several years, and affected basins are not required to attain sustainability goals until approximately 2040.

The California Department of Water Resources (DWR) has estimated the SGMA will cover 96 percent of groundwater used in California.

##### *6.2.2.3.2.2 Local Groundwater Sustainability Agency*

Based on language in the SGMA, any local agency with water supply, water management, or land use responsibilities or a combination of agencies in a groundwater basin covered under the SGMA may become a Groundwater Sustainability Agency for that groundwater basin.

The SGMA gives these GSAs the power, among others, to conduct investigations, acquire property including water rights, regulate, limit, allocate, or transfer extractions, and execute registration and extraction measurement requirements of facilities that extract groundwater within their authority. To support their powers pursuant to the GSP, the GMAs can implement fees on permits and groundwater extractions along with enforcement through penalties for any violations.

As outlined in the California Water Code, Part 2.74, Sustainable Groundwater Management Act (Act), Section 10723 (c), the Fox Canyon Groundwater Management Agency (FCGMA) shall be deemed the exclusive Groundwater Sustainability Agency (GSA) within its boundaries with powers to comply with Act.

On January 9, 2015, the FCGMA held a public hearing and passed Resolution 2015-01, Attachment 1, wherein the FCGMA elected to become the GSA for the Arroyo Santa Rosa Valley, Las Posas Valley (West, South, and East), Oxnard Forebay, Oxnard Plain and Pleasant Valley Basins within the FCGMA boundaries.

Per Section 10723.2 of the Act, the GSA shall consider the interests of all beneficial uses and users of groundwater, as well as those responsible for implementing groundwater sustainability plans. The FCGMA as enacted has a Board of Directors and operating structure that clearly represents the interests of all users and uses of groundwater and surface water within the FCGMA boundaries. The five-member Board of the FCGMA is comprised as follows:

- One member shall be chosen by United Water Conservation District, the member's district or divisions must overlie at least in part the territory of the FCGMA
- One member shall be chosen by the County of Ventura, the member's district must overlie at least in part the territory of the FCGMA
- One member shall be chosen from the members of the city councils of the cities whose territory at least in part overlies the territory of the FCGMA
- One member shall be chosen from the members of the governing boards of the following mutual water companies and special districts not governed by the County Board of Supervisors which are engaged in water activities and whose territory at least in part overlies the territory of the FCGMA: the Alta Mutual Water Company, the Anacapa Municipal Water District, the Berylwood Mutual Water Company, the Calleguas Municipal Water District, the Camrosa County Water District, the Del Norte Mutual Water Company, the Pleasant Valley County Water District, and the Zone Mutual Water Company
- The fifth member of the Board shall be chosen by the other four members from a list of at least five nominations from the Ventura County Farm Bureau and the Ventura County Agricultural Association acting jointly for a two-year term to represent agricultural interests within the territory of the FCGMA. The fifth member shall reside and be actively and primarily engaged in agriculture within the territory of the FCGMA

Final Groundwater Sustainability Plans (GSP) for the Oxnard Subbasin, Pleasant Valley Basin, and Las Posas Valley Basin were prepared in compliance with the SGMA. The Fox Canyon GMA board adopted the GSP at a public hearing on December 13, 2020.

#### *6.2.2.3.2.3 Las Posas Valley Basin GSP*

Per the adopted GSP for the Las Posas Valley Basin, the sustainability goal is to maintain a sufficient volume of groundwater in storage so that there is no significant and unreasonable net decline in groundwater elevation or storage over wet and dry climatic cycles. Further, groundwater levels in the Las Posas Basin will be maintained at elevations that are high enough not to constrain the ability of surrounding basis, such as the Oxnard Plain Basin, that would prevent net seawater intrusion after 2040.

Goals of the GSP in the Las Posas Valley Basin include:

- Control saline water impact front at its current position
- Do not allow groundwater quality to further degrade without mitigation
- No net subsidence due to groundwater withdrawal
- Promote water levels that mitigate or minimize undesirable results (including pumping trough depressions, surface water connectivity, and chronic lowering of water levels)

The GSP assesses net impacts to the basin over both a 50-year period beginning in 2020 and a 30-year period beginning in 2040. Results in the Las Posas Valley Basin may be undesirable between 2020 and 2039, as progress is made toward achieving the sustainability goal of 2040. The 30-year period from 2040 through 2069, is the basis for evaluation and is referred to as the sustaining period.

To achieve the sustainability goal by 2040, the production of groundwater from the East, South, and West Las Posas Basins will need to decline relative to historical extraction rates while taking into account both the potential economic impacts to groundwater users and the estimated sustainable yield of the basins.

The estimated sustainable yield of East Las Posas Management Area, which includes portions of the East Las Posas Basin and South Las Posas Basin, is 17,800 AFY ±2,300 AFY. This also includes the safe yield of 1,300 AFY from the Epworth Gravels Management Area (EGMA), an area in the foothills north of the City of Moorpark that sits in the East Las Posas Basins. Without the EGMA, the estimated sustainable safe yield is approximately 15,700 AFY ±1,250 AFY to 18,700 ±1,500 AFY. The average groundwater extraction rate during the period of 2015 to 2017 within the basins was approximately 20,500 AFY. The uncertainty of the estimated sustainable yield is calculated by taking the difference of the upper limit (18,000 AFY and 1,500 AFY for a total of 20,200 AFY) and the average extraction (20,500 AFY) equaling 300 AFY.

The estimated sustainable yield of the West Las Posas Management Area, which includes a portion of the East Las Posas Basin, is approximately 12,500 AFY with an uncertainty of ±1,200 AFY. The average extraction rate during the period of 2015 to 2017 was approximately 14,000 AFY.

**Projects to Achieve Sustainability in the East Las Posas Management Area**

Projects that will be implemented through FCGMA to achieve sustainability include:

The purchase of Imported Water from Calleguas to replenish the Basin. This will help in the mitigation of basin levels and subsidence from over withdrawal.

Arroyo Simi-Las Posas Arundo Removal Project involves removing the invasive plant species Arundo from approximately 324 acres of land along the Arroyo Simi-Las Posas corridor. This plant species is estimated to consume 6 to 25 AFY per acre. Arroyo Simi-Las Posas Arundo removal could result in an additional 2,680 AFY of recharge into the basins.

a. Arroyo Simi-Las Posas Water Acquisition Project would involve the purchase of recycled water from the City of Simi Valley in return for the continuing Simi Valley's discharge of leased water from the Simi Valley Water Quality Control Plant for recharge in the basins.

### *6.2.2.3.2.4 State Involvement and Compliance*

Because the SGMA implements local management of groundwater resources, to ensure compliance, the State, through the DWR develops and publishes best management practices for sustainable groundwater management, and it is responsible for reviewing sustainability plans every five years. In addition, it is also tasked with establishing the initial priority for the state's groundwater basins. DWR has announced that the basin designations it finalized under the California Statewide Groundwater Elevation Monitoring (CASGEM) program will serve as the initial prioritization required by the SGMA.

Under the SGMA, the State Water Resources Control Board (SWRCB or State Board) is given the authority to place a groundwater basin in probation for non-compliance, such as if no GSP is developed for a designated basin or if the implantation of the GSP is found insufficient. If a local agency fails to remedy the problem that led to a designation, the State Board may adopt its own interim sustainability plan for the basin.

### *6.2.2.3.2.5 Significant Future deadlines to meet SGMA compliance*

January 31, 2020: GSPs required for critically over drafted basins

> Basins designated as high or medium priority and subject to critical conditions of overdraft must be managed under a GSP or GSPs. The State Water Board can initiate probationary status for all or part of a basin if there is no GSP, if the GSP is inadequate, or the GSP implementation will not likely achieve sustainability (Water Code § 10720.7(a)(1), 10735.2(a)(2), 10735.2(a)(3)).

January 31, 2022: GSPs required for all remaining high and medium priority groundwater basins

> All remaining basins designated as high- or medium-priority must be managed under a GSP or GSPs. The State Water Board can initiate probationary status in 2022 for all or part of a basin if there is no GSP, if the GSP is inadequate, or the GSP implementation will not likely achieve sustainability except for basins where groundwater extractions result in significant depletion of interconnected surface waters (Water Code § 10720.7(a)(2), 10735.2(a)(4), and 10735.2(a)(5)(A)).

January 31, 2025: State Water Board actions where extractions impact surface waters

> The State Water Board can initiate probationary status for those medium or high priority basin where the GSP is inadequate or implementation is not likely to achieve sustainability and the basin is in a condition where groundwater extractions result in significant depletion of interconnected surface waters (Water Code § 10735(a)(5)(B).

#### 6.2.2.3.3 Regulatory Conditions

Since 1988, the FCGMA has applied multiple ordinances and policies with regards to well permitting and groundwater protection. A list of historical and current policies and ordinances is available on the FCGMA website (http://fcgma.org/). Current ordinances are discussed further below.

Currently, the FCGMA Ordinance Code (Ordinance No. 8) requires that permits be obtained from FCGMA prior to constructing new wells. For wells installed within the FCGMA area, the applicant is required to obtain a permit from the Ventura County Public Works Agency as well. The FCGMA Ordinance Code requires the installation and maintenance of flow meters, with proof of flowmeter accuracy, and reporting of all groundwater extractions semi-annually. In 2018, FCGMA adopted an ordinance that requires all wells within the Agency to be equipped with advanced metering telemetry by October 1, 2020.

In response to severe drought conditions, declining water levels, and seawater intrusion, Emergency Ordinance E was adopted April 11, 2014. This ordinance prohibits the issuance of permits for new groundwater wells associated with new or increased groundwater use, and limits extraction from existing wells (FCGMA 2014). Beginning January 1, 2016, Article 2.C. of the emergency ordinance implemented a 20 percent reduction to Temporary Extraction Allocations (TEA) for municipal agencies. In December 2019, the agency adopted the allocation system to repeal Article 2.C. in the temporary Ordinance E measure. This provides a foundation for long-term sustainability management. Implementation began on January 1, 2020.

Ventura County Watershed Protection District is included as a beneficial user of the Las Posas Valley Basin and is involved in an active stake holder group, the Las Posas Users Group, to discuss and provide feedback to the FCGMA regarding localized management including the GSP. In April 2016, FCGMA developed a proposed extraction allocation system for the Las Posas Valley Basin to help meet the sustainability goal in the SGMA and GSP. According to *An Ordinance To Establish an Extraction Allocation System For the Las Posas Groundwater Basin*, which was passed and adopted by the FCGMA board on December 14, 2020 and will take effect on October 1, 2021, the Las Posas Management Area Allocation Pool No. 2, including VCWWD No. 1 & No. 19, is provided a yield share of 12.59 percent of the available yield within the East Las Posas Management Area and 11.89 percent of the available yield within the West Las Posas Management area.

As discussed above, in 2020, VCWWD No. 1's set allocation TEA was 1,756 AFY. In FY2020 the District produced 1,965 AF of groundwater from four of their wells in the East Las Posas Basin. No groundwater was produced from Well #97. See Table 6-1 for local groundwater production in FY2020. The Initial

Allocation established by FCGMA pursuant to the goals in the GSP and SGMA for the District in 2021 is 2,195 AFY. This is subject to change based on basin evaluations every five years.

#### 6.2.2.4 Past Five Years

Over the past five years, VCWWD No. 1 has utilized its five wells to extract groundwater for potable uses from the East Las Posas Basin with Well No. 97 being taken off-line in 2017. These groundwater wells are in the north-western portion of the District's service area. In 2016 the FCGMA, through Emergency Ordinance E., allotted VCWWD No. 1 an allocation (TEA) of 1,756 AFY from the East Las Posas Basin. As approved by FGCMA, the allocation for calendar year 2020 was increased to 2,195 AFY. See Table 6-1 for a summary of ground water production over the past five years.

| **Submittal Table 6-1 Retail: Groundwater Volume Pumped** | | | | | | |
|---|---|---|---|---|---|---|
| ☐ | Supplier does not pump groundwater. The supplier will not complete the table below. | | | | | |
| ☐ | All or part of the groundwater described below is desalinated. | | | | | |
| Groundwater Type ***Drop Down List*** *May use each category multiple times* | Location or Basin Name | 2016 | 2017 | 2018 | 2019 | 2020 |
| *Add additional rows as needed* | | | | | | |
| Alluvial Basin | East Las Posas | 2130 | 1744 | 1526 | 1544 | 1966 |
| | **TOTAL** | 2,130 | 1,744 | 1,526 | 1,544 | 1,966 |
| NOTES: Values presented account for FY (July) to June | | | | | | |

### 6.2.3 Surface Water

The District is not currently utilizing surface waters as a supply.

### 6.2.4 Stormwater

The District is not currently utilizing storm waters as a supply.

### 6.2.5 Wastewater and Recycled Water

In 2003, the District constructed tertiary treatment facilities at its Moorpark Water Reclamation Facility (MWRF) in and began distributing tertiary treated water to customers for agricultural irrigation, landscape irrigation, grading, and dust control purposes. Currently, the plant has a capacity of 5.0 mgd to treat wastewater to secondary treatment levels and 3.0 mgd capacity to bring the effluent to tertiary treatment

levels but is only permitted to treat 1.5 mgd to tertiary levels. The tertiary treated effluent meets applicable requirements and standards per Title 22 California Code of Regulations.

In FY 2020, the MWRF produced 966 AF of tertiary treated recycled water. Approximately 941 AF of recycled water was sold to its customers. Currently, there are thirteen (13) customers that have permits to purchase and reuse recycled water from VCWWD No. 1.

#### 6.2.5.1 Recycled Water Coordination

Ventura County Waterworks District No. 1 is the sole entity responsible for the collection, treatment, disposal and distribution of wastewater and recycled water in its service area. This includes the City of Moorpark and the adjacent unincorporated areas of North-east Ventura County. Since 2003, the District has expanded operation and capacity at the MWRF to meet the growing recycled water demand.

#### 6.2.5.2 Wastewater Collection, Treatment, and Disposal

VCWWD No.1 collects sanitary wastewater flows within its service area and conveys the flows to the Moorpark Water Reclamation Facility (MWRF). The MWRF is located along California State Route 118 just west of the Moorpark city limits. The District owns, operates, and maintains the wastewater collection system and the reclamation facility. Metered wastewater flows from over 10,000 customers averaged 1.97 mgd (2,206 AFY) for 2020 as shown in Table 6-2. The reclamation facility has a capacity of 5.0 mgd (5,601 AFY) for primary and secondary treatment and can treat approximately 3.0 mgd (3,360 AFY) to tertiary levels, but currently is only permitted to treat 1.5 mgd (1680 AFY) to tertiary levels that meet Title 22 requirements.

**Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020**

| | |
|---|---|
| ☐ | There is no wastewater collection system. The supplier will not complete the table below. |
| 100 | Percentage of 2020 service area covered by wastewater collection system *(optional)* |
| 100 | Percentage of 2020 service area population covered by wastewater collection system *(optional)* |

| Wastewater Collection | | | Recipient of Collected Wastewater | | | |
|---|---|---|---|---|---|---|
| Name of Wastewater Collection Agency | Wastewater Volume Metered or Estimated? *Drop Down List* | Volume of Wastewater Collected from UWMP Service Area 2020 * | Name of Wastewater Treatment Agency Receiving Collected Wastewater | Treatment Plant Name | Is WWTP Located Within UWMP Area? *Drop Down List* | Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List* |

| | | | | | | |
|---|---|---|---|---|---|---|
| Ventura County Waterworks District No. 1 (VCWWD No. 1) | Metered | 2,206 | VCWWD No. 1 | Moorpark Wastewater Reclamation Facility (MWRF) | Yes | No |
| **Total Wastewater Collected from Service Area in 2020:** | | 2,206 | | | | |
| NOTES: | | | | | | |

Quantified volumes for wastewater treatment and discharge within the Districts' service area are shown in Table 6-3.

**Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020**

| ☐ | **No wastewater is treated or disposed of within the UWMP service area.** The supplier will not complete the table below. |
|---|---|

| Wastewater Treatment Plant Name | Discharge Location Name or Identifier | Discharge Location Description | Wastewater Discharge ID Number *(optional) 2* | Method of Disposal ***Drop down list*** | Does This Plant Treat Wastewater Generated Outside the Service Area? ***Drop down list*** | Treatment Level ***Drop down list*** | **2020 volumes [1]** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Wastewater Treated | Discharged Treated Wastewater | Recycled Within Service Area [3] | Recycled Outside of Service Area | Instream Flow Permit Requirement |
| Moorpark Wastewater Reclamation Facility (MWTF) | MWRF | Percolation Ponds | | Percolation ponds | No | Tertiary | 2,206 | 1,242 | 941 | 0 | |
| | | | | | | | | | | | |
| | | | | | | **Total** | 2,206 | 1,242 | 941 | 0 | 0 |

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.
[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES: Approximately 966 AF of Recycled Water was produced in FY2020 at MWRF. Recycled Water volume shown in this table reflects recycled water purchases within the service area and the difference from production to retail sales is included in discharged treated wastewater.

### 6.2.5.3 Recycled Water System Description

The reclaimed water treatment facility and distribution system were completed in September 2003 with reclaimed water production starting that same month delivering water for turf and landscape irrigation at Moorpark Country Club Golf Course. In 2012, the reclaimed water distribution facility constructed Phase 2 and 3a which expanded the capacity to 1.5 mgd (1680 AFY). In 2017, the recycled water distribution system was further expanded (Phase 4) with the addition of a booster pump station, capable of supplying 1,800 gpm (2,900 AFY), and the construction of 12,700 linear feet of pipeline to a second golf course (Rustic Canyon Golf Course) for irrigation. The expansion also serves the City of Moorpark Landscape Maintenance District which delivers reclaimed water for landscape irrigation purposes to its own facilities as well as Homeowners Associations. As approved by the Regional Water Quality Control Board Division of Drinking Water in September 2017, three additional permittees were approved to receive tertiary treated reclaimed water from VCWWD No. 1. Currently, the facility has the capacity to treat approximately 3.0 mgd (3,360 AFY) of wastewater to tertiary levels but is only permitted to treat 1.5 mgd.

As of 2020, the District provided recycled water to thirteen (13) customers for reuse, including the plant itself. Recycled water uses vary from facility operations, grading, dust control, golf course and landscape irrigation, and agricultural (lemon) irrigation. Recycled water purchases in 2020 by user is shown in DRAFT Submittal Table 6-D. In 2020, the plant produced 966 AF and sold 941 AF of recycled water. The MWRF also reused water for operational and landscaping purposes at its own facility.

The MWRF has plans to expand the tertiary treatment distribution to 2,020 AFY by 2040. Current and projected recycled water direct beneficial uses within the District's water service area is shown in DRAFT Submittal Table 6-6. A comparison of 2015 projected recycled water uses for 2020 compared with actual 2020 use is shown in DRAFT Submittal Table 6-5. Methods to expand future recycled water use are shown in in DRAFT Submittal Table 6-6.

### 6.2.5.4 Potential, Current, and Projected Recycled Water Uses

Current uses of recycled water with the service area of VCWWD No. 1 include ground water recharge, golf course and landscape irrigation, agricultural irrigation, grading and dust control. Currently, there are thirteen (13) permittees that can purchase recycled water from the District, including the plant itself. These users and intended uses are shown in DRAFT Submittal Table 6-D.

| Submittal Table 6-D: VCWWD NO. 1 - FY 2020 Recycled Water Production | | |
|---|---|---|
| **User** | **Purchased (AF)** | **Intended Use** |
| Moorpark Country Club Golf Course | 375 | Golf Course Irrigation |
| Rustic Canyon Golf Course | 310 | Golf Course Irrigation |
| MWRF | 150 | (Internal Reuse) Facilities Operations and Landscape Irrigation |
| Guadalupe Guzman | 31 | Agricultural Irrigation (lemons) |
| Country Club Estates-Moorpark Homeowners Association (HOA) | 25 | Landscape Irrigation |
| Lazy Lemon Farms, LLC | 23 | Agricultural Irrigation (lemons) |
| Waters Family Farms, INC. | 20 | Agricultural Irrigation (lemons) |
| City of Moorpark | 4 | Landscape Irrigation |
| Ventura County Waterworks Well No. 20 | 2 | Facilities Operations and Landscape Irrigation |
| Ventura County Waterworks RW Reservoir | 0.2 | Facilities Operations and Landscape Irrigation |
| Tom Lucas | 0 | Agricultural Irrigation (nursery) |
| Ventura County PWA | 0 | Dust Control |
| Warwar Properties | 0 | Agricultural Irrigation (lemons) |
| **Total** | **941** | |

For future recycled water use planning, the District forecasts that customers will be added, and recycled water supply will increase to an additional 500 AFY in 2025 and up to 1,100 AFY by 2040. Currently, the plant is able meet the projected recycled water demand of 2,200 AFY in 2040 with its capacity at 3.0 mgd (3,360 AFY), but to do so would require a new permit from RWQCB allowing additional treatment up to the plant's capacity.

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

| | |
|---|---|
| ☐ | Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below. |

| | |
|---|---|
| Name of Supplier Producing (Treating) the Recycled Water: | VCWWD No. 1 |
| Name of Supplier Operating the Recycled Water Distribution System: | VCWWD No. 1 |
| Supplemental Water Added in 2020 (volume) | 0 |
| Source of 2020 Supplemental Water | |

| Beneficial Use Type | Potential Beneficial Uses of Recycled Water | Amount of Potential Uses of Recycled Water (Quantity) (AFY) | General Description of 2020 Uses | Level of Treatment | 2020 | 2025 | 2030 | 2035 | 2040 |
|---|---|---|---|---|---|---|---|---|---|
| Agricultural irrigation | Irrigation of lemons | | Irrigation of lemons | Tertiary | 75 | 100 | 100 | 100 | 100 |
| Landscape irrigation (excludes golf courses) | General Landscape irrigation | | General Landscape irrigation | Tertiary | 29 | 500 | 500 | 500 | 650 |
| Golf course irrigation | Turf and Landscape irrigation | | Turf and Landscape irrigation | Tertiary | 685 | 900 | 1,050 | 1,200 | 1,200 |
| Industrial use | Facilities Operation & Storage | | Facilities Operation & Storage | Tertiary | 152 | 100 | 150 | 200 | 250 |
| | | | | **Total:** | 941 | 1,600 | 1,800 | 2,000 | 2,200 |

| **Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual** | | |
|---|---|---|
| ☐ | Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table. | |
| **Beneficial Use Type** | **2015 Projection for 2020** | **2020 Actual Use** |
| *Insert additional rows as needed.* | | |
| Agricultural irrigation | 100 | 75 |
| Landscape irrigation (exc golf courses) | 300 | 29 |
| Golf course irrigation | 900 | 685 |
| Industrial use | 100 | 152 |
| **Total** | 1,400 | 941 |
| NOTE: | | |

### 6.2.5.5 Actions to Encourage and Optimize Future Recycled Water Use

As discussed previously, the District anticipates that customers will be added based on the growing demand trend to utilize recycled water in the area. See Table 6-6 for recycled water use expansions.

| **Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use** | | | |
|---|---|---|---|
| ☐ | 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 UWMP | | |
| Name of Action | Description | Planned Implementation Year | Expected Increase in Recycled Water Use |
| *Add additional rows as needed* | | | |
| Customer/Mains | Add/retrofit customers and construct transmission mains to users | 2020 - 2025 | 500 |
| Customer/Mains | Add/retrofit customers and construct transmission mains to users | 2025 - 2040 | 600 |
| | | **Total** | 1,100 |
| NOTES: | | | |

### 6.2.6 Desalinated Water

VCWWD No. 1 does not currently have any plans to implement seawater desalination to increase water supply on its own. VCWWD No. 1 will continue purchasing water through Calleguas. In 2015, Calleguas began exploring the feasibility of implementing seawater desalination as a baseline supply designed to meet essential water demands during a Stage 3 water shortage. A preliminary assessment indicated that the cost of a seawater desalination facility would be cost prohibitive, in part because much of Calleguas' demand occurs over 20 miles inland and at an elevation up to 1,100 feet and the expense to run the seawater reverse osmosis units. Seawater desalination will be further evaluated by Calleguas along with other water supply alternatives to identify solutions that will meet Calleguas' reliability needs in the most cost-effective and environmentally responsible manner.

### 6.2.7 Water Exchanges and Transfers

The District currently does not participate with other water agencies on water exchanges or transfers into or out of the District's water service area and none are planned at this time. However, the District can provide Calleguas well water in the event of an emergency and has the potential to make an inter-tie with Camrosa Water District and Ventura County Water Works District No. 19 for emergencies.

### 6.2.8 Future Water Projects

As discussed in Section 3.1.4, the District is planning two future water projects. One will increase water storage capacity by constructing an additional reservoir along with infrastructure, and another that may lower the dependence on imported water. The projects are discussed below.

#### 6.2.8.1 Stockton Reservoir – VCWWD No. 1 (Moorpark)

Currently in the design phase, the Stockton Reservoir project will replace an existing 0.5-million-gallon storage reservoir with a 1-million-gallon storage reservoir allowing the District to store additional water at this location. The existing reservoir is in the 994-pressure zone in the northwest portion of the District and is at the end of its useful service life. The new Stockton Reservoir will be a 1.0-million-gallon steel tank located on Stockton Road near the existing tank.

#### 6.2.8.2 Moorpark Desalter – VCWWD No. 1 (Moorpark)

The District is in the planning stages of the Moorpark Desalter Project, which is a groundwater production and treatment system that could provide up to 5,000 AFY of potable water for customers in the District's water service area. As part of the project, 10 to 18 extraction wells will be constructed to a depth of 250 feet within or near an active agricultural field east of Hitch Boulevard between Los Angeles Avenue and the Arroyo Las Posas/Arroyo Simi. The proposed Moorpark Desalter Treatment Plant will be located east of the existing Moorpark Water Reclamation Facility (MWRF), which is located at 9550 East Los Angeles Avenue just west of Moorpark City limits along California State Route 118.

The wells will extract approximately 6,000 AFY of poor-quality, brackish groundwater from a shallow aquifer in the South Las Posas Basin and pump the groundwater via a new transmission pipeline to the proposed treatment plant, where the water will be treated to State drinking water standards through a membrane treatment process that includes filters, low-pressure reverse osmosis, disinfection, and chemical water conditioning. The treated water will be connected to VCWWD No.1's water distribution system. Brine produced by the reverse osmosis process will be transported out of the watershed through the Salinity Management Pipeline (SMP), currently being constructed by Calleguas. The SMP will convey brine from Moorpark to the ocean discharge point at Point Hueneme.

The Project is a key element in the Northern Reach Renewable Water Management Plan which was developed as part of the Calleguas Creek Boron, Chloride, Total Dissolved Solids, and Sulfate Total Maximum Daily Load Compliance Plan. The Project will supplement imported water supplies, remove poor quality groundwater, allow higher quality storm flows to recharge the shallow unconfined groundwater basin, and improve the groundwater quality of the overall basin.

The Ventura County Public Works Agency's Water and Sanitation Department received a $7 million Proposition 84 grant from the State Department of Water Resources through the Watershed Coalition of Ventura County for the Moorpark Desalter Project.

The Project, which has an overall estimated cost of $50 million to complete, will remove up to 18 million pounds of salt per year from the Las Posas Basin and provide up to 5,000 acre-feet per year of high-quality water for use by customers in the VCWWD No. 1 water service area. The project is still in the planning stages.

| **Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs** | | | | | | |
|---|---|---|---|---|---|---|
| ☐ | No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below. | | | | | |
| ☐ | 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? | | Description (if needed) | Planned Implementation Year | Planned for Use in Year Type *Drop Down List* | Expected Increase in Water Supply to Supplier *This may be a range* |
| | *Drop Down List (y/n)* | *If Yes, Supplier Name* | | | | |
| *Add additional rows as needed* | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Recycled Water System Expansion | No | | Near Term Expansion of Plant tertiary treatment capacity/construct conveyance facilities | 2020 - 2025 | All Year Types | 500 |
| Moorpark Desalter | No | | Desalinate brackish groundwater | 2030 | All Year Types | 5,000 |
| Recycled Water System Expansion | No | | Long Term Expansion of Plant tertiary treatment capacity/construct conveyance facilities | 2025 - 2040 | All Year Types | 600 |
| NOTES: | | | | | | |

#### 6.2.8.3 Future Recycled Water System Expansions

As discussed in Section 6.2.5, 966 AFY of wastewater was treated to tertiary levels with 941 AFY of recycled water purchased by thirteen customers in 2020. The District forecasts that future customers will be added, and recycled water supply will increase to an additional 500 AFY by 2025 and up to an another additional 1,100 AFY by 2040. To meet demand, a permit would be required to capitalize on the plant's full tertiary treatment capacity with a recycled water use of 2,200 AFY by 2040.

### 6.2.9 Summary of Existing and Planned Sources of Water

#### 6.2.9.1 Description of Supplies

The primary source of water supply for the District has been water imported from MWD through the local wholesale agency, Calleguas Municipal Water District. The imported water is primarily treated water the from the Sacramento-San Joaquin River Delta in Northern California, which conveyed via State Water Project (SWP) facilities. In 2020, the District supplied a total of 7,112 AF from imported water purchased from Calleguas, which accounted for 71 percent of the total water supply including recycled water.

The second largest source of water is groundwater extracted from the East Las Posas Groundwater Basin via five groundwater wells owned and operated by the District. Most of the groundwater meets all State and Federal water quality standards for drinking water with the exception that treatment is required at one of the well sites *(Well No. 20) to lower iron and manganese levels below the State Secondary Maximum Contaminant Level (MCL) requirements. Each well site has chlorine injection before being

pumped into the potable water distribution system. In 2020, the District supplied a total of 1,966 AF of groundwater, which accounted for 20 percent of the total water supply including recycled water.

A summary of expected future water supply projects or programs for the District is shown in Table 6-8.

### 6.2.9.2 Quantification of Supplies

Actual quantified water supplies for 2020 are shown in DRAFT Submittal Table 6-8. Water supply projections for 2025 to 2040 are shown in DRAFT Submittal Table 6-9.

**Submittal Table 6-8 Retail: Water Supplies — Actual**

| Water Supply | Additional Detail on Water Supply | 2020 | | |
|---|---|---|---|---|
| **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 | | Actual Volume | Water Quality Drop Down List | Total Right or Safe Yield (optional) |
| Add additional rows as needed | | | | |
| Groundwater (not desalinated) | Fox Canyon Groundwater Management Area | 1,966 | Drinking Water | 2,195 |
| Purchased or Imported Water | Calleguas Municipal Water District | 7,112 | Drinking Water | 10,723 |
| Recycled Water | Moorpark Wastewater Reclamation Facility | 941 | Recycled Water | 1,680 |
| | **Total** | 10,019 | | 14,598 |
| NOTES: | | | | |

| Submittal Table 6-9 Retail: Water Supplies — Projected | | | | | | |
|---|---|---|---|---|---|---|
| Water Supply | Additional Detail on Water Supply | Projected Water Supply<br>Report To the Extent Practicable | | | | |
| **Drop down list**<br>May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool | | **2025** | **2030** | **2035** | **2040** | **2045** (opt) |
| | | Reasonably Available Volume | Reasonably Available Volume | Reasonably Available Volume | Reasonably Available Volume | Reasonably Available Volume |
| Add additional rows as needed | | | | | | |
| Purchased or Imported Water (a) | Purchased from CMWD | 7,307 | 2,534 | 2,787 | 3,015 | 3,267 |
| Groundwater (not desalinated) | East Las Posas Basin | 2,195 | 2,195 | 2,195 | 2,195 | 2,195 |
| Recycled Water | MWRF | 1,600 | 1,800 | 2,000 | 2,200 | 2,200 |
| Desalinated Water - Groundwater | Moorpark Desalter Project | 0 | 5,000 | 5,000 | 5,000 | 5,000 |
| | **Total** | 11,102 | 11,529 | 11,982 | 12,410 | 12,662 |

NOTES: Imported Water volume was calculated based on domestic water demands less groundwater supply and desalinated groundwater supply as applicable.
(a) Imported water does not include surplus water. Surplus water is discussed in Chapter 7 as part of the reliability analysis

It should be noted, as discussed in Section 7.2, MWD expects its supplies to exceed future water demands from its customer base during normal-year, single-dry year, and extended drought periods. This ensures the reliability of imported water to VCWWD No.1 will meet projected demands into the future.

## 6.2.10 Special Conditions

### 6.2.10.1 Climate Change Impacts

Climate change impacts to VCWWD No. 1's water supplies and activities related to climate change concerns are discussed in Section 4.5.

Based on the Groundwater Sustainability Plan for the Las Posas Valley Basin, a literature review in support of the U.S. Bureau of Reclamation's Los Angeles Basin Stormwater Conservation Study Task 3.1 Report found that the following changes are anticipated in Southern California due to global climate change (Bureau of Reclamation 2013):

- increased temperature (1°C to 3°C, or 1.8°F to 5.4°F)
- Increased evaporation rate
- Decrease in annual precipitation (2% to 5%)
- Increase in extreme precipitation events

Though it is difficult to quantify what affect climate change will have, it is expected that supply will be negatively impacted. For local production, increased evaporation, increased temperature, and a decrease in annual precipitation may reduce surface water from infiltrating into groundwater basins resulting in lower groundwater levels. These impacts may be felt statewide and have impact on imported water supplies to the District.

### 6.2.10.2 Regulatory Conditions and Project Development

**Imported water:** Regulatory conditions that could affect imported water supply to VCWWD No. 1's service include any change in allocation either directly from Calleguas or MWD. Since MWD has a contract allocation to obtain water from the SWP and the Colorado River, any changes to these contracted sources can influence the supply available to Calleguas which may affect the supply to the District. Also, during periods of reduced water measures or drought, Calleguas and MWD could implement Water Shortage Action Plans that could affect supply to VCWWD No. 1.

**Groundwater:** Groundwater production in VCWWD No. 1's service area is regulated by the FCGMA through State law and Local ordinances. Local ordinances provide VCWWD No. 1 with a set allocation (TEA) as described in section 6.2.2.3.3. The adopted Groundwater Sustainability Plan sets a yield share for each groundwater producer as described in sections 6.2.2.3.2.3 and 6.2.2.3.3. Any changes to the local groundwater ordinances, Groundwater Sustainability Plans, or State laws could influence the

groundwater supply available to VCWWD No. 1. Future projects, such as the Moorpark Desalter project, as described in 6.2.8.2, will provide additional 5,000 AFY of supply to the District.

**Recycled Water:** Production and distribution of recycled water is regulated by the California State Water Resources Control Board. Any changes in the regulations applicable to the production, distribution and disposal of recycled water may have an impact on the supply produced at the MWRF.

### 6.2.10.3 Other Locally Applicable Criteria

Local criteria that may affect water supply for VCWWD No. 1 is only applicable as it pertains to local groundwater production. Local criteria influencing groundwater production includes groundwater basin levels as described in the Groundwater Sustainability Plans, see section 6.2.2.3.2.3.

## 6.3 Submittal Tables

Optional Planning Tool was not used.

## 6.4 Energy Intensity

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. Estimated energy consumption and estimated energy Intensity for groundwater extraction, pumping, pressure reducing, and storage for the VCWWD No. 1 potable water system for FY2020 is shown DRAFT Submittal Table 6-E. Energy consumption information was made available by Southern California Edison from metered facilities that supply and distribute water within the District's system.

**Submittal Table 6-E: VCWWD No. 1 Potable System FY2020 Estimated Energy**

| Facility Description | kWh | SCE Meter No. |
|---|---|---|
| Meridian Tank | 12,441 | 222012-367885 |
| Skyline Reservoir | 12,178 | 222014-082077 |
| Fairview Reservoir | 7,287 | 222014-025778 |
| Dalaway Pressure Reducing Station | 1,334 | 222014-020745 |
| Well #15 | 1,337,143 | V349N-010521 |
| Well #20 | 881,116 | 359150-001393 |
| Well #95 | 101,445 | 254000-032076 |
| Well #97 | 830 | 259000-001285 |
| Well #98 | 799,071 | V349N-006617 |
| Fruitvale Booster Pump Station | 4,904 | 25600-221959 |
| Grimes Booster Pump Station | 2,595 | 259000-062704 |
| Home Acres Booster Pump Station | 28,300 | 222013-990123 |
| Palmer Booster Pump Station | 249,279 | 259000-058555 |
| Roseland Booster Pump Station | 34,492 | 256000-121813 |

| | | |
|---|---|---|
| S & K Booster Pump Station | 103,390 | 259000-077192 |
| Walnut Canyon Booster Pump Station | 78,227 | 256000-198858 |
| **Total Energy Use (kWh)** | **4,453,101** | |
| **VCWWD No. 1 Potable System FY2020 Estimated Energy Intensity** | | |
| Total Annual Potable System Volume (AF) | 9,078 | |
| **Energy Intensity (kWh/AF)** | **491** | |

# Chapter 7 Water Service Reliability and Drought Risk Assessment

## 7.1 Water Supply Reliability and Drought Risk Assessment

The UMWP requires urban water suppliers to assess water supply reliability and compare total projected water use with the expected water supply at a minimum, over the next twenty years in five-year increments. The UWMP also requires an assessment for a single dry year and five consecutive dry years. This chapter presents the reliability assessment for VCWWD No.1 service area.

It is the goal of VCWWD No. 1 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 25 years, in combination with conservation of non-essential demand during certain dry years, VCWWD No.1 successfully achieves this goal as shown in the following sections.

## 7.2 Water Supply Reliability Assessment

### 7.2.1 Constraints on Water Sources and Response Programs

Two of the most significant constraints on water supply for the District and for Southern California has been the drought that started in 2012 and persisted for parts of California into 2019, and Sacramento-San Joaquin River Delta ecosystem issues that affect imported water supply from the State Water Project. The water conditions that the region faced in 2020 were shaped by supply conditions and are summarized below[15]:

- MWD basins have historically experienced large swings in annual hydrologic conditions; however, these swings have largely been buffered through MWD's efforts and large volume of storage
- Dramatic swings in annual hydrologic conditions have impacted water supplies available from the State Water Project (SWP) over the last decade. MWD has been building dry-year storage reserves, water banking and transfers have helped manage the wide swings in SWP allocations
- 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, such as algae toxins, PFAS, and the identification of constituents of emerging concern, have a significant impact on the region's water supply conditions and underscore the importance of flexible and adaptive regional planning strategies

[15] MWD Final Draft 2020 UWMP

#### 7.2.1.1 Constraints on Water Sources and Response Programs

This section provides a general description of the water quality of the supplies delivered by VCWWD No. 1. The District is committed to providing its purveyors with high quality water meeting all federal and state primary drinking water standards. Some contaminants are naturally-occurring minerals. In some cases, the presence of animals or human activity can contribute to the constituents in the source waters.

The District continues to maintain high standards in their effort to provide a reliable water source. More information is provided in the 2019 VCWWD No.1's Water Quality Report.

### 7.2.2 Year Type Characterization

Table 7-1 is used to report the characteristics of water supplies during the year types required for the water service reliability assessment. The three-year types are as follows:

- **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. In this Guidebook, DWR uses the terms average and normal interchangeably when addressing the water year type.
- **Single Dry Year**. The single dry year is the year that represents the lowest water supply available to the Supplier.
- **Five-Consecutive-Year Drought**. The five-consecutive year drought for the DRA would be the driest five-year historical sequence for the Supplier (Water Code Section 10612). For the water service reliability assessment, Suppliers are encouraged to use the same five-year sequence for their water service reliability assessment. However, they may choose to use a different five-consecutive year dry period such as the lowest average water supply available to the Supplier for five years in a row. Suppliers are encouraged to characterize the five-consecutive year drought in a manner that is best suited for understanding and managing their water service reliability.

#### 7.2.2.1 MWD Reliability by Type of Year

In MWD's 2020 UWMP dated June 2021, MWD estimated supply capabilities and projected demands for a normal year based on an average of hydrology analysis for the years 1922 through 2017; for a single dry-year based on a repeat of the hydrology in 1977; and for five consecutive years from 1988 to 1992. These estimates are summarized in Tables 2-4, 2-5, and 2-6 of MWD's 2020 UWMP, which are included in Appendix G of this report for reference.

MWD 2020 UWMP Table 2-4 summarizes the sources of supply for the single dry year (1977 hydrology). MWD 2020 UWMP Table 2-5 provides results for the average of the five consecutive dry years. These tables show that MWD can provide reliable water supplies under both the single driest year and the multiple dry year scenarios. MWD Table 2-6 reports the expected situation on the average over all historic hydrology from 1922 to 2017.

A summary of the information provided in MWD Tables 2-4, 2-5, and 2-6 is shown in Table 7-A. For each of these scenarios there is a projected surplus of supply in every forecast year. Projected supply surpluses, based on the capability of current supplies, range from 0.1 percent to 87 percent of projected demands. With the inclusion of supplies under development, potential surpluses range from 5 percent to 110 percent of projected demands. MWD's supply capabilities are discussed further in their 2020 UWMP. MWD's likelihood of having adequate supply capability to meet projected demands, without implementing the Water Supply Allocation Plan (WSAP), is dependent on its storage resources.

| **Submittal Table 7-A Retail: MWD Supply Capability and Projected Demands (AFY)** | | | | | |
|---|---|---|---|---|---|
| **Single Dry Year MWD Supply Capability and Projected Demands (1977 Hydrology)** | | | | | |
| | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| Capability of Current Programs | 2,727,000 | 2,791,000 | 2,789,000 | 2,551,000 | 2,572,000 |
| Projected Demands | 1,402,000 | 1,387,000 | 1,408,000 | 1,431,000 | 1,457,000 |
| Projected Difference | 1,325,000 | 1,404,000 | 1,381,000 | 1,120,000 | 1,115,000 |
| Projected Surplus % [(a)] | 49% | 50% | 50% | 44% | 43% |
| Supplies under Development | 0 | 0 | 0 | 0 | 0 |
| Potential Surplus | 1,325,000 | 1,404,000 | 1,381,000 | 1,120,000 | 1,115,000 |
| Potential Surplus %[(a)] | 49% | 50% | 50% | 44% | 43% |
| **Drought Lasting Five Consecutive Water Years MWD Supply Capability and Projected Demands (1922-2017 Hydrology)** | | | | | |
| | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| Capability of Current Programs | 2,198,000 | 2,210,000 | 2,209,000 | 1,973,000 | 1,995,000 |
| Projected Demands | 1,412,000 | 1,414,000 | 1,435,000 | 1,457,000 | 1,484,000 |
| Projected Difference | 786,000 | 796,000 | 774,000 | 516,000 | 511,000 |
| Projected Surplus %[(a)] | 36% | 36% | 35% | 26% | 26% |
| Supplies under Development | 10,000 | | | 235,000 | 213,000 |
| Potential Surplus | 796,000 | 796,000 | 774,000 | 751,000 | 724,000 |
| Potential Surplus %[(a)] | 36% | 36% | 35% | 38% | 36% |
| **Average Year MWD Supply Capability and Projected Demands (1922-2017 Hydrology)** | | | | | |
| | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| Capability of Current Programs | 3,932,000 | 3,962,000 | 3,960,000 | 3,598,000 | 3,622,000 |
| Projected Demands | 1,274,000 | 1,256,000 | 1,273,000 | 1,294,000 | 1,319,000 |
| Projected Difference | 2,658,000 | 2,706,000 | 2,687,000 | 2,304,000 | 2,303,000 |
| Projected Surplus %[(a)] | 68% | 68% | 68% | 64% | 64% |

| | | | | | |
|---|---|---|---|---|---|
| Supplies under Development | 47,000 | 13,000 | 13,000 | 372,000 | 347,000 |
| Potential Surplus | 2,705,000 | 2,719,000 | 2,700,000 | 2,676,000 | 2,650,000 |
| Potential Surplus %[(a)] | 69% | 69% | 68% | 74% | 73% |

(a) As a percentage of projected supplies. *Source – 2020 MWD UWMP*

All storage capability figures shown in Metropolitan's 2020 UWMP reflect actual storage program conveyance constraints. It is important to note that under some conditions, Metropolitan may choose to implement the WSAP in order to preserve storage reserves for a future year, instead of using the full supply capability. This can result in impacts at the retail level even under conditions where there may be adequate supply capabilities to meet demands.

#### 7.2.2.2 Calleguas Reliability by Type of Year

In Calleguas' 2020 UWMP dated June 2021, the estimated supply capability and projected demands for a normal year based on an average of hydrology analysis for the years 1922-2004; for a single dry-year based on a repeat of the hydrology in the year 1977; and for five consecutive years of 1988 to 1992 are presented. These estimates are summarized in Tables 7-1 through 7-4 of the Calleguas 2020 UWMP, which are included in Appendix G of this report for reference.

The available supplies (as a percentage of average supply) shown in Table 7-B are those estimated for the Calleguas service area that includes VCWWD No. 1. MWD and Calleguas develop independent supply/demand forecasts for the Calleguas service area.

**Table 7-B: Basis of Water Year Data for Calleguas**

| Year Type | Base Year | Available Supplies from Calleguas if Year Type Repeats<br>% of Average Supply |
|---|---|---|
| Average Year | 1922 to 2017 | 100% |
| Single-Dry Year | 1977 | 95% |
| Consecutive Dry Years 1st Year | 1988 to 1992 | 107% |
| Consecutive Dry Years 2nd Year | 1988 to 1992 | 113% |
| Consecutive Dry Years 3rd Year | 1988 to 1992 | 115% |
| Consecutive Dry Years 4th Year | 1988 to 1992 | 93% |
| Consecutive Dry Years 5th Year | 1988 to 1992 | 99% |

As shown in Table 7-C, the estimated supply of water as determined by MWD during an average (normal) year, together with Calleguas' recycled water supply, is sufficient to meet the Calleguas' projected normal year water demands from 2020 through 2040. Also provided in Table 7-C is the estimated demand on Calleguas during a normal year in the event new local water production facilities are not developed as forecasted by retail purveyors. These local projects include groundwater desalters and recycled water

system start-ups or expansions such as the VCWWD No. 1 Moorpark Desalter Project and expansions to the MWRF recycled water system, respectively,

As shown in Table 7-C, the estimated supply of water as determined by MWD during an average (normal) year, together with Calleguas' recycled water supply, is sufficient to meet the Calleguas' projected normal year water demands from 2020 through 2040. Also provided in Table 7-C is the estimated demand on Calleguas during a normal year in the event new local water production facilities, i.e., groundwater desalters and recycled water systems, are not developed as forecasted by retail purveyors.

| Submittal Table 7-C Retail: Calleguas Supply Capability and Projected Demands (AFY) | | | | | | |
|---|---|---|---|---|---|---|
| **Average Year Calleguas Supply Capability and Projected Demands (1922-2017 Hydrology)** | | | | | | |
| | | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| | Capability of Current Programs | 117,298 | 118,570 | 120,694 | 122,069 | 122,439 |
| | Projected Demands | 90.629 | 91,912 | 94,059 | 95,447 | 95,821 |
| | Projected Difference | 26,669 | 26,658 | 26,635 | 26,622 | 26,618 |
| **Single Dry Year Calleguas Supply Capability and Projected Demands (1977 Hydrology)** | | | | | | |
| | | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| | Capability of Current Programs | 111,706 | 112,972 | 115,093 | 116,468 | 116,833 |
| | Projected Demands | 85,038 | 86,317 | 88,459 | 89,848 | 90,217 |
| | Projected Difference | 26,668 | 26,655 | 26,634 | 26,620 | 26,616 |
| **Drought Lasting Five Consecutive Water Years Calleguas Supply Capability and Projected Demands (1922-2017 Hydrology)** | | | | | | |
| | | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| First Year | Capability of Current Programs | 117,102 | 117,061 | 118,856 | 120,539 | 121,320 |
| | Projected Demands | 89,602 | 89,561 | 91,356 | 93,039 | 93,820 |
| | Projected Difference | 27,500 | 27,500 | 27,500 | 27,500 | 27,500 |
| Second Year | Capability of Current Programs | 125,349 | 125,305 | 127,243 | 129,059 | 129,902 |
| | Projected Demands | 97,849 | 97,805 | 99,743 | 101,559 | 102,402 |
| | Projected Difference | 27,500 | 27,500 | 27,500 | 27,500 | 27,500 |
| Third Year | Capability of Current Programs | 124,710 | 124,665 | 126,630 | 128,473 | 129,328 |
| | Projected Demands | 97,210 | 97,165 | 99,130 | 100,973 | 101,828 |
| | Projected Difference | 27,500 | 27,500 | 27,500 | 27,500 | 27,500 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Fourth Year | Capability of Current Programs | 104,460 | 104,426 | 105,925 | 107,330 | 107,982 |
| | Projected Demands | 76,960 | 76,926 | 78,425 | 79,830 | 80,482 |
| | Projected Difference | 27,500 | 27,500 | 27,500 | 27,500 | 27,500 |
| Fifth Year | Capability of Current Programs | 110,171 | 110,135 | 111,744 | 113,254 | 113,954 |
| | Projected Demands | 82,671 | 82,635 | 84,244 | 85,754 | 86,454 |
| | Projected Difference | 27,500 | 27,500 | 27,500 | 27,500 | 27,500 |

As shown in Table 7-C, the estimated allocation of water from Metropolitan during a dry year is sufficient to meet the Calleguas' projected dry year imported water demands from 2025 through 2045. Table 7-C also shows the water supply versus demand evaluation under multiple dry year hydrologic conditions. Sufficient supplies are projected to be available for the years 2025 through 2045. Based on the estimates in Table 7-C, estimated increases in Calleguas service area demands as a percentage of normal demands assuming planned local production projects by Calleguas purveyors are constructed for dry-year and multiple-dry year conditions are shown in Table 7-D. Based on the estimates made in Table 7-C, estimated Calleguas supply capability, which is available from the MWD supply to Calleguas as a percentage of estimated Calleguas service area demands assuming planned local projects are implemented, for normal-year, dry-year and multiple-dry year conditions are shown in Table 7-E.

| **DRAFT Submittal Table 7-D Retail: Estimated Calleguas WSA Demands (%)** | | | | | |
|---|---|---|---|---|---|
| **Demand-Type Year** | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| Single Dry Year | -6.2% | -6.1% | -6.0% | -5.9% | -5.9% |
| Multiple Dry Years | -1.1% | -2.6% | -2.9% | -2.5% | -2.1% |

| **DRAFT Submittal Table 7-E Retail: Estimated Calleguas Supply Capability (%)** | | | | | |
|---|---|---|---|---|---|
| **Demand-Type Year** | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| Normal Year | 29% | 29% | 28% | 28% | 28% |
| Single Dry Year | 31% | 31% | 30% | 30% | 30% |
| Multiple Dry Years | 30.7% | 30.7% | 30.1% | 29.6% | 29.3% |

### 7.2.3 Water Service Reliability

Every urban water supplier shall include, as part of its UWMP, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier 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. The water service reliability assessment shall be based upon the information compiled pursuant to CWC Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

#### 7.2.3.1 Water Service Reliability – Normal Year

Projected normal year VCWWD No. 1 supplies and demands as developed in Table 6-9 and Table 4-3, respectively, are shown in Table 7-2.

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

| | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
|---|---|---|---|---|---|
| Supply totals *(autofill from Table 6-9)* | 11,102 | 11,529 | 11,982 | 12,410 | 12,662 |
| Demand totals *(autofill from Table 4-3)* | 11,102 | 11,528 | 11,982 | 12,410 | 12,662 |
| Difference | 0 | 1 | 0 | 0 | 0 |

NOTES:

#### 7.2.3.2 Water Service Reliability – Single Dry Year

The District's imported water demands are estimated to decrease by approximately six percent during single dry year and one percent during multiple dry years consistent with the estimated projections in Calleguas water demands shown in Table 7-D. Projected single-dry-year and multiple-dry-year District supplies and demands are shown in Table 7-3 and Table 7-4, respectively, which includes estimated surplus imported water supply from Calleguas based on the percentage surplus shown in Table 7-E.

| Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison | | | | | |
|---|---|---|---|---|---|
| | 2025 | 2030 | 2035 | 2040 | 2045 (Opt) |
| Supply totals | 13,367 | 12,315 | 12,818 | 13,314 | 13,643 |
| Demand totals | 10,649 | 11,175 | 11,415 | 11,632 | 11,870 |
| Difference | 2,718 | 1,140 | 1,403 | 1,682 | 1,773 |
| NOTES: Demand and supply projections assume groundwater and recycled water remain the same and imported water is adjusted per tables 7-D and 7-E. | | | | | |

Calleguas distributes imported water on a wholesale basis to 19 local purveyors, including VCWWD No.1, who in turn delivers water to area residents, businesses, and agricultural customers. Approximately three-quarters of Ventura County residents (roughly 630,000 people) depend on Calleguas for all or part of their water. Calleguas is projecting a supply surplus for every 5-year year increment through 2040 for normal, single-dry, and multiple-dry year demand conditions. The District is planning to increase recycled water use to 2,200 AFY by 2040 but will need to update the current permit.

### 7.2.3.3 Water Service Reliability – Five Consecutive Dry Years

Table 7-4 compares the projected water supply versus water demand during a five consecutive dry year period. For this assessment, the evaluation considered imported water supplies from Calleguas and projected a ramp up in demand during the first three years. Following the third year, Calleguas anticipates a 20 percent decrease in imported water use as a result of conservation measures being implemented and/or MWD's WSAP. Sufficient supplies are anticipated based on projected supplies from Calleguas and MWD as shown in Table 7-4.

| Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison | | | | | | |
|---|---|---|---|---|---|---|
| | | 2025 | 2030 | 2035 | 2040 | 2045 (Opt) |
| First year | Supply totals | 13,345 | 12,308 | 12,821 | 13,302 | 13,620 |
| | Demand totals | 11,022 | 11,264 | 11,501 | 11,734 | 11,994 |
| | Difference | 2,323 | 1,044 | 1,320 | 1,568 | 1,626 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Second year | Supply totals | 13,155 | 12,242 | 12,751 | 13,227 | 13,541 |
| | Demand totals | 11,687 | 11,492 | 11,749 | 12,003 | 12,288 |
| | Difference | 1,468 | 750 | 1,002 | 1,224 | 1,253 |
| Third year | Supply totals | 13,170 | 12,247 | 12,740 | 13,230 | 13,545 |
| | Demand totals | 11,635 | 11,474 | 11,733 | 11,984 | 12,268 |
| | Difference | 1,535 | 773 | 1,008 | 1,245 | 1,276 |
| Fourth year | Supply totals | 13,711 | 12,434 | 12,960 | 13,447 | 13,780 |
| | Demand totals | 9,999 | 10,916 | 11,120 | 11,315 | 11,540 |
| | Difference | 3,712 | 1,518 | 1,841 | 2,131 | 2,240 |
| Fifth year | Supply totals | 13,535 | 12,373 | 12,891 | 13,377 | 13,701 |
| | Demand totals | 10,459 | 11,073 | 11,292 | 11,502 | 11,742 |
| | Difference | 3,076 | 1,300 | 1,598 | 1,875 | 1,959 |
| Sixth year *(optional)* | Supply totals | | | | | |
| | Demand totals | | | | | |
| | Difference | 0 | 0 | 0 | 0 | 0 |
| NOTES: Demand and supply projections assume groundwater and recycled water remain the same and imported water is adjusted per tables 7-D and 7-E. | | | | | | |

## 7.3 Drought Risk Assessment

### 7.3.1 Data, Methods, and Basis for Water Shortage Condition

*Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update.*

For VCWWD No. 1, the five-consecutive dry years from 1988 to 1992 represent the driest historical five-consecutive years for its water supply from Calleguas and MWD.

Metropolitan developed estimates of future water demand and supplies for its member agencies based on local water sources and from imported water sources based on 96 years (1922-2017) of historic hydrology. Supply and demand analyses for droughts lasting at least five consecutive water years were based on conditions affecting the SWP, as this supply availability fluctuates the most among Metropolitan's sources of supply. Using the same 96-year period that was utilized for the SWP supply availability, 1988 to 1992 is the driest historical consecutive 5-years for SWP supplies.

### 7.3.2 DRA Water Source Reliability

VCWWD No. 1's five-year drought risk assessment (DRA) is shown in Table 7-5. This table was developed using DWR's optional Planning Tool. Based on Calleguas and MWD's 2020 UWMP Updates, a surplus in water supply is available above the projected water demands. Both Calleguas and MWD have robust WSCP's that include shortage response planning utilizing demand reduction and supply augmentation. The District does not anticipate reliability issues over the next five years. The DRA will be revisited annually.

**Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)**

| 2021 | Total |
|---|---|
| Total Water Use | 9,179 |
| Total Supplies | 12,830 |
| Surplus/Shortfall w/o WSCP Action | 3,651 |
| Planned WSCP Actions (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 0 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 0 |

| 2022 | Total |
|---|---|
| Total Water Use [Use Worksheet] | 9,748 |
| Total Supplies [Supply Worksheet] | 12,645 |
| Surplus/Shortfall w/o WSCP Action | 2,897 |
| Planned WSCP Actions (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 0 |

| | |
|---|---|
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 0 |

| 2023 | Total |
|---|---|
| Total Water Use [Use Worksheet] | 10,267 |
| Total Supplies [Supply Worksheet] | 12,660 |
| Surplus/Shortfall w/o WSCP Action | 2,393 |
| Planned WSCP Actions (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 0 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 0% |

| 2024 | Total |
|---|---|
| Total Water Use [Use Worksheet] | 9,193 |
| Total Supplies [Supply Worksheet] | 13,186 |
| Surplus/Shortfall w/o WSCP Action | 3,993 |
| Planned WSCP Actions (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 0 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 0% |

| 2025 | Total |
|---|---|
| Total Water Use [Use Worksheet] | 8,567 |
| Total Supplies [Supply Worksheet] | 13,015 |
| Surplus/Shortfall w/o WSCP Action | 4,448 |
| Planned WSCP Actions (use reduction and supply augmentation) | |
| WSCP - supply augmentation benefit | 0 |
| WSCP - use reduction savings benefit | 0 |
| Revised Surplus/(shortfall) | 0 |
| Resulting % Use Reduction from WSCP action | 0% |

# 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). It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

The WSCP aligns with both Calleguas' WSCP as well as MWD to ensure continuity, collaboration, and efficiency. The WSCP also draws upon lessons learned from the 2012-2016 drought. The following discussion presents the various stages and the basis for implementation. For detailed information, the WSCP is attached as Appendix H.

## 8.1 Water Supply Reliability Analysis

The primary source of water supply for the District has been water imported from MWD through Calleguas. The imported water is primarily treated water the from the Sacramento-San Joaquin River Delta in Northern California, which is conveyed via State Water Project (SWP) facilities. In 2020, the District supplied a total of 7,112 AF from imported water purchased from Calleguas, which was 71 percent of the total water supply including recycled water.

The second largest source of water is groundwater extracted from the East Las Posas Groundwater Basin via five groundwater wells owned and operated by the District. Most of the groundwater meets all State and Federal water quality standards for drinking water with the exception that treatment is required at one of the well sites (Well No. 20) to lower iron and manganese levels below the State Secondary Maximum Contaminant Level (MCL) requirements. Each well site has a chlorine injection before being pumped into the potable water distribution system. In 2020, the District supplied a total of 1,966 AF from groundwater production, which was 20 percent of the total water supplied including recycled water.

The District's Moorpark Water Reclamation Facility (MWRF) produces recycled water via tertiary treatment facilities owned and operated by the District. In 2020, the reclamation plant produced 941 AF of recycled water which accounted for 9 percent of the total water supplied. The District forecasts that recycled water demand will increase to 1,400 AFY by 2025, necessitating a new permit from RWQCB; and to 2,200 AFY by 2040. Currently, the plant is able meet the projected recycled water demand of 2,200 AFY in 2040 with its capacity at 3.0 mgd but an updated permit would be required for supply above the current permitted amount of 1.5 mgd.

The District is in the planning stages of the Moorpark Desalter Project, which is a groundwater production and treatment system that is projected to provide up to 5,000 AFY of potable water for customers within the District's water service area. This project is currently in the planning phase and anticipated to be online by 2030.

## 8.2 Annual Water Supply and Demand Assessment Procedures

As an urban water supplier, VCWWD No.1 must prepare and submit an Annual Water Supply and Demand Assessment. The Annual Water Supply and Demand Assessment is a written decision-making process for determining supply reliability each year, along with the data and methods used to evaluate reliability. The following information provides the procedures the District will undertake to complete and approve the Annual Assessment.

### 8.2.1 Decision-Making Process

To formally approve the Annual Assessment, the District staff will draft a board letter, resolution, and exhibits. They will also work with County Counsel on the public hearing requirements. The Water and Sanitation Department Director will then present these items to the County Board of Supervisors to adopt a resolution for the Annual Water Supply and Demand 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.

#### Evaluation Criteria

The District Staff Services Specialist Conservation/Legislative Coordinator coordinates with staff from Calleguas and MWD to ensure messaging and legislation is consistent and compliant among the agency guidelines. MWD's Annual Assessment is primarily based on MWD's ongoing Water Supply Drought Management process described in their 2020 UWMP Update.

Figure A.4-1
Sample Annual Assessment Reporting Timeline

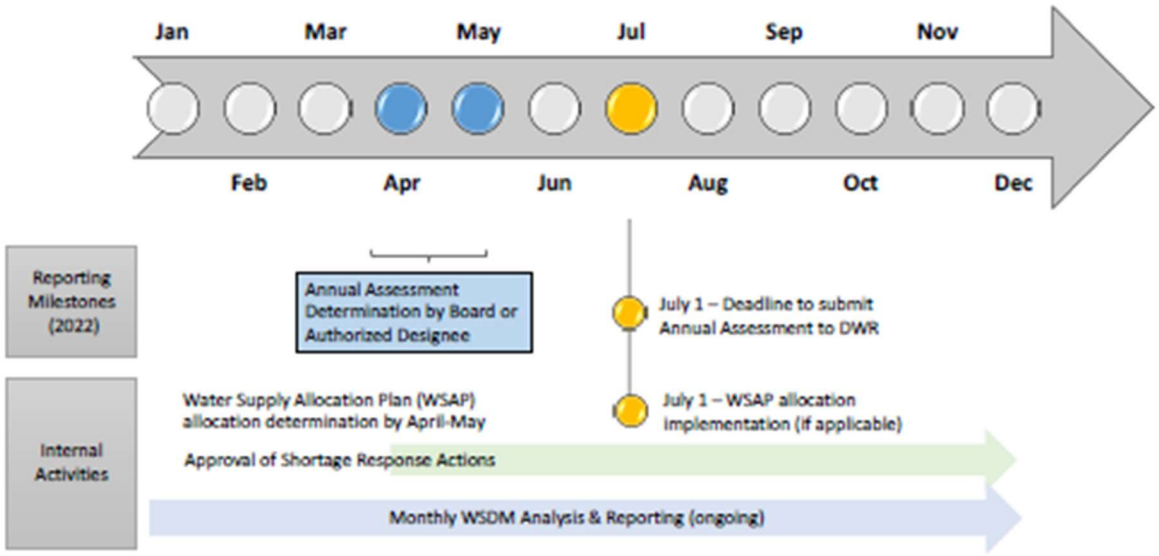


*Figure 8-1 MWD Sample Annual Assessment Reporting Timeline (2020 UWMP)*

## Water Supply

Water supply data is collected daily and reported on a weekly and monthly interval. The underlying data, as well as the reports, will be used in the Annual Assessment.

## Current Year Unconstrained Customer Demand

The District is expected to use unconstrained customer demands when assessing water supply reliability or in other words the District's customer water needs for the year prior to any special shortage response actions. Customer demand projections in Chapter 4 consider historical demand trends, changes in local supply production, climate change, water-use efficiency trends, etc. These forecasted demands may need to be adjusted to account for any use of demand management measures such as conservation campaigns or other measures that come from Calleguas or MWD.

## Current Year Available Supply

To plan for a future dry year the District will have to rely on meeting demands with extra imported water. The District imports approximately 70 to 80 percent of their annual supplies from Calleguas who receives water from MWD. In 2020, imported water accounted from 71 percent of the supply. Over the last few years, MWD has been able to rebuild its storage in reservoirs due to favorable supply conditions. MWD storage allows for a single dry year and at times multiple dry years. MWD has developed a Water

Shortage Contingency Plan which is consistent with their current policies for managing regional water supplies during shortage periods. Current year supplies are discussed further in Chapter 6.

### Infrastructure Consideration

The District is preparing an update to their Water Master Plan and hydraulic system water model to evaluate distribution system needs currently and for future planning. The District has determined the existing Stockton Reservoir requires replacement and is currently in the design phase. In addition, the District determined a need for additional water supply sources to reduce their reliance on imported water. The Moorpark Desalter is a groundwater production and treatment system that would supplement imported water and remove high salinity water from the groundwater basin.

### Other Factors

FCGMA may impose groundwater allocation cutbacks in the future.

## 8.3 Six Standard Water Shortage Stages

As required by CWC §10632(a)(3)(A), the WSCP is framed around six standard shortage levels that correspond to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortages. Each of the six shortage levels represents an increasing gap between the District's estimated core supplies and unconstrained demands as determined in the Annual Assessment. Shortage levels also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other emergency events. Table 8-1 shows the percent shortage range and its associated water shortage condition.

**Submittal Table 8-1: Water Shortage Contingency Plan Levels**

| Shortage Level | Percent Shortage Range | Water Shortage Condition |
|---|---|---|
| Permanent | -- | The District has adopted permanent conservation methods such as water saving devices and prohibited water waste. |
| 1 | Up to 10% | The District will initiate a public information campaign to increase awareness of water conservation measures specified in the District's Rules and Regulations. Customers are expected to perform voluntary water use reductions and adhere to on-going water conservation measures. |
| 2 | Up to 20% | The District will expand the public information campaign and step-up enforcement of water conservation measures specified in the District's Rules and Regulations. It is mandatory for Customers to implement water use |

| | | |
|---|---|---|
| | | reductions and adhere to on-going water conservation measures. |
| 3 | Up to 30% | This stage requires additional mandatory water conservation actions. |
| 4 | Up to 40% | This stage requires additional mandatory water conservation actions, such as water rationing for specific uses. |
| 5 | Up to 50% | This stage requires additional mandatory water conservation actions, such as water rationing for all customers. |
| 6 | >50% | This stage requires additional mandatory water conservation actions, such as increased water rationing for all water customers. |
| NOTES: | | |

## 8.4 Plan Adoption, Submittal, and Availability

The District WSCP was developed and is included as an Appendix H 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 WSCP may be periodically amended independently of the UWMP, as needed.

The District provided notice of availability of the draft 2020 UWMP and 2020 WSCP in accordance with CWC. A public meeting will be held prior to the adoption of the District's WSCP. The public meeting will provide a platform for cities, counties, and members of the public to comment on the WSCP prior to its adoption. Notice of the public hearing was given to cities and counties within which water is supplied and to the general public.

A public hearing is scheduled to be held at the County Government Center Hall of Administration Board of Supervisors Hearing Room 800 S. Victoria Avenue Ventura, California 93009 on June 22, 2021 to receive public comments.

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 2020 UWMP and WSCP for the OH system will be made publicly available on the District's website https://vcpublicworks.org/wsd.

# Chapter 9 Demand Management Measures

The goal of the Demand Management Measures (DMM) section in a UWMP is to provide a comprehensive description of the water conservation programs that the District has implemented, is currently implementing, and plans to implement in order to meet its urban water use reduction targets. Calleguas implements many of the urban water conservation DMMs on behalf of its member agencies, including VCWWD No. 1. Calleguas' 2020 Regional Urban Water Management Plan should be referred to for a detailed discussion of each regional BMP program.

## 9.1 Existing Demand Management Measures for Retail Suppliers

### 9.1.1 Water Waste Prevention Ordinances

The District has passed rules and regulations that prohibit water wasting. Specifically, the District has implemented the following requirements:

**Water Saving Devices**: All new customers shall install and use the following water efficient plumbing fixtures:

a) Ultra-low-volume toilets (1.6 gallons per flush or less).

b) Low-flow shower heads (2.0 gallons per minute or less).

**Water Waste Prohibited**: No person shall use or permit the use of District water as follows:

a) Watering of turf, ornamental landscape, open ground crops and trees, in a manner or to an extent which allows water to run to waste.

b) In any manner such that the escape of water through leaks, breaks, or malfunctions within the water user's plumbing or distribution system occurs for any period of time beyond which such break or leak should reasonably have been discovered and corrected. It shall be presumed that a period of forty-eight hours after the water user discovers such leak, break, or malfunction, or receives notice from the District of such condition, whichever occurs first, is a reasonable time within which to correct such condition.

c) Using water to wash or clean a vehicle, including but not limited to washing automobiles, trucks, trailers, boats, or other types of mobile equipment, without the use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This subsection does not apply to any commercial car washing facility.

d) Operating any ornamental fountain, or similar structures, unless water for such is recycled for lawful reuse without substantial loss.

e) Washing down hard or paved surfaces, including but not limited to washing of sidewalks, walkways, driveways, parking lots or any other hard-surfaced areas by hose or flooding, except

as otherwise necessary to prevent or eliminate conditions dangerous to the public health and safety or for other legitimate uses approved by the District, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, a low-volume high-press cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom.

f) Serving water in eating or drinking establishments, including but not limited to restaurants, hotels, cafés, bars or other public places where food or drinks are sold or served, to customers without first being expressly requested by the customer.

g) For any indiscriminate running of water or washing with water not otherwise prohibited above which is wasteful and without reasonable purpose.

h) Watering of residential, commercial, industrial, and governmental outdoor irrigation from 9:00 a.m. to 4:00 p.m. except for a short duration, not to exceed 3 minutes per station, for the limited purpose of testing or making repairs to the irrigation system. Agricultural customers are exempt from this irrigation schedule but must comply with agricultural irrigation schedules determined by the District (currently a 3 day/week watering schedule is in effect).

i) Running of water or spraying of water onto other properties.

j) Watering or irrigating of lawn, landscape or other vegetated area with potable water using a landscape irrigation system or a watering device that is not continuously attended for more than ten (10) minutes watering per day per station. This rule does not apply during the establishment period, as determined by the District, for new landscaping.

k) For laundry purposes by hotels, motels and other commercial lodging establishments, except where customers are given the option of not having towels and linens laundered daily through the prominent display of written notice of such option in each bathroom using clear and easily understood language.

l) Through the installation of single pass cooling systems in buildings requesting new water service.

m) Through the installation of non-recirculating water systems in new commercial conveyor car wash and new commercial laundry systems.

n) Through the use of non-water conserving dish wash spray valves by food preparation establishments, such as restaurants and cafes.

o) Through a commercial conveyor car wash operating without a re-circulating water system, or without first securing a waiver of this requirement from the Director.

**Irrigation Schedules**: The district may impose irrigation schedules for outdoor use, including agricultural use, to address water conservation and limited water supply.

### 9.1.2 Metering

The District maintains water meters on all residential, commercial, industrial and municipal connections to the District's water distribution system. The District has an aggressive meter replacement program. Meters are re-built on a multi-year cycle to ensure accuracy and proper functioning. The District's water system is fully metered. Therefore, the District completes annual checks on the accuracy and operation of production meters by either recalibrating and reinstalling, or by replacing meters that do not fall within the required operating range of AWWA standards.

### 9.1.3 Conservation Pricing

The District has a tiered rate structure for water service for residential customers within its service area. The tiered rate structure discourages high water use for residential customers.

### 9.1.4 Public Education and Outreach

The County of Ventura's Public Works Agency maintains a website (https://www.vcpublicworks.org/) that provides information regarding indoor and outdoor water conservation tips (e.g., fix leaks, take shorter showers, recycle indoor water for outdoor plant use). Ventura County Public Works Agency also offers a Leak Adjustment Program for customers who experience an indoor water leak or an outdoor irrigation leak.

In addition, Calleguas has made water conservation a priority and as such they have budgeted for Public Outreach and Education Programs annually. This budget also supports their rebate programs. Over the years water saving technologies have advanced in both quality and effectiveness and these advancements have necessitated changes in the way they run rebate programs. Metropolitan and Calleguas continue to try and find the best way to get these devices and rebates to the customers and end users. Calleguas provides the following additional resource links that includes water conservation, rebate programs, water saving incentives and other information sources related to water conservation.

Education: http://www.mwdh2o.com/inthecommunity/education-programs/Pages/default.aspx
Community Partnering Program: http://www.mwdh2o.com/inthecommunity/community-outreach
Water Savings Incentive Program: http://www.bewaterwise.com/water_savings_incentive_program.shtml
Innovative Conservation Program: http://www.bewaterwise.com/icp.shtml
California Native Plant Society: http://www.cnps.org/
Gardening Classes: http://www.bewaterwise.com/Training.shtml

### 9.1.5 Programs to Assess and Manage Distribution System Real Loss

The District is currently using a wide range of operational policies and practices to ensure the efficient use of its water supply. The District conducts monthly monitoring of all water services. In addition, daily inspection of all facilities such as pump stations, wells, reservoirs, valve vaults, etc., is completed. On an annual basis, visual inspection of all easements and pipeline alignments is accomplished.

The District accomplishes water audits and leak detection through various District activities focused on finding and correcting water losses. Field crews visually survey the system as they travel throughout the district service area on a daily basis. The District's telemetry system also enhances the ability to locate

and correct large leaks expeditiously. Leak monitoring is accomplished by all operations field personnel. In the event of a leak, prompt response and investigation are communicated to the District by customers and other entities.

The District works diligently to confirm that the appropriate parties are billed for water loss resulting from damaged fire hydrants, air-vacuums, blow offs, dig-ins, etc. In addition, monthly monitoring of "unaccounted-for" water losses assists in identifying leaks. The AWWA Water Audit Software Version 5.0 was used to quantify distribution water loss for the District for 2020 and a water loss volume of 120 AFY was calculated for the domestic water system, which is 1.3 percent of the water supplied.

The District implements programs on leak detection and repair, metering, meter replacement, system flushing, reservoir cleaning and maintenance, valve maintenance and mapping. The District proposes to review distribution system operational procedures and maintenance practices with appropriate field and administrative staff. These measures will ensure system reliability. The hydrant flushing program will be reviewed for its scope and timing, as well as to determine how much water is lost during flushing.

### 9.1.6 Water Conservation Program Coordination and Staffing Support

The District has designated the Water Superintendent responsible for the position of Water Conservation Coordinator. The District continues to be involved in water conservation programs and coordinates with Calleguas and MWD on an as needed basis.

## 9.2 Water Use Objectives

Water Code Section 10631 requires that Suppliers develop new water use objectives that are based on specific standards for certain water use sectors. These water use objectives will not be developed until 2023.

# Chapter 10 Plan Adoption, Submittal, and Implementation

Plan Adoption, Submittal, and Implementation. Suppliers may use this section to describe and document the steps taken to make its UWMP publicly available, as well as the steps taken to adopt and submit its UWMP in accordance with the Water Code. This chapter can also describe the Supplier's plan to implement the UWMP.

Since 2015, the public processes for completing the UWMP have not been revised. However, the Water Shortage Contingency Plan is now a standalone component of the 2020 UWMP that can be amended separately from the UWMP (see Chapter 8).

## 10.1 Inclusion of all 2020 Data

The 2020 UWMP consists of water use and planning data for FY2020. The District is reporting on a fiscal year basis.

## 10.2 Notice of Public Hearing

A public meeting will be held prior to the adoption of the District's UWMP. The public meeting will provide a platform for cities, counties, and members of the public to comment on the UWMP prior to its adoption. Notice of the public hearing was given to cities and counties within which water is supplied and to the general public. Copies of all public notices will be included in Appendix A.

### 10.2.1 Notification to Cities and Counties

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.

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

| City Name | 60 Day Notice | Notice of Public Hearing |
|---|---|---|
| *Add additional rows as needed* | | |
| City of Moorpark | Yes | Yes |
| **County Name** *Drop Down List* | **60 Day Notice** | **Notice of Public Hearing** |
| *Add additional rows as needed* | | |
| Ventura County | Yes | Yes |

### 10.2.2 Notice to the Public

Prior to holding the public hearing and adoption meeting for this UWMP, two Notices of Public Hearing will be published in a local newspaper, with at least five intervening days between each notice. Copies of the public notices will be included in Appendix B.

## 10.3 Public Hearing and Adoption

As part of the public hearing, the District will provide information on their baseline values, water use targets, and implementation plan required in the Water Conservation Act of 2009. The public hearing on the UWMP will take place before the adoption of the UWMP, which will allow the District the opportunity to modify the UWMP in response to public input before adoption. A public hearing and board adoption is scheduled to be held at County Government Center Hall of Administration Board of Supervisors Hearing Room 800 S. Victoria Avenue Ventura, California 93009 on June 22, 2021 to receive public comments. The District will formally adopt the UWMP before submitting the UWMP to DWR. A copy of the District's adoption resolution is included in Appendix C.

## 10.4 Plan Submittal

The District's 2020 UWMPs will be submitted to DWR within 30 days of adoption and by July 1, 2021. UWMP submittal will be done electronically through the WUE Data Portal, an online submittal tool that will be updated for 2020 UWMPs and available in adequate time for UWMP submittal.

After the UWMP has been submitted, DWR will review the plan using the provided checklist (Appendix K) and determine whether or not 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.

## 10.5 Public Availability

Not later than 30 days after filing a copy of its plan with the department, the District shall make the plan available for public review during normal business hours.

## 10.6 Amending an Adopted UWMP

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

# Appendix A – Notification Letter

| | |
|---|---|
| **From:** | Lippincott, Ryan |
| **To:** | Prillhart, Kim |
| **Cc:** | Harrison, Sandy; Glaeser, Autumn |
| **Subject:** | 2020 UWMP and WSCP - VCWWD No. 1 |
| **Date:** | Friday, February 12, 2021 2:12:37 PM |
| **Attachments:** | image001.png<br>image002.png<br>K.Prillhart_Outreach_Letter_VCWWD_PWA_2021.2.12.pdf |

---

Good Afternoon Kim,

VCWWD No.1 is updating its Urban Water Management and Water Shortage Contingency plans. The notice is enclosed for your reference.

Please contact me if you have questions on the matter.

Regards,

Ryan Lippincott
*Engineering Manager*
**Water and Sanitation**

6767 Spring Road / P.O. Box 250
Moorpark, CA 93020
P: 805.378.3018 | C: 805.765.5777
VCPWA Online | Facebook | Twitter

| | |
|---|---|
| **From:** | Lippincott, Ryan |
| **To:** | Pratt, Jeff |
| **Cc:** | Harrison, Sandy; Glaeser, Autumn |
| **Subject:** | 2020 UWMP and WSCP - VCWWD No. 1 |
| **Date:** | Friday, February 12, 2021 2:10:11 PM |
| **Attachments:** | image001.png<br>image002.png<br>J.Pratt_Outreach_Letter_VCWWD_PWA_2021.2.12.pdf |

---

Good Afternoon Jeff,

VCWWD No.1 is updating its Urban Water Management and Water Shortage Contingency plans. The notice is enclosed for your reference.

Please contact me if you have questions on the matter.

Regards,

Ryan Lippincott
*Engineering Manager*
**Water and Sanitation**

6767 Spring Road / P.O. Box 250
Moorpark, CA 93020
P: 805.378.3018 | C: 805.765.5777
VCPWA Online | Facebook | Twitter

| | |
|---|---|
| **From:** | Lippincott, Ryan |
| **To:** | Daniel Kim |
| **Cc:** | Harrison, Sandy; Glaeser, Autumn |
| **Subject:** | 2020 UWMP and WSCP - VCWWD No. 1 |
| **Date:** | Friday, February 12, 2021 2:07:57 PM |
| **Attachments:** | image001.png<br>image003.png<br>D.Kim_Outreach_Letter_VCWWD_PWA_2021.2.12.pdf |

---

Good Afternoon Dan,

VCWWD No.1 is updating its Urban Water Management and Water Shortage Contingency plans. The notice is enclosed for your reference.

Please contact me if you have questions on the matter.

Regards,

Ryan Lippincott
*Engineering Manager*
**Water and Sanitation**

6767 Spring Road / P.O. Box 250
Moorpark, CA 93020
P: 805.378.3018 | C: 805.765.5777
VCPWA Online | Facebook | Twitter

| | |
|---|---|
| **From:** | Lippincott, Ryan |
| **To:** | Goff, Tony |
| **Cc:** | Harrison, Sandy; Glaeser, Autumn |
| **Subject:** | 2020 UWMP and WSCP - VCWWD No. 1 |
| **Date:** | Friday, February 12, 2021 2:04:52 PM |
| **Attachments:** | image001.png<br>image003.png<br>A.Goff_Outreach_Letter_VCWWD_PWA_2021.2.12.pdf |

---

Good Afternoon Tony,

VCWWD No.1 is updating its Urban Water Management and Water Shortage Contingency plans. The notice is enclosed for your reference.

Please contact me if you have questions on the matter.

Regards,

Ryan Lippincott
*Engineering Manager*
**Water and Sanitation**

6767 Spring Road / P.O. Box 250
Moorpark, CA 93020
P: 805.378.3018 | C: 805.765.5777
VCPWA Online | Facebook | Twitter

| | |
|---|---|
| **From:** | Lippincott, Ryan |
| **To:** | kvaughn@moorparkca.gov |
| **Cc:** | Harrison, Sandy; Glaeser, Autumn |
| **Subject:** | 2020 UWMP and WSCP - VCWWD No. 1 |
| **Date:** | Friday, February 12, 2021 2:14:24 PM |
| **Attachments:** | image001.png<br>image003.png<br>K.Vaughn_Outreach_Letter_VCWWD_PWA_2021.2.12.pdf |

---

Good Afternoon Karen,

VCWWD No.1 is updating its Urban Water Management and Water Shortage Contingency plans. The notice is enclosed for your reference.

Please contact me if you have questions on the matter.

Regards,

Ryan Lippincott
*Engineering Manager*
**Water and Sanitation**

6767 Spring Road / P.O. Box 250
Moorpark, CA 93020
P: 805.378.3018 | C: 805.765.5777
VCPWA Online | Facebook | Twitter

# Appendix B – Public Notice

# Appendix C – Adoption Resolution

# Appendix D – Population Tool Worksheet

# WUEdata - Ventura County Waterworks District No 01 - Moorpark

Sign Out

*Please print this page to a PDF and include as part of your UWMP submittal.*

## Confirmation Information

| Generated By | Water Supplier Name | Confirmation # | Generated On |
|---|---|---|---|
| Kevin Hernandez | Ventura County Waterworks District No 01 - Moorpark | 6529935538 | 2/4/2021 10:40:36 AM |

## Boundary Information

| Census Year | Boundary Filename | Internal Boundary ID |
|---|---|---|
| 1990 | ww01_sp.kml | 1029 |
| 2000 | ww01_sp.kml | 1029 |
| 2010 | ww01_sp.kml | 1029 |
| 1990 | ww01_sp.kml | 1029 |
| 2000 | ww01_sp.kml | 1029 |
| 2010 | ww01_sp.kml | 1029 |

## Baseline Period Ranges

### 10 to 15-year baseline period

Number of years in baseline period: 10

Year beginning baseline period range: 2000

Year ending baseline period range[1]: 2009

### 5-year baseline period

Year beginning baseline period range: 2004

Year ending baseline period range[2]: 2008

[1] The ending year must be between December 31, 2004 and December 31, 2010.

[2] The ending year must be between December 31, 2007 and December 31, 2010.

## Persons-Per-SF Connection and Persons-Per-MF/GQ Connection

| | Census Block Group Level | Census Block Level | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Year | % Population in SF Housing | Service Area Population | Population in SF Housing (calculated) | Population in MF/GQ Housing (calculated) | # SF Connections | # MF/GQ Connections | Persons per SF Connection | Persons per MF/GQ Connection |
| 1990 | 86.08% | 25,626 | 22,060 | 3,566 | 7035 | 91 | 3.14 | 39.19 |
| 1991 | - | - | - | - | - | - | 3.17 | 39.14 |
| 1992 | - | - | - | - | - | - | 3.20 | 39.09 |
| 1993 | - | - | - | - | - | - | 3.22 | 39.03 |
| 1994 | - | - | - | - | - | - | 3.25 | 38.98 |
| 1995 | - | - | - | - | - | - | 3.28 | 38.93 |
| 1996 | - | - | - | - | - | - | 3.31 | 38.88 |
| 1997 | - | - | - | - | - | - | 3.34 | 38.83 |
| 1998 | - | - | - | - | - | - | 3.36 | 38.77 |
| 1999 | - | - | - | - | - | - | 3.39 | 38.72 |
| 2000 | 87.28% | 31,913 | 27,853 | 4,060 | 8140 | 105 | 3.42 | 38.67 |
| 2001 | - | - | - | - | - | - | 3.39 | 38.88 |
| 2002 | - | - | - | - | - | - | 3.37 | 39.08 |
| 2003 | - | - | - | - | - | - | 3.34 | 39.29 |
| 2004 | - | - | - | - | - | - | 3.32 | 39.50 |
| 2005 | - | - | - | - | - | - | 3.29 | 39.70 |
| 2006 | - | - | - | - | - | - | 3.26 | 39.91 |
| 2007 | - | - | - | - | - | - | 3.24 | 40.12 |
| 2008 | - | - | - | - | - | - | 3.21 | 40.33 |
| 2009 | - | - | - | - | - | - | 3.19 | 40.53 |
| 2010 | 85.59% | 35,351 | 30,258 | 5,093 | 9572 | 125 | 3.16 | 40.74 |
| 2011 | - | - | - | - | - | - | 3.13 | 40.95 |
| 2012 | - | - | - | - | - | - | 3.11 | 41.16 |
| 2013 | - | - | - | - | - | - | 3.08 | 41.36 |
| 2014 | - | - | - | - | - | - | 3.06 | 41.57 |
| 2015 | - | - | - | - | - | - | 3.03 | 41.78 |
| 2020 | - | - | - | - | - | - | 2.90 * | 42.82 * |

## Population Using Persons-Per-SF Connection and Persons-Per-MF/GQ Connection

| Year | | # SF Connections | # MF/GQ Connections | Persons per SF Connection | Persons per MF/GQ Connection | SF Population | MF/GQ Population | Total Population |
|---|---|---|---|---|---|---|---|---|
| **10 to 15 Year Baseline Population Calculations** | | | | | | | | |
| Year 1 | 2000 | 8140 | 105 | 3.42 | 38.67 | 27,853 | 4,060 | 31,913 |
| Year 2 | 2001 | 8283 | 107 | 3.39 | 38.88 | 28,113 | 4,160 | 32,272 |
| Year 3 | 2002 | 8426 | 109 | 3.37 | 39.08 | 28,379 | 4,260 | 32,639 |
| Year 4 | 2003 | 8570 | 111 | 3.34 | 39.29 | 28,641 | 4,361 | 33,002 |
| Year 5 | 2004 | 8713 | 113 | 3.32 | 39.50 | 28,892 | 4,463 | 33,356 |
| Year 6 | 2005 | 8856 | 115 | 3.29 | 39.70 | 29,136 | 4,566 | 33,702 |
| Year 7 | 2006 | 8999 | 117 | 3.26 | 39.91 | 29,373 | 4,670 | 34,042 |
| Year 8 | 2007 | 9142 | 119 | 3.24 | 40.12 | 29,602 | 4,774 | 34,376 |
| Year 9 | 2008 | 9286 | 121 | 3.21 | 40.33 | 29,827 | 4,879 | 34,706 |
| Year 10 | 2009 | 9429 | 123 | 3.19 | 40.53 | 30,041 | 4,986 | 35,026 |
| **5 Year Baseline Population Calculations** | | | | | | | | |
| Year 1 | 2004 | 8713 | 113 | 3.32 | 39.50 | 28,892 | 4,463 | 33,356 |
| Year 2 | 2005 | 8856 | 115 | 3.29 | 39.70 | 29,136 | 4,566 | 33,702 |
| Year 3 | 2006 | 8999 | 117 | 3.26 | 39.91 | 29,373 | 4,670 | 34,042 |
| Year 4 | 2007 | 9142 | 119 | 3.24 | 40.12 | 29,602 | 4,774 | 34,376 |
| Year 5 | 2008 | 9286 | 121 | 3.21 | 40.33 | 29,827 | 4,879 | 34,706 |
| **2020 Compliance Year Population Calculations** | | | | | | | | |
| 2020 | | 10255 | 160 | 2.90 * | 42.82 * | 29,773 | 6,852 | 36,625 |

Hide Print Confirmation

QUESTIONS / ISSUES? CONTACT THE WUEDATA HELP DESK

# Appendix E – AWWA System Losses Worksheet

# AWWA Free Water Audit Software:
## Reporting Worksheet

WAS v5.0



? Click to access definition
+ Click to add a comment

**Water Audit Report for:** Ventura County Waterworks District 1
**Reporting Year:** 2016 | 1/2016 - 12/2016

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 utility meets or exceeds all criteria for that grade and all grades below it.

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

Master Meter and Supply Error Adjustments

### WATER SUPPLIED

| | Grading | Volume | | Grading | Pcnt: | Value: | |
|---|---|---|---|---|---|---|---|
| Volume from own sources: | 6 | 1,791.100 | acre-ft/yr | 3 | | | acre-ft/yr |
| Water imported: | 7 | 6,983.700 | acre-ft/yr | 9 | | | acre-ft/yr |
| Water exported: | n/a | 0.000 | acre-ft/yr | | | | acre-ft/yr |
| **WATER SUPPLIED:** | | **8,774.800** | 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

| | Grading | Volume | | Pcnt: | Value: | |
|---|---|---|---|---|---|---|
| Billed metered: | 5 | 8,339.070 | acre-ft/yr | | | |
| Billed unmetered: | 10 | 3.230 | acre-ft/yr | | | |
| Unbilled metered: | 9 | 28.710 | acre-ft/yr | | | |
| Unbilled unmetered: | 7 | 0.606 | acre-ft/yr | | 0.606 | acre-ft/yr |
| **AUTHORIZED CONSUMPTION:** | | **8,371.616** | acre-ft/yr | | | |

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

### WATER LOSSES (Water Supplied - Authorized Consumption)

**403.184** acre-ft/yr

#### Apparent Losses

| | Grading | Volume | | Pcnt: | Value: | |
|---|---|---|---|---|---|---|
| Unauthorized consumption: | 3 | 5.000 | acre-ft/yr | | 5.000 | acre-ft/yr |
| Customer metering inaccuracies: | 4 | 84.523 | acre-ft/yr | 1.00% | | acre-ft/yr |
| Systematic data handling errors: | 9 | 10.000 | acre-ft/yr | | 10.000 | acre-ft/yr |
| **Apparent Losses:** | | **99.523** | acre-ft/yr | | | |

#### Real Losses (Current Annual Real Losses or CARL)

**Real Losses = Water Losses - Apparent Losses:** **303.661** acre-ft/yr

**WATER LOSSES:** **403.184** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER:** **432.500** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

| | Grading | | |
|---|---|---|---|
| Length of mains: | 5 | 168.0 | miles |
| Number of active AND inactive service connections: | 9 | 10,876 | |
| Service connection density: | | 65 | 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**

| | Grading | | |
|---|---|---|---|
| Average operating pressure: | 5 | 83.0 | psi |

### COST DATA

| | Grading | | |
|---|---|---|---|
| Total annual cost of operating water system: | 10 | $18,398,000 | $/Year |
| Customer retail unit cost (applied to Apparent Losses): | 9 | $3.06 | $/100 cubic feet (ccf) |
| Variable production cost (applied to Real Losses): | 5 | $1,210.00 | $/acre-ft |

☐ Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 70 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: Billed metered
3: Customer metering inaccuracies

# AWWA Free Water Audit Software:
## Reporting Worksheet

WAS v5.0



? Click to access definition
+ Click to add a comment

**Water Audit Report for:** Ventura County Waterworks District 1
**Reporting Year:** 2017 1/2017 - 12/2017

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 utility meets or exceeds all criteria for that grade and all grades below it.

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

Master Meter and Supply Error Adjustments

### WATER SUPPLIED

| | | | Pcnt: | Value: | |
|---|---|---|---|---|---|
| Volume from own sources: | 7 | 1,753.500 acre-ft/yr | 3 | | acre-ft/yr |
| Water imported: | 7 | 7,947.400 acre-ft/yr | 9 | | acre-ft/yr |
| Water exported: | n/a | 0.000 acre-ft/yr | | | acre-ft/yr |

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

**WATER SUPPLIED:** 9,700.900 acre-ft/yr

### AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

| | | | Pcnt: | Value: | |
|---|---|---|---|---|---|
| Billed metered: | 5 | 8,995.038 acre-ft/yr | | | |
| Billed unmetered: | 10 | 2.085 acre-ft/yr | | | |
| Unbilled metered: | 9 | 13.315 acre-ft/yr | | | |
| Unbilled unmetered: | 7 | 20.000 acre-ft/yr | | 20.000 | acre-ft/yr |

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

**AUTHORIZED CONSUMPTION:** ? 9,030.438 acre-ft/yr

**WATER LOSSES (Water Supplied - Authorized Consumption)** 670.462 acre-ft/yr

**Apparent Losses**

| | | | Pcnt: | Value: | |
|---|---|---|---|---|---|
| Unauthorized consumption: | 3 | 5.000 acre-ft/yr | | 5.000 | acre-ft/yr |
| Customer metering inaccuracies: | 3 | 90.993 acre-ft/yr | 1.00% | | acre-ft/yr |
| Systematic data handling errors: | 9 | 10.000 acre-ft/yr | | 10.000 | acre-ft/yr |

**Apparent Losses:** ? 105.993 acre-ft/yr

**Real Losses (Current Annual Real Losses or CARL)**

**Real Losses = Water Losses - Apparent Losses:** ? 564.469 acre-ft/yr

**WATER LOSSES:** 670.462 acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER:** ? 703.777 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

| | | | |
|---|---|---|---|
| Length of mains: | 6 | 168.0 | miles |
| Number of active AND inactive service connections: | 9 | 10,921 | |
| Service connection density: | | 65 | 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: 5 83.0 psi

### COST DATA

| | | | |
|---|---|---|---|
| Total annual cost of operating water system: | 10 | $18,840,000 | $/Year |
| Customer retail unit cost (applied to Apparent Losses): | 9 | $3.23 | $/100 cubic feet (ccf) |
| Variable production cost (applied to Real Losses): | 5 | $1,302.00 | $/acre-ft |

☐ Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 70 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: Billed metered

# AWWA Free Water Audit Software:
## Reporting Worksheet

WAS v5.0



? Click to access definition
+ Click to add a comment

**Water Audit Report for:** Ventura County Waterworks District 1
**Reporting Year:** 2018 1/2018 - 12/2018

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 utility meets or exceeds all criteria for that grade and all grades below it.

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

Master Meter and Supply Error Adjustments

### WATER SUPPLIED

| | | | | Pcnt: | Value: | |
|---|---|---|---|---|---|---|
| Volume from own sources: | 9 | 1,755.700 | acre-ft/yr | 3 | | acre-ft/yr |
| Water imported: | 5 | 7,507.200 | acre-ft/yr | 9 | | acre-ft/yr |
| Water exported: | n/a | 0.000 | acre-ft/yr | | | acre-ft/yr |
| **WATER SUPPLIED:** | | **9,262.900** | 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: | 5 | 9,168.700 | acre-ft/yr | | | |
| Billed unmetered: | n/a | 0.000 | acre-ft/yr | | | |
| Unbilled metered: | 9 | 19.070 | acre-ft/yr | | | |
| Unbilled unmetered: | 7 | 5.000 | acre-ft/yr | | 5.000 | acre-ft/yr |
| **AUTHORIZED CONSUMPTION:** | | **9,192.770** | acre-ft/yr | | | |

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

### WATER LOSSES (Water Supplied - Authorized Consumption)

**70.130** acre-ft/yr

#### Apparent Losses

| | | | | Pcnt: | Value: | |
|---|---|---|---|---|---|---|
| Unauthorized consumption: | 3 | 1.000 | acre-ft/yr | | 1.000 | acre-ft/yr |
| Customer metering inaccuracies: | 3 | 92.806 | acre-ft/yr | 1.00% | | acre-ft/yr |
| Systematic data handling errors: | 9 | 2.000 | acre-ft/yr | | 2.000 | acre-ft/yr |
| **Apparent Losses:** | | **95.806** | acre-ft/yr | | | |

Check input values; APPARENT LOSSES should be less than WATER LOSSES

#### Real Losses (Current Annual Real Losses or CARL)

**Real Losses = Water Losses - Apparent Losses:** **-25.676** acre-ft/yr

**WATER LOSSES:** **70.130** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER:** **94.200** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

| | | | |
|---|---|---|---|
| Length of mains: | 9 | 177.0 | miles |
| Number of active AND inactive service connections: | 9 | 10,941 | |
| Service connection density: | | 62 | 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: 5 83.0 psi

### COST DATA

| | | | |
|---|---|---|---|
| Total annual cost of operating water system: | 10 | $19,597,000 | $/Year |
| Customer retail unit cost (applied to Apparent Losses): | 9 | $3.47 | $/100 cubic feet (ccf) |
| Variable production cost (applied to Real Losses): | 5 | $1,356.00 | $/acre-ft |

☐ Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 64 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: Billed metered

# AWWA Free Water Audit Software:
## Reporting Worksheet

WAS v5.0



? Click to access definition
+ Click to add a comment

**Water Audit Report for:** Ventura County Waterworks District 1
**Reporting Year:** 2019 7/2018 - 6/2019

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 utility meets or exceeds all criteria for that grade and all grades below it.

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

Master Meter and Supply Error Adjustments

### WATER SUPPLIED

| | | | | Pcnt: | Value: | |
|---|---|---|---|---|---|---|
| Volume from own sources: | 5 | 1,544.430 | acre-ft/yr | 3 | | acre-ft/yr |
| Water imported: | 5 | 6,905.500 | acre-ft/yr | 9 | | acre-ft/yr |
| Water exported: | n/a | 0.000 | acre-ft/yr | | | acre-ft/yr |
| **WATER SUPPLIED:** | | **8,449.930** | 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: | 7 | 8,419.560 | acre-ft/yr | | | |
| Billed unmetered: | n/a | 0.000 | acre-ft/yr | | | |
| Unbilled metered: | 9 | 18.560 | acre-ft/yr | | | |
| Unbilled unmetered: | 9 | 5.000 | acre-ft/yr | | 5.000 | acre-ft/yr |
| **AUTHORIZED CONSUMPTION:** | | **8,443.120** | acre-ft/yr | | | |

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

### WATER LOSSES (Water Supplied - Authorized Consumption)

**6.810** acre-ft/yr

#### Apparent Losses

| | | | | Pcnt: | Value: | |
|---|---|---|---|---|---|---|
| Unauthorized consumption: | | 21.125 | acre-ft/yr | 0.25% | | acre-ft/yr |

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Customer metering inaccuracies: | 3 | 85.234 | acre-ft/yr | 1.00% | | acre-ft/yr |
| Systematic data handling errors: | 9 | 2.000 | acre-ft/yr | | 2.000 | acre-ft/yr |
| **Apparent Losses:** | | **108.358** | acre-ft/yr | | | |

Check input values; APPARENT LOSSES should be less than WATER LOSSES

#### Real Losses (Current Annual Real Losses or CARL)

**Real Losses = Water Losses - Apparent Losses:** **-101.548** acre-ft/yr

**WATER LOSSES:** **6.810** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER:** **30.370** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

| | | | |
|---|---|---|---|
| Length of mains: | 9 | 174.0 | miles |
| Number of active AND inactive service connections: | 9 | 10,901 | |
| Service connection density: | | 63 | 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: | 5 | 83.0 | psi |

### COST DATA

| | | | | |
|---|---|---|---|---|
| Total annual cost of operating water system: | 10 | $17,386,550 | $/Year | |
| Customer retail unit cost (applied to Apparent Losses): | 9 | $3.61 | $/100 cubic feet (ccf) | |
| Variable production cost (applied to Real Losses): | 5 | $1,346.00 | $/acre-ft | ☐ Use Customer Retail Unit Cost to value real losses |

### WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 65 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: Variable production cost (applied to Real Losses)

# AWWA Free Water Audit Software:
## Reporting Worksheet

WAS v5.0



? Click to access definition
+ Click to add a comment

**Water Audit Report for:** Ventura County Waterworks District 1
**Reporting Year:** 2019 (7/2019 - 6/2020)

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 utility meets or exceeds all criteria for that grade and all grades below it.

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

Master Meter and Supply Error Adjustments

### WATER SUPPLIED

| | Grading | Volume | | Grading | Pcnt: | Value: | |
|---|---|---|---|---|---|---|---|
| Volume from own sources: | 7 | 1,965.770 | acre-ft/yr | 3 | | | acre-ft/yr |
| Water imported: | 7 | 7,112.350 | acre-ft/yr | 9 | | | acre-ft/yr |
| Water exported: | n/a | 0.000 | acre-ft/yr | | | | acre-ft/yr |
| **WATER SUPPLIED:** | | **9,078.120** | 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

| | Grading | Volume | | Pcnt: | Value: | |
|---|---|---|---|---|---|---|
| Billed metered: | 7 | 8,939.770 | acre-ft/yr | | | |
| Billed unmetered: | n/a | 0.000 | acre-ft/yr | | | |
| Unbilled metered: | 9 | 13.170 | acre-ft/yr | | | |
| Unbilled unmetered: | 9 | 5.000 | acre-ft/yr | | 5.000 | acre-ft/yr |
| **AUTHORIZED CONSUMPTION:** | | **8,957.940** | acre-ft/yr | | | |

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

### WATER LOSSES (Water Supplied - Authorized Consumption)

**120.180** acre-ft/yr

#### Apparent Losses

| | Grading | Volume | | Pcnt: | Value: | |
|---|---|---|---|---|---|---|
| Unauthorized consumption: | | 22.695 | acre-ft/yr | 0.25% | | acre-ft/yr |

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

| | | | | | | |
|---|---|---|---|---|---|---|
| Customer metering inaccuracies: | 3 | 90.434 | acre-ft/yr | 1.00% | | acre-ft/yr |
| Systematic data handling errors: | 9 | 2.000 | acre-ft/yr | | 2.000 | acre-ft/yr |
| **Apparent Losses:** | | **115.129** | acre-ft/yr | | | |

#### Real Losses (Current Annual Real Losses or CARL)

**Real Losses = Water Losses - Apparent Losses:** **5.051** acre-ft/yr

**WATER LOSSES:** **120.180** acre-ft/yr

### NON-REVENUE WATER

**NON-REVENUE WATER:** **138.350** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

| | Grading | Value | |
|---|---|---|---|
| Length of mains: | 9 | 174.0 | miles |
| Number of active AND inactive service connections: | 9 | 10,901 | |
| Service connection density: | | 63 | 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**

| | Grading | Value | |
|---|---|---|---|
| Average operating pressure: | 5 | 83.0 | psi |

### COST DATA

| | Grading | Value | |
|---|---|---|---|
| Total annual cost of operating water system: | 10 | $19,750,732 | $/Year |
| Customer retail unit cost (applied to Apparent Losses): | 9 | $3.77 | $/100 cubic feet (ccf) |
| Variable production cost (applied to Real Losses): | 5 | $1,326.00 | $/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: Variable production cost (applied to Real Losses)

# Appendix F – SBx7-7 Verification Form

| **SB X7-7 Table 0: Units of Measure Used in UWMP*** *(select one from the drop down list)* |
| --- |
| Acre Feet |
| **The unit of measure must be consistent with Submittal Table 2-3* |
| NOTES: |

| SB X7-7 Table-1: Baseline Period Ranges | | | |
|---|---|---|---|
| **Baseline** | **Parameter** | **Value** | **Units** |
| **10- to 15-year baseline period** | 2008 total water deliveries | 13,876 | Acre Feet |
| | 2008 total volume of delivered recycled water | 469 | Acre Feet |
| | 2008 recycled water as a percent of total deliveries | 3% | **See Note 1** |
| | Number of years in baseline period[1, 2] | 10 | Years |
| | Year beginning baseline period range | 2000 | |
| | Year ending baseline period range[3] | 2009 | |
| **5-year baseline period** | Number of years in baseline period | 5 | Years |
| | Year beginning baseline period range | 2004 | |
| | Year ending baseline period range[4] | 2008 | |

[1] *If the 2008 recycled water delivery is less than 10 percent of total water deliveries, then the 10-15year baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater of total deliveries, the 10-15 year baseline period is a continuous 10- to 15-year period.*

[2] *The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.*

[3] *The ending year for the 10-15 year baseline period must be between December 31, 2004 and December 31, 2010.*

[4] *The ending year for the 5 year baseline period must be between December 31, 2007 and December 31, 2010.*

NOTES:

| SB X7-7 Table 2: Method for Population Estimates | |
|---|---|
| **Method Used to Determine Population** (may check more than one) | |
| ☐ | **1. Department of Finance** (DOF) or **American Community Survey** (ACS) |
| ☐ | **2. Persons-per-Connection Method** |
| ☑ | **3. DWR Population Tool** |
| ☐ | **4. Other**<br>DWR recommends pre-review |
| NOTES: | |

| SB X7-7 Table 3: Service Area Population | | |
|---|---|---|
| Year | | Population |
| 10 to 15 Year Baseline Population | | |
| Year 1 | 2000 | 31,913 |
| Year 2 | 2001 | 32,272 |
| Year 3 | 2002 | 32,639 |
| Year 4 | 2003 | 33,002 |
| Year 5 | 2004 | 33,356 |
| Year 6 | 2005 | 33,702 |
| Year 7 | 2006 | 34,042 |
| Year 8 | 2007 | 34,376 |
| Year 9 | 2008 | 34,706 |
| Year 10 | 2009 | 35,026 |
| *Year 11* | | |
| *Year 12* | | |
| *Year 13* | | |
| *Year 14* | | |
| *Year 15* | | |
| 5 Year Baseline Population | | |
| Year 1 | 2004 | 33,356 |
| Year 2 | 2005 | 33,702 |
| Year 3 | 2006 | 34,042 |
| Year 4 | 2007 | 34,376 |
| Year 5 | 2008 | 34,706 |
| NOTES: | | |

**SB X7-7 Table 4: Annual Gross Water Use ***

| Baseline Year *Fm SB X7-7 Table 3* | | Volume Into Distribution System *This column will remain blank until SB X7-7 Table 4-A is completed.* | Deductions | | | | | Acre Feet |
|---|---|---|---|---|---|---|---|---|
| | | | Exported Water | Change in Dist. System Storage (+/-) | Indirect Recycled Water *This column will remain blank until SB X7-7 Table 4-B is completed.* | Water Delivered for Agricultural Use | Process Water *This column will remain blank until SB X7-7 Table 4-D is completed.* | Annual Gross Water Use |
| 10 to 15 Year Baseline - Gross Water Use | | | | | | | | |
| Year 1 | 2000 | 11,576 | | | - | 3,249 | - | 8,327 |
| Year 2 | 2001 | 10,891 | | | - | 2,890 | - | 8,001 |
| Year 3 | 2002 | 12,538 | | | - | 3,669 | - | 8,869 |
| Year 4 | 2003 | 11,678 | | | - | 2,922 | - | 8,756 |
| Year 5 | 2004 | 13,639 | | | - | 3,709 | - | 9,930 |
| Year 6 | 2005 | 11,873 | | | - | 2,615 | - | 9,258 |
| Year 7 | 2006 | 11,469 | | | - | 2,614 | - | 8,855 |
| Year 8 | 2007 | 12,628 | | | - | 3,464 | - | 9,164 |
| Year 9 | 2008 | 13,407 | | | - | 2,869 | - | 10,538 |
| Year 10 | 2009 | 12,617 | | | - | 3,040 | - | 9,577 |
| *Year 11* | 0 | - | | | - | | - | - |
| *Year 12* | 0 | - | | | - | | - | - |
| *Year 13* | 0 | - | | | - | | - | - |
| *Year 14* | 0 | - | | | - | | - | - |
| *Year 15* | 0 | - | | | - | | - | - |
| **10 - 15 year baseline average gross water use** | | | | | | | | **9,128** |
| 5 Year Baseline - Gross Water Use | | | | | | | | |
| Year 1 | 2004 | 13,639 | | | - | 3,709 | - | 9,930 |
| Year 2 | 2005 | 11,873 | | | - | 2,615 | - | 9,258 |
| Year 3 | 2006 | 11,469 | | | - | 2,614 | - | 8,855 |
| Year 4 | 2007 | 12,628 | | | - | 3,464 | - | 9,164 |
| Year 5 | 2008 | 13,407 | | | - | 2,869 | - | 10,538 |
| **5 year baseline average gross water use** | | | | | | | | **9,549** |

*** Units of measure** (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.

NOTES:

**SB X7-7 Table 4-A: Volume Entering the Distribution System(s)**
Complete one table for each source.

| Name of Source | Source 1 |
|---|---|
| This water source is: | |
| ☐ | The supplier's own water source |
| ☑ | A purchased or imported source |

| Baseline Year *Fm SB X7-7 Table 3* | | Volume Entering Distribution System[1] | Meter Error Adjustment[2] *Optional (+/-)* | Corrected Volume Entering Distribution System |
|---|---|---|---|---|
| **10 to 15 Year Baseline - Water into Distribution System** | | | | |
| Year 1 | 2000 | 9,261 | | 9,261 |
| Year 2 | 2001 | 10,074 | | 10,074 |
| Year 3 | 2002 | 10,969 | | 10,969 |
| Year 4 | 2003 | 10,347 | | 10,347 |
| Year 5 | 2004 | 13,545 | | 13,545 |
| Year 6 | 2005 | 11,624 | | 11,624 |
| Year 7 | 2006 | 11,310 | | 11,310 |
| Year 8 | 2007 | 12,214 | | 12,214 |
| Year 9 | 2008 | 11,914 | | 11,914 |
| Year 10 | 2009 | 10,534 | | 10,534 |
| *Year 11* | 0 | | | - |
| *Year 12* | 0 | | | - |
| *Year 13* | 0 | | | - |
| *Year 14* | 0 | | | - |
| *Year 15* | 0 | | | - |
| **5 Year Baseline - Water into Distribution System** | | | | |
| Year 1 | 2004 | 13,545 | | 13,545 |
| Year 2 | 2005 | 11,624 | | 11,624 |
| Year 3 | 2006 | 11,310 | | 11,310 |
| Year 4 | 2007 | 12,214 | | 12,214 |
| Year 5 | 2008 | 11,914 | | 11,914 |

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

**SB X7-7 Table 4-A: Volume Entering the Distribution System(s)**
Complete one table for each source.

| Name of Source | Source 2 |
|---|---|
| This water source is: | |
| ☑ | The supplier's own water source |
| ☐ | A purchased or imported source |

| Baseline Year *Fm SB X7-7 Table 3* | | Volume Entering Distribution System [1] | Meter Error Adjustment [2] *Optional (+/-)* | Corrected Volume Entering Distribution System |
|---|---|---|---|---|
| **10 to 15 Year Baseline - Water into Distribution System** | | | | |
| Year 1 | 2000 | 2315 | | 2,315 |
| Year 2 | 2001 | 817 | | 817 |
| Year 3 | 2002 | 1569 | | 1,569 |
| Year 4 | 2003 | 1331 | | 1,331 |
| Year 5 | 2004 | 94 | | 94 |
| Year 6 | 2005 | 249 | | 249 |
| Year 7 | 2006 | 159 | | 159 |
| Year 8 | 2007 | 414 | | 414 |
| Year 9 | 2008 | 1493 | | 1,493 |
| Year 10 | 2009 | 2083 | | 2,083 |
| Year 11 | 0 | | | 0 |
| Year 12 | 0 | | | 0 |
| Year 13 | 0 | | | 0 |
| Year 14 | 0 | | | 0 |
| Year 15 | 0 | | | 0 |
| **5 Year Baseline - Water into Distribution System** | | | | |
| Year 1 | 2004 | 94 | | 94 |
| Year 2 | 2005 | 249 | | 249 |
| Year 3 | 2006 | 159 | | 159 |
| Year 4 | 2007 | 414 | | 414 |
| Year 5 | 2008 | 1493 | | 1,493 |

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

**SB X7-7 Table 4-B: Indirect Recycled Water Use Deduction** *(For use only by agencies that are deducting indirect recycled water)*

| **Baseline Year** *Fm SB X7-7 Table 3* | | Surface Reservoir Augmentation | | | | | Groundwater Recharge | | | **Total Deductible Volume of Indirect Recycled Water Entering the Distribution System** |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Volume Discharged from Reservoir for Distribution System Delivery [1] | Percent Recycled Water | Recycled Water Delivered to Treatment Plant | Transmission/ Treatment Loss [1] | Recycled Volume Entering Distribution System from Surface Reservoir Augmentation | Recycled Water Pumped by Utility [1, 2] | Transmission/ Treatment Losses [1] | Recycled Volume Entering Distribution System from Groundwater Recharge | |
| 10-15 Year Baseline - Indirect Recycled Water Use | | | | | | | | | | |
| Year 1 | 2000 | | | - | | - | | | - | - |
| Year 2 | 2001 | | | - | | - | | | - | - |
| Year 3 | 2002 | | | - | | - | | | - | - |
| Year 4 | 2003 | | | - | | - | | | - | - |
| Year 5 | 2004 | | | - | | - | | | - | - |
| Year 6 | 2005 | | | - | | - | | | - | - |
| Year 7 | 2006 | | | - | | - | | | - | - |
| Year 8 | 2007 | | | - | | - | | | - | - |
| Year 9 | 2008 | | | - | | - | | | - | - |
| Year 10 | 2009 | | | - | | - | | | - | - |
| *Year 11* | 0 | | | - | | - | | | - | - |
| *Year 12* | 0 | | | - | | - | | | - | - |
| *Year 13* | 0 | | | - | | - | | | - | - |
| *Year 14* | 0 | | | - | | - | | | - | - |
| *Year 15* | 0 | | | - | | - | | | - | - |
| 5 Year Baseline - Indirect Recycled Water Use | | | | | | | | | | |
| Year 1 | 2004 | | | - | | - | | | - | - |
| Year 2 | 2005 | | | - | | - | | | - | - |
| Year 3 | 2006 | | | - | | - | | | - | - |
| Year 4 | 2007 | | | - | | - | | | - | - |
| Year 5 | 2008 | | | - | | - | | | - | - |

[1] ***Units of measure*** *(AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in Table 2-3.*

[2] *Suppliers will provide supplemental sheets to document the calculation for their input into "Recycled Water Pumped by Utility". The volume reported in this cell must be less than total groundwater pumped - See Methodology 1, Step 8, section 2.c.*

NOTES:

| SB X7-7 Table 5: Baseline Gallons Per Capita Per Day (GPCD) | | | | |
|---|---|---|---|---|
| **Baseline Year** *Fm SB X7-7 Table 3* | | Service Area Population *Fm SB X7-7 Table 3* | Annual Gross Water Use *Fm SB X7-7 Table 4* | Daily Per Capita Water Use (GPCD) |
| 10 to 15 Year Baseline GPCD | | | | |
| Year 1 | 2000 | 31,913 | 8,327 | 233 |
| Year 2 | 2001 | 32,272 | 8,001 | 221 |
| Year 3 | 2002 | 32,639 | 8,869 | 243 |
| Year 4 | 2003 | 33,002 | 8,756 | 237 |
| Year 5 | 2004 | 33,356 | 9,930 | 266 |
| Year 6 | 2005 | 33,702 | 9,258 | 245 |
| Year 7 | 2006 | 34,042 | 8,855 | 232 |
| Year 8 | 2007 | 34,376 | 9,164 | 238 |
| Year 9 | 2008 | 34,706 | 10,538 | 271 |
| Year 10 | 2009 | 35,026 | 9,577 | 244 |
| *Year 11* | 0 | - | - | |
| *Year 12* | 0 | - | - | |
| *Year 13* | 0 | - | - | |
| *Year 14* | 0 | - | - | |
| *Year 15* | 0 | - | - | |
| **10-15 Year Average Baseline GPCD** | | | | **243** |
| 5 Year Baseline GPCD | | | | |
| **Baseline Year** *Fm SB X7-7 Table 3* | | Service Area Population *Fm SB X7-7 Table 3* | Gross Water Use *Fm SB X7-7 Table 4* | Daily Per Capita Water Use |
| Year 1 | 2004 | 33,356 | 9,930 | 266 |
| Year 2 | 2005 | 33,702 | 9,258 | 245 |
| Year 3 | 2006 | 34,042 | 8,855 | 232 |
| Year 4 | 2007 | 34,376 | 9,164 | 238 |
| Year 5 | 2008 | 34,706 | 10,538 | 271 |
| **5 Year Average Baseline GPCD** | | | | **250** |

NOTES:

| **SB X7-7 Table 6: Baseline GPCD** *From Table SB X7-7 Table 5* | *Summary* |
|---|---|
| 10-15 Year Baseline GPCD | 243 |
| 5 Year Baseline GPCD | 250 |
| NOTES: | |

| **SB X7-7 Table 7: 2020 Target Method**<br>*Select Only One* | | |
|---|---|---|
| **Target Method** | | **Supporting Tables** |
| ☐ | Method 1 | SB X7-7 Table 7A |
| ☐ | Method 2 | SB X7-7 Tables 7B, 7C, and 7D |
| ☐ | Method 3 | SB X7-7 Table 7-E |
| ☑ | Method 4 | Method 4 Calculator *Located in the WUE Data Portal at wuedata.water.ca.gov* Resources *button* |
| NOTES: | | |

| **SB X7-7 Table 7-A: Target Method 1**<br>20% Reduction | |
|---|---|
| 10-15 Year Baseline<br>GPCD | **2020 Target<br>GPCD** |
| 243 | **194** |
| NOTES: | |

| SB X7-7 Table 7-E: Target Method 3 | | | | |
|---|---|---|---|---|
| Agency May Select More Than One as Applicable | Percentage of Service Area in This Hydrological Region | Hydrologic Region | "2020 Plan" Regional Targets | Method 3 Regional Targets (95%) |
| ☐ | | North Coast | 137 | 130 |
| ☐ | | North Lahontan | 173 | 164 |
| ☐ | | Sacramento River | 176 | 167 |
| ☐ | | San Francisco Bay | 131 | 124 |
| ☐ | | San Joaquin River | 174 | 165 |
| ☐ | | Central Coast | 123 | 117 |
| ☐ | | Tulare Lake | 188 | 179 |
| ☐ | | South Lahontan | 170 | 162 |
| ☑ | 100% | South Coast | 149 | 142 |
| ☐ | | Colorado River | 211 | 200 |
| | | **2020 Target** *(If more than one region is selected, this value is calculated.)* | | **142** |
| NOTES: | | | | |

**SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target**

| 5 Year Baseline GPCD *From SB X7-7 Table 5* | Maximum 2020 Target[1] | Calculated 2020 Target[2] | | | Confirmed 2020 Target[4] |
|---|---|---|---|---|---|
| | | As calculated by supplier in this SB X7-7 Verification Form | Special Situations[3] | | |
| | | | Prorated 2020 Target | Population Weighted Average 2020 Target | |
| 250 | 238 | 194 | | | **194** |

[1] ***Maximum 2020 Target*** *is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.*

[2] ***Calculated 2020 Target*** *is the target calculated by the Supplier based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target. Supplier may only enter one calculated target.*

[3] ***Prorated targets and population weighted target*** *are allowed for special situations only. These situations are described in Appendix P, Section P.3*

[4] ***Confirmed Target*** *is the lesser of the Calculated 2020 Target (C5, D5, or E5) or the Maximum 2020 Target (Cell B5)*

NOTES:

# Appendix G – MWD and Calleguas Supply and Demand Tables

## Table 2-1
## Metropolitan Regional Water Demands
## Single Dry-Year
(Acre-Feet)

| | | 2025 | 2030 | 2035 | 2040 | 2045 |
|---|---|---|---|---|---|---|
| **A.** | **Total Demands[1]** | **4,942,000** | **5,023,000** | **5,147,000** | **5,252,000** | **5,365,000** |
| | Retail Municipal and Industrial | 4,397,000 | 4,507,000 | 4,626,000 | 4,737,000 | 4,848,000 |
| | Retail Agricultural | 144,000 | 134,000 | 130,000 | 122,000 | 123,000 |
| | Seawater Barrier | 57,000 | 57,000 | 57,000 | 57,000 | 57,000 |
| | Storage Replenishment | 345,000 | 325,000 | 334,000 | 336,000 | 337,000 |
| **B.** | **Total Conservation** | **1,162,000** | **1,211,000** | **1,263,000** | **1,325,000** | **1,389,000** |
| | Existing Active (through 2020)[2] | 93,000 | 55,000 | 35,000 | 25,000 | 17,000 |
| | Code-based | 560,000 | 623,000 | 665,000 | 701,000 | 731,000 |
| | Price-Effect[3] | 259,000 | 283,000 | 313,000 | 349,000 | 391,000 |
| | Pre-1990 Conservation | 250,000 | 250,000 | 250,000 | 250,000 | 250,000 |
| **C.** | **Total Local and Other Imported Supplies** | **2,461,000** | **2,543,000** | **2,657,000** | **2,681,000** | **2,703,000** |
| | Groundwater | 1,248,000 | 1,263,000 | 1,304,000 | 1,314,000 | 1,327,000 |
| | Surface Water | 83,000 | 86,000 | 86,000 | 86,000 | 86,000 |
| | Los Angeles Aqueduct | 119,000 | 119,000 | 119,000 | 119,000 | 119,000 |
| | Seawater Desalination | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 |
| | Groundwater Recovery | 144,000 | 158,000 | 158,000 | 158,000 | 160,000 |
| | Recycling[4] | 533,000 | 584,000 | 656,000 | 669,000 | 678,000 |
| | Other Imported Supplies[5] | 278,000 | 278,000 | 278,000 | 278,000 | 278,000 |
| **D.** | **Total Metropolitan Demands** | **1,319,000** | **1,270,000** | **1,227,000** | **1,246,000** | **1,273,000** |
| | Consumptive Use | 1,157,000 | 1,133,000 | 1,092,000 | 1,111,000 | 1,138,000 |
| | Seawater Barrier | 6,000 | 5,000 | 4,000 | 4,000 | 4,000 |
| | Replenishment | 156,000 | 131,000 | 131,000 | 131,000 | 131,000 |

Notes:
All units are acre-feet unless specified, rounded to the nearest thousand.
Totals may not sum due to rounding.
[1] Growth projections are based on SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy and SANDAG San Diego Forward: The 2019 Federal Regional Transportation Plan.
[2] Does not include future active conservation savings. 1990 is base year.
[3] Includes un-metered water use savings.
[4] Excludes Santa Ana River base flow, which is used for recharge of Orange County groundwater basin and reflected in the Groundwater production numbers.
[5] Exchange with SDCWA.

## Table 2-2
## Metropolitan Regional Water Demands
## Drought Lasting Five Consecutive Water Years
(Acre-Feet)

| | | 2025 | 2030 | 2035 | 2040 | 2045 |
|---|---|---|---|---|---|---|
| **A.** | **Total Demands[1]** | **4,877,000** | **5,051,000** | **5,168,000** | **5,285,000** | **5,397,000** |
| | Retail Municipal and Industrial | 4,417,000 | 4,540,000 | 4,658,000 | 4,777,000 | 4,889,000 |
| | Retail Agricultural | 147,000 | 143,000 | 135,000 | 129,000 | 126,000 |
| | Seawater Barrier | 57,000 | 57,000 | 57,000 | 57,000 | 57,000 |
| | Storage Replenishment | 257,000 | 311,000 | 318,000 | 323,000 | 325,000 |
| **B.** | **Total Conservation** | **1,162,000** | **1,211,000** | **1,263,000** | **1,325,000** | **1,389,000** |
| | Existing Active (through 2020)[2] | 93,000 | 55,000 | 35,000 | 25,000 | 17,000 |
| | Code-based | 560,000 | 623,000 | 665,000 | 701,000 | 731,000 |
| | Price-Effect[3] | 259,000 | 283,000 | 313,000 | 349,000 | 391,000 |
| | Pre-1990 Conservation | 250,000 | 250,000 | 250,000 | 250,000 | 250,000 |
| **C.** | **Total Local and Other Imported Supplies** | **2,364,000** | **2,508,000** | **2,608,000** | **2,670,000** | **2,695,000** |
| | Groundwater | 1,205,000 | 1,258,000 | 1,288,000 | 1,313,000 | 1,327,000 |
| | Surface Water | 81,000 | 81,000 | 82,000 | 82,000 | 82,000 |
| | Los Angeles Aqueduct | 118,000 | 118,000 | 118,000 | 118,000 | 118,000 |
| | Seawater Desalination | 56,000 | 56,000 | 56,000 | 56,000 | 56,000 |
| | Groundwater Recovery | 140,000 | 152,000 | 158,000 | 158,000 | 159,000 |
| | Recycling[4] | 487,000 | 564,000 | 627,000 | 664,000 | 675,000 |
| | Other Imported Supplies[5] | 278,000 | 278,000 | 278,000 | 278,000 | 278,000 |
| **D.** | **Total Metropolitan Demands** | **1,351,000** | **1,332,000** | **1,297,000** | **1,290,000** | **1,313,000** |
| | Consumptive Use | 1,254,000 | 1,208,000 | 1,173,000 | 1,167,000 | 1,190,000 |
| | Seawater Barrier | 8,000 | 5,000 | 5,000 | 4,000 | 4,000 |
| | Replenishment | 89,000 | 119,000 | 119,000 | 119,000 | 119,000 |

Notes:
All units are acre-feet unless specified, rounded to the nearest thousand.
Totals may not sum due to rounding.
[1] Growth projections are based on SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy and SANDAG San Diego Forward: The 2019 Federal Regional Transportation Plan.
[2] Does not include future active conservation savings. 1990 is base year.
[3] Includes un-metered water use savings.
[4] Excludes Santa Ana River base flow, which is used for recharge of Orange County groundwater basin and reflected in the Groundwater production numbers.
[5] Exchange with SDCWA.

## Table 2-3
## Metropolitan Regional Water Demands
## Normal Water Year
(Acre-Feet)

| | | 2025 | 2030 | 2035 | 2040 | 2045 |
|---|---|---|---|---|---|---|
| **A.** | **Total Demands[1]** | **4,938,000** | **5,019,000** | **5,143,000** | **5,248,000** | **5,361,000** |
| | Retail Municipal and Industrial | 4,403,000 | 4,514,000 | 4,632,000 | 4,743,000 | 4,854,000 |
| | Retail Agricultural | 144,000 | 134,000 | 130,000 | 123,000 | 123,000 |
| | Seawater Barrier | 57,000 | 57,000 | 57,000 | 57,000 | 57,000 |
| | Storage Replenishment | 334,000 | 314,000 | 323,000 | 325,000 | 326,000 |
| **B.** | **Total Conservation** | **1,162,000** | **1,211,000** | **1,263,000** | **1,325,000** | **1,389,000** |
| | Existing Active (through 2020)[2] | 93,000 | 55,000 | 35,000 | 25,000 | 17,000 |
| | Code-based | 560,000 | 623,000 | 665,000 | 701,000 | 731,000 |
| | Price-Effect[3] | 259,000 | 283,000 | 313,000 | 349,000 | 391,000 |
| | Pre-1990 Conservation | 250,000 | 250,000 | 250,000 | 250,000 | 250,000 |
| **C.** | **Total Local and Other Imported Supplies** | **2,584,000** | **2,667,000** | **2,779,000** | **2,807,000** | **2,832,000** |
| | Groundwater | 1,236,000 | 1,251,000 | 1,289,000 | 1,305,000 | 1,320,000 |
| | Surface Water | 85,000 | 88,000 | 88,000 | 88,000 | 88,000 |
| | Los Angeles Aqueduct | 257,000 | 258,000 | 258,000 | 258,000 | 258,000 |
| | Seawater Desalination | 51,000 | 51,000 | 51,000 | 51,000 | 51,000 |
| | Groundwater Recovery | 144,000 | 158,000 | 158,000 | 158,000 | 160,000 |
| | Recycling[4] | 533,000 | 584,000 | 656,000 | 669,000 | 678,000 |
| | Other Imported Supplies[5] | 278,000 | 278,000 | 278,000 | 278,000 | 278,000 |
| **D.** | **Total Metropolitan Demands** | **1,191,000** | **1,142,000** | **1,101,000** | **1,116,000** | **1,140,000** |
| | Consumptive Use | 1,040,000 | 1,016,000 | 976,000 | 991,000 | 1,015,000 |
| | Seawater Barrier | 6,000 | 5,000 | 4,000 | 4,000 | 4,000 |
| | Replenishment | 145,000 | 120,000 | 120,000 | 120,000 | 120,000 |

Notes:
All units are acre-feet unless specified, rounded to the nearest thousand.
Totals may not sum due to rounding.
[1] Growth projections are based on SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy and SANDAG San Diego Forward: The 2019 Federal Regional Transportation Plan.
[2] Does not include future active conservation savings. 1990 is base year.
[3] Includes un-metered water use savings.
[4] Excludes Santa Ana River base flow, which is used for recharge of Orange County groundwater basin and reflected in the Groundwater production numbers.
[5] Exchange with SDCWA.

Runoff data is available at:

- DWR (cdec) https://cdec.water.ca.gov/
- U.S. Geological Survey: https://maps.waterdata.usgs.gov/mapper/?state=ca
- Operators of local dams and reservoirs

Groundwater information is available at:

- Fox Canyon GMA: http://fcgma.org/
- State of California Sustainable Groundwater Management Website: https://water.ca.gov/Programs/Groundwater-Management
- California Statewide Groundwater Elevation Monitoring (CASGEM): https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM

### 7.1.4 Water Service Reliability

#### 7.1.4.1 Water Service Reliability – Normal Year

As shown in Table 7-2, the estimated supply of water as determined by Metropolitan during an average (normal) year, together with Calleguas' recycled water supply, and the District's reasonably available outage supply are sufficient to meet the Calleguas' projected normal year water demands from 2025 through 2045.

**Table 7-2. Normal Year Supply and Demand Comparison**

| | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
|---|---|---|---|---|---|
| Supply totals *(autofill from Table 6-9)* | 119,587 | 120,700 | 122,860 | 124,306 | 124,764 |
| Demand totals *(autofill from Table 4-3)* | 92,941 | 94,065 | 96,246 | 97,707 | 98,169 |
| Difference | 26,646 | 26,635 | 26,614 | 26,599 | 26,595 |

NOTES: "Supply totals" does not include projected losses.

#### 7.1.4.2 Water Service Reliability – Single Dry Year

As shown in Table 7-3, the estimated supply of water from Metropolitan during a dry year is sufficient to meet the Calleguas' projected dry year imported water demands from 2025 through 2045.

| Table 7-3. Single Dry Year Supply and Demand Comparison | | | | | |
|---|---|---|---|---|---|
| | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| Supply totals | 113,980 | 115,090 | 117,246 | 118,691 | 119,144 |
| Demand totals | 87,335 | 88,456 | 90,634 | 92,093 | 92,551 |
| Difference | 26,645 | 26,634 | 26,612 | 26,598 | 26,593 |
| NOTES: "Supply totals" does not include projected losses. | | | | | |

### 7.1.4.3 Water Service Reliability – Five Consecutive Dry Years

Table 7-4 shows the water supply versus demand evaluation under five consecutive drought years. For the five consecutive drought years assessment, a steady ramp up in imported demand is projected to occur over the first 3 years. Following the 3rd consecutive drought year, an approximate 20 percent decrease in imported demand would be observed. This would most likely occur due to the implementation of Metropolitan's WSAP or other external conservation messaging (e.g., SWRCB Conservation Targets for Community Water Systems). The 20 percent decrease in imported demand is consistent with what the Calleguas system experienced in 1988 through 1992 and again in 2012 through 2016. For example, during the 2012-2016 drought, imported demands decreased from 105,868 AF in 2014 to 86,537 AF in 2015. Sufficient supplies are projected to be available for the years 2025 through 2045.

| Table 7-4. Multiple Dry Years Supply and Demand Comparison | | | | | | |
|---|---|---|---|---|---|---|
| | | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| First year | Supply totals | 119,282 | 119,293 | 121,045 | 122,784 | 123,644 |
| | Demand totals | 92,679 | 92,690 | 94,460 | 96,216 | 97,085 |
| | Difference | 26,603 | 26,603 | 26,585 | 26,568 | 26,559 |
| Second year | Supply totals | 127,702 | 127,714 | 129,605 | 131,482 | 132,411 |
| | Demand totals | 101,171 | 101,183 | 103,093 | 104,988 | 105,926 |
| | Difference | 26,532 | 26,532 | 26,513 | 26,494 | 26,485 |
| Third year | Supply totals | 127,097 | 127,109 | 129,027 | 130,931 | 131,873 |
| | Demand totals | 100,579 | 100,591 | 102,529 | 104,452 | 105,403 |
| | Difference | 26,518 | 26,518 | 26,499 | 26,479 | 26,470 |
| Fourth year | Supply totals | 106,280 | 106,289 | 107,752 | 109,204 | 109,923 |

| Table 7-4. Multiple Dry Years Supply and Demand Comparison | | | | | | |
|---|---|---|---|---|---|---|
| | | 2025 | 2030 | 2035 | 2040 | 2045 *(Opt)* |
| | Demand totals | 79,529 | 79,539 | 81,016 | 82,483 | 83,208 |
| | Difference | 26,751 | 26,751 | 26,736 | 26,722 | 26,715 |
| Fifth year | Supply totals | 112,127 | 112,136 | 113,708 | 115,267 | 116,038 |
| | Demand totals | 85,431 | 85,441 | 87,028 | 88,603 | 89,382 |
| | Difference | 26,696 | 26,695 | 26,680 | 26,664 | 26,656 |

### 7.1.5 Management Tools, Options, and Other Considerations

Metropolitan manages supplies on a calendar year basis and follows its WSDM plan for water management actions in response to a potential surplus or shortage year.

Calleguas does own and operate two significant points of imported water storage (Lake Bard and the Las Posas ASR) that primarily function as sources of outage supply for the District. In every water service reliability scenario described in the UWMP, Calleguas maintains a supply reserve in the event of a supply interruption from Metropolitan.

The supply vs. demand difference of 27,500 AF represents reasonably available Calleguas Outage Storage: Lake Bard (7,500 AF) and the Las Posas ASR (20,000 AF) that is within direct control of Calleguas. More information on Calleguas historical groundwater storage can be found in Section 6.2.3.

Water use efficiency and the implementation of demand management measures (DMMs) are effective management tools for Calleguas. Water use efficiency contributes to the District's Reduced Reliance on the Delta as the supply Calleguas receives from Metropolitan is virtually all from the SWP. More information on the District's Reduced Reliance on the Delta can be found in Appendix L.

## 7.2 DROUGHT RISK ASSESSMENT

### 7.2.1 Data, Methods, and Basis for Water Shortage Condition

CWC Section 10635(b) requires every urban water supplier to include, as part of its urban water management plan, a drought risk assessment (DRA) for its water service as part of information considered in developing its demand management measures and water supply projects and programs. The DRA analysis allows suppliers to consider how to manage their water supplies during stressed hydrologic conditions in relation to variations in demand. The DRA helps a supplier to evaluate the functionality of its WSCP shortage response actions and understand the type and degree of response that is appropriate for managing water supplies. This evaluation can help the supplier to identify risks and take proactive steps before the next actual drought lasting at least five consecutive years.

CWC Section 10612 requires the DRA to be based on the driest five-year historic sequence for the agency's water supply. However, CWC Section 10635 also requires that the analysis consider plausible changes on projected supplies and demands due to climate change, anticipated regulatory

# Appendix H – Water Shortage Contingency Plan

# Water Shortage Contingency Plan

**Public Draft**

March 26, 2021

Prepared for:

Ventura County Waterworks
District No. 1 - Moorpark

Prepared by:

Stantec Consulting Services Inc.

**WATER SHORTAGE CONTINGENCY PLAN FOR VENTURA COUNTY WATERWORKS DISTRICT NO. 1 – MOORPARK**

March 26, 2021

Notes:

This is a public draft, and all statements, characterizations, and values are subject to change due to public or further internal review.

# 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). It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

The WSCP aligns with both Calleguas' WSCP as well as MWD to ensure continuity, collaboration, and efficiency. The WSCP also draws upon lessons learned from the 2012-2016 drought. The following discussion presents the various stages and the basis for implementation.

## Water Supply Reliability Analysis

The primary source of water supply for the District has been water imported from MWD through Calleguas. The imported water is primarily treated water the from the Sacramento-San Joaquin River Delta in Northern California, which is conveyed via State Water Project (SWP) facilities. In 2020, the District supplied a total of 7,112 AF from imported water purchased from Calleguas, which was 71% of the total water supply including recycled water.

The second largest source of water is groundwater extracted from the East Las Posas Groundwater Basin via five groundwater wells owned and operated by the District. Most of the groundwater meets all State and Federal water quality standards for drinking water with the exception that treatment is required at one of the well sites (Well No. 20) to lower iron and manganese levels below the State Secondary Maximum Contaminant Level (MCL) requirements. Each well site has a chlorine injection before being pumped into the potable water distribution system. In 2020, the District supplied a total of 1,966 AF from groundwater production, which was 20% of the total water supply including recycled water.

The District's Moorpark Water Reclamation Facility (MWRF) produces recycled water via tertiary treatment facilities owned and operated by the District. In 2020, the reclamation plant produced 941 AF of recycled water which accounted for 9% of supply. The District forecasts that recycled water demand will increase to 1,400 AFY by 2025, necessitating an expansion of the plant's tertiary treatment capacity; and to 2,200 AFY by 2040.

The District is in the planning stages of the Moorpark Desalter Project, which is a groundwater production and treatment system that is projected to provide up to 5,000 AFY of potable water for customers within the District's water service area. This project is currently in the planning phase.

## Annual Water Supply and Demand Assessment Procedures

As an urban water supplier, VCWWD No. 1 must prepare and submit an Annual Water Supply and Demand Assessment. The Annual Water Supply and Demand Assessment is a written decision-making

process for determining supply reliability each year, along with the data and methods used to evaluate reliability. The following information provides the procedures the District will undertake to complete and approve the Annual Assessment.

## Decision-Making Process

To formally approve the Annual Assessment, the District staff will draft a board letter, resolution, and exhibits. They will also work with County Counsel on the public hearing requirements. The Water and Sanitation Department Director will then present these items to the County Board of Supervisors to adopt a resolution for the Annual Water Supply and Demand Assessment.

## Data and Methodologies

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

### *Evaluation Criteria*

The District Staff Services Specialist Conservation/Legislative Coordinator coordinates with staff from Calleguas and MWD to ensure messaging and legislation is consistent and compliant among the agency guidelines. MWD's Annual Assessment is primarily based on MWD's ongoing Water Supply Drought Management process described in their 2020 UWMP Update.

Figure A.4-1
Sample Annual Assessment Reporting Timeline

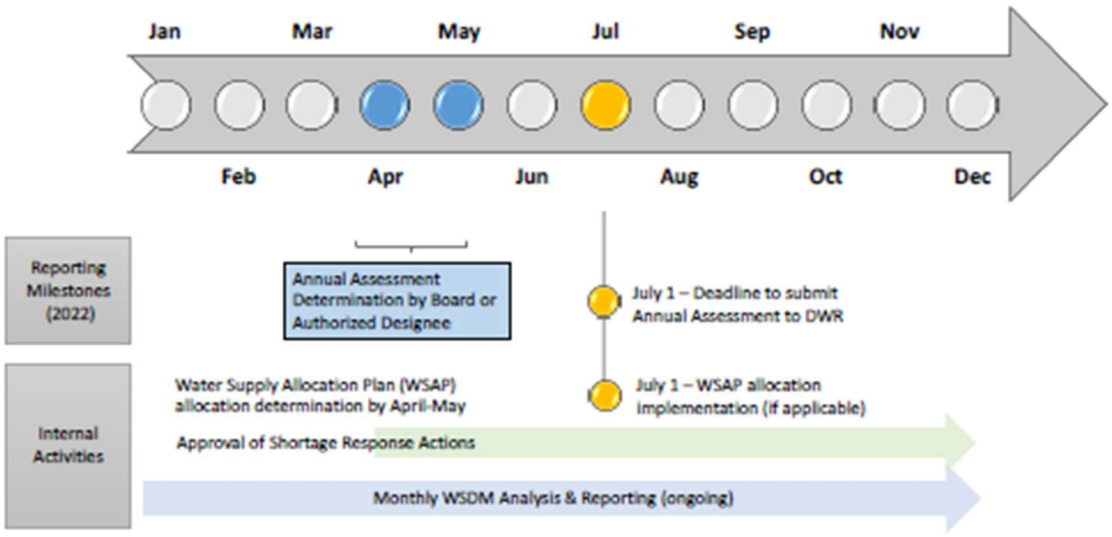

*Figure 1 MWD Sample Annual Assessment Reporting Timeline (2020 UWMP)*

### *Water Supply*

Water supply data is collected daily and reported on a weekly and monthly interval. The underlying data, as well as the reports, will be used in the Annual Assessment.

### *Current Year Unconstrained Customer Demand*

The District is expected to use unconstrained customer demands when assessing water supply reliability or in other words the District's customer water needs for the year prior to any special shortage response actions. Customer demand projections provided in Chapter 4 of the UWMP consider historical demand trends, changes in local supply production, climate change, water-use efficiency trends, etc. These forecasted demands may need to be adjusted to account for any use of demand management measures such as conservation campaigns or other measures that come from Calleguas or MWD.

### Current Year Available Supply

To plan for a future dry year the District will have to rely on meeting demands with extra imported water. The District imports approximately 70 to 80 percent of their annual supplies from Calleguas who receives water from MWD. In 2020, imported water accounted from 71 percent of the supply. Over the last few years, MWD has been able to rebuild its storage in reservoirs due to favorable supply conditions. MWD storage allows for a single dry year and at times multiple dry years. MWD has developed a Water Shortage Contingency Plan which is consistent with their current policies for managing regional water supplies during shortage periods. Current year supplies are discussed further in Chapter 6 of the 2020 UWMP.

### *Infrastructure Consideration*

The District is preparing an update to their Water Master Plan and hydraulic system water model to evaluate distribution system needs currently and for future planning. The District has determined the existing Stockton Reservoir requires replacement and is currently in the design phase. In addition, the District determined a need for additional water supply sources to reduce their reliance on imported water. The Moorpark Desalter is a groundwater production and treatment system that would supplement imported water and removal of salts from the groundwater basin. It is estimated the Desalter will be online in 2030.

### *Other Factors*

FCGMA may impose groundwater allocation cutbacks in the future.

## Six Standard Water Shortage Stages

As required by CWC §10632(a)(3)(A), the WSCP is framed around six standard shortage levels that correspond to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50

percent shortages. Each of the six shortage levels represents an increasing gap between the District's estimated core supplies and unconstrained demand as determined in the Annual Assessment. Shortage levels also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other emergency events. Table 1 shows the percent shortage range and its associated water shortage condition.

**DRAFT Submittal Table 1: Water Shortage Contingency Plan Levels**

| Shortage Level | Percent Shortage Range | Water Shortage Condition |
|---|---|---|
| Permanent | -- | The District has adopted permanent conservation methods such as water saving devices and prohibited water waste. |
| 1 | Up to 10% | The District will initiate a public information campaign to increase awareness of water conservation measures specified in the District's Rules and Regulations. Customers are expected to perform voluntary water use reductions and adhere to on-going water conservation measures. |
| 2 | Up to 20% | The District will expand the public information campaign and step-up enforcement of water conservation measures specified in the District's Rules and Regulations. It is mandatory for Customers to implement water use reductions and adhere to on-going water conservation measures. |
| 3 | Up to 30% | This stage requires additional mandatory water conservation actions. |
| 4 | Up to 40% | This stage requires additional mandatory water conservation actions, such as water rationing for specific uses. |
| 5 | Up to 50% | This stage requires additional mandatory water conservation actions, such as water rationing for all customers. |
| 6 | >50% | This stage requires additional mandatory water conservation actions, such as increased water rationing for all water customers, no outdoor water use, etc. |
| NOTES: | | |

## Shortage Response Actions

The following section specifies the types of shortage response actions that may be undertaken before and during a shortage declaration. Note that a shortage response actions will align with, and are in part dictated by, both Calleguas and MWD. Calleguas' policy is based on MWD's adopted Water Surplus and Drought Management Plan (WSDM Plan) as well as MWD's Water Supply Allocation Plan (WSAP) as revised in December 2014. The WSDM Plan recognizes the link between surplus and shortages and integrates planned operational actions with respect to both conditions. The WASP is designed to provide a framework for administering an allocation should a water shortage be declared. Table 2 provides a summary of the shortage stage and the suite of response actions the District may take.

| DRAFT Submittal Table 2: VCWWD Shortage Stages and Response Actions | | | |
|---|---|---|---|
| **Shortage Stage** | **Shortage Percentage** | **Response Actions** | |
| 1 | Up to 10% | **MWD & Calleguas:**<br>Take from Storage<br>Execute Flexible Supplies<br>Implement Water Supply Allocation Plan (WSAP)[1]<br><br>**VCWWD:**<br>Implement Demand Reduction | 0 to 100% supply met by storage from Wholesaler<br>0 to 100% supply met by Flexible Supplies<br>0 to 50% of total base demand met by WSAP implementation<br><br>0 to 25% of total retail water use met by voluntary demand reduction |
| 2 | Up to 20% | **MWD & Calleguas:**<br>Take from Storage<br>Execute Flexible Supplies<br>Implement Water Supply Allocation Plan<br><br>**VCWWD:**<br>Implement Demand Reduction | 0 to 100% supply met by storage from Wholesaler<br>0 to 100% supply met by Flexible Supplies<br>0 to 50% of total base demand met by WSAP implementation<br><br>0 to 25% of total retail water use met by voluntary demand reduction |
| 3 | Up to 30% | **MWD & Calleguas:**<br>Take from Storage | 0 to 100% supply met by storage from Wholesaler<br>0 to 100% supply met by Flexible Supplies |

| | | | |
|---|---|---|---|
| | | Execute Flexible Supplies<br>Implement Water Supply Allocation Plan<br><br>**VCWWD:**<br>Implement Demand Reduction | 0 to 50% of total base demand met by WSAP implementation<br><br>0 to 25% of total retail water use met by mandatory demand reduction |
| 4 | Up to 40% | **MWD & Calleguas:**<br>Take from Storage<br>Execute Flexible Supplies<br>Implement Water Supply Allocation Plan<br><br>**VCWWD:**<br>Implement Demand Reduction | 0 to 100% supply met by storage from Wholesaler<br>0 to 100% supply met by Flexible Supplies<br>0 to 50% of total base demand met by WSAP implementation<br><br>0 to 25% of total retail water use met by mandatory demand reduction |
| 5 | Up to 50% | **MWD & Calleguas:**<br>Take from Storage<br>Execute Flexible Supplies<br>Implement Water Supply Allocation Plan<br><br>**VCWWD:**<br>Implement Demand Reduction | 0 to 100% supply met by storage from Wholesaler<br>0 to 100% supply met by Flexible Supplies<br>0 to 50% of total base demand met by WSAP implementation<br><br>0 to 25% of total retail water use met by mandatory demand reduction |
| 6 | >50% | **MWD:**<br>Take from Storage<br>Execute Flexible Supplies | 0 to 100% supply met by storage from Wholesaler<br>0 to 100% supply met by Flexible Supplies |

| | | | |
|---|---|---|---|
| | | Implement Water Supply Allocation Plan<br><br>**VCWWD:**<br>Implement Demand Reduction<br>No new service provided | 0 to 50% of total base demand met by WSAP implementation<br><br>0 to 25% of total retail water use met by mandatory demand reduction |
| Notes: Actions to increase water supply through storage extraction or execute flexible supplies is only available to MWD, but not the District.<br>[1]Implementing the Water Supply Allocation Plan would reduce VCWW supply and require additional conservation efforts to make up for lost supply. | | | |

## Supply Augmentation

The District does not have additional contracts to acquire emergency dry year supply on a short-term basis. The District will rely upon shortage response actions to address the gap between supply and demand. However, MWD has the ability to augment supply by extracting water from its storage facilities and from transfer and exchange programs. For more information on MWD's plan, see their WSCP.

## Demand Reduction

Demand reduction actions are temporary measures that can constrain demand in the current year, such as public information campaigns and mandatory allocations. The intensity of demand reduction measures will vary by the severity of shortage and availability of other cost-effective measures. Early demand reduction actions are voluntary measures. More severe conditions may necessitate mandatory restrictions on landscape use, special water features, and residential water features. Table 3 shows the supply augmentation methods and other actions available to the District.

**DRAFT Submittal Table 3: Demand Reduction Actions**

| Shortage Level | Demand Reduction Actions | How much is this going to reduce the shortage gap? *Include volume units used.* | Penalty, Charge, or Other Enforcement? |
|---|---|---|---|
| Permanent | • Provide rebates for plumbing fixtures and devices<br>• Prohibit water waste | | No |
| 1 and 2 | • Education and outreach campaign<br>• Landscape water use voluntary restriction | | No |
| 3 and 4 | In addition to the measures listed above,<br>• Landscape water use mandatory restriction<br>• Special water feature restriction<br>• Vehicle washing restrictions | | Yes |
| 5 | In addition to the measures listed above,<br>• Landscape water use prohibited | | Yes |
| 6 | In addition to the measures listed above,<br>• Moratorium on new services | | Yes |

**Permanent Conservation Level**

As set forth by the Rules and Regulations, the District has a permanent water conservation. The District has implemented the following requirements:

- New customers install and use water efficient plumbing features
- Water waste is prohibited

For more detail, refer to the Rules and Regulations.

**Shortage Levels 1 and 2**

Under Shortage Levels 1 and 2, the following demand reduction measures would be applied:

- Expand Public Information Campaign.
- Landscape water use voluntary restriction.

**Shortage Levels 3 and 4**

Under Shortage Levels 3 and 4, the following demand reduction measures would be applied in addition to those implemented at Levels 1 and 2:

- Landscape water use mandatory restriction. When landscape water use restrictions are mandatory, the District implements an updated, more limited watering schedule with higher fines for noncompliance. The District will send out patrols to ensure compliance and will also make an online form available for customers to identify those out of compliance
- Special Water Features. Water for decorative water features is restricted. Filling or re-filling ornamental lakes or ponds is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the declaration of a supply shortage level. For recreational water features, re-filling of more than one foot and initial filling of residential swimming pools or outdoor spas with potable water is prohibited.
- Vehicle Washing Restriction. The District prohibits vehicle washing, with the following exceptions: by hand-held bucket or container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, by high pressure/low volume wash systems, or at a commercial car washing facility that utilizes a recirculating water system to capture or reuse water

**Shortage Level 5**

Under Shortage Level 5, the District would continue to implement the demand reduction measures listed in Stages 3 and 4. However, landscape water use would move from mandatory restrictions to prohibited.

- Landscape water use prohibited. Watering or irrigating of lawn, landscape, or other vegetated areas with potable water is prohibited However, this restriction does not apply to the following categories of use, unless it is determined by the Director that recycled water is available and may be applied to the use:
    - Maintenance of vegetation, including trees and shrubs, that are watered using a hand-held bucket or similar container or handheld hose equipped with a positive self-closing water shutoff nozzle or device.
    - Maintenance of existing landscape necessary for fire protection.
    - Maintenance of existing landscape for soil erosion control.
    - Maintenance of plant materials identified to be rare or essential to the well-being of protected species.
    - Maintenance of landscape within active public parks and playing fields, day-care centers, golf course greens, and school grounds, provided that such irrigation does not exceed two (2) days per week according to the schedule established in rules and regulations.
    - Actively irrigated environmental mitigation projects.

**Shortage Level 6**

Under Shortage Levels 6, the District would continue to implement the demand reduction measures outlined in Storage Level 5. In addition, the District would:

- Stop new water service. No new potable water service will be provided, no new temporary meters or permanent meters will be provided, and no statements of immediate ability to serve or provide potable water service (such as will-serve letters, certificates, or letters of availability) will be issued, except under the following circumstances:
    - A valid, unexpired building permit has been issued for the project; or
    - The project is necessary to protect the public health, safety, & welfare; or
    - The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District.

## Operational Changes

The District has several operational changes they may implement during the various water shortage levels. The operational changes occur both at the staff, financial, and technical level.

**Enforcement Responsibilities**. The District staff will administer the water auditing program and designate sites for monitoring and enforcement of irrigation restrictions. The District staff will monitor and respond to the water violation reports. The District has a form, found at www.vcpublicworks.org "Report a Concern" titled "Report Water Runoff" where customers and staff can report water violations.

**Communications Roll Out**. The Director will approve the District staff to provide the public with appropriate updates and messaging. For more information about the Communication Plan, see "Communication Protocols".

**Repair Leaks, Breaks, and Malfunctions.** All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within forty-eight (48) hours of notification as set forth in Rule 1-J-4b (ii) unless other arrangements are made with the District.

**No New Potable Water Service.** Upon declaration of a Level 6 Water Supply Shortage Emergency, no new potable water service will be provided, no new temporary meters or permanent meters will be provided, and no statements of immediate ability to serve or provide potable water service (such as will-serve letters, certificates, or letters of availability) will be issued, except under the following circumstances:

- A valid, unexpired building permit has been issued for the project; or
- The project is necessary to protect the public health, safety, & welfare; or
- The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District.

**No New Annexation**. Upon the declaration of a Level 6 Water Supply Shortage condition, the District will suspend consideration of annexations to its service area. This subsection does not apply to boundary corrections and annexations that will not result in any increased use of water.

## Additional Mandatory Restrictions

The County does not have any additional mandatory restrictions outside of the previous demand reduction actions.

## Emergency Response Plan

A water shortage emergency could be the result of a catastrophic event such as result of drought, failures of transmission facilities, a regional power outage, earthquake, flooding, supply contamination from chemical spills, or other adverse conditions. These emergencies and the District's method for handling them are described below. Note these emergency efforts would be in line with the Level 6 Water Shortage unless otherwise stated.

**Earthquakes or Other Natural Disasters.** The District and its wholesale suppliers are located in an earthquake zone. In the event of an earthquake or natural disaster, the District has the potential of losing its imported water supply. For information on how the District would handle an earthquake, see the section below.

In their WSCP, Calleguas describes the actions they would take should an earthquake interrupt their only intake with MWD. Calleguas would conduct an initial assessment of the outage, make a call for conservation with no outdoor water use, and then determine imported water outage protocol (IWOP) allocation should be implemented. Calleguas would meet demands with supply from Lake Bard and local groundwater basins through an aquifer recovery program.

Similar to Calleguas, MWD can meet demand with other sources should an earthquake cause a major outage. MWD has invested heavily in emergency storage facilities located both in and out of the region because the LA Aqueduct, California Aqueduct, and CRA cross the San Andreas Fault. MWD's emergency storage mandate is to maintain 75 percent of their demand for six months from within the earthquake fault lines. For more information, refer to MWD's WSCP.

**Contamination.** Contamination of water supply can result from a number of different events including a water main break, cross-connection condition, water source pollution, or covert action. Water supplies for the District are generally of good quality and no foreseeable permanent contamination issues are anticipated. In the event of a toxic spill or major contamination, the District would isolate the problem and reduce the impact to the water supply. Once the problem has been isolated, the contamination would be cleaned up using chlorination or other necessary procedures and the water supply returned to service as soon as possible. In the meantime, alternative supply would be utilized to meet demand. Implementation of additional demand management measures could also be utilized if the outage is anticipated to be of longer duration.

**Power Outage.** In the event of a regional power outage, the District would follow the procedures outlined in their Emergency Procedures Manual (EPM) Section VII. The District's EPM identifies various levels of emergencies and provides examples of actions for a number of given emergencies, including power failure. Standby generators are available at each of the District's well and pump station sites to maintain operation should an interruption of power occur. Section IX of the EPM lists all of the stationary and mobile generators located at the various District facilities, with model numbers, kilowatt rating, and fuel tank capacity. In addition, the District would implement the procedures outlined in the Rules and Regulations regarding water shortages which include sanctions for any event which results in loss of supply.

Regardless of the catastrophic event category, the District would follow a standard set of procedures as outlined in their Ventura County Public Works Agency Emergency Operations Procedure National Incident Management System (NIMS) Implementation Plan, updated in October 2020. In the event of an incident that requires response of the Water and Sanitation resources, the Water & Sanitation Director would activate a Water & Sanitation Operations Center (WSOC). The WSOC can request mutual aid from other departments or agencies and provide updates to the Public Works Agency Operations Center. If the

incident requires public outreach, the Emergency Operations center (EOC) would issue a warning and provide instructions to public and request assistance from State and Federal resources. Communication would be handled via our Ventura County Public Works Agency -Alert System (Everbridge Mass Notification System).

## Seismic Risk Assessment and Mitigation Plan

VCWWD No. 1 does conduct its own seismic risk on its facilities but was a participant in the 2015 Ventura County Multi-Hazard Mitigation Plan (Hazard Plan)1 to assess risk caused by various hazards and establish mitigation measures to avoid these risks. As part of the plan, seismic risk in the Ventura County region, including the District's service area, was evaluated.

The District's has both potable water and recycled water facilities within its service area. The District's potable water distribution system consists of 10 booster pumping stations, 20 pressure-reducing stations, 6 production wells, 10 imported water turnouts, 18 reservoirs and approximately 138 miles of distribution and transmission pipelines. The recycled water distribution system consists of a network of distribution mains and booster pumps to serves 13 customers.

**Seismic Risk**

The largest water supply for the District is imported water from Calleguas Municipal Water District (CMWD) in which 100% of that supply is delivered from Metropolitan Water District of Southern California (MWD) through a single connection, the East Portal conveyance channel in Chatsworth. Once in Calleguas' service facilities it is distributed throughout Ventura County including VCWWD No. 1. A substantial earthquake could damage or destroy this single-point connection, Calleguas' infrastructure or any of the turnout connections between Calleguas and the District, leaving a water shortage.

Locally, VCWWD. No. 1's facilities are in close proximity to the Simi-Santa Rosa fault zone. This fault zone extends from the Santa Susana Mountains westward along the northern margin of the Simi and Tierra Rejada valleys and along the southern slope and crest of the Las Posas Hills to their westerly termination. The Simi-Santa Rosa fault zone crosses the southern portion of the District service area as shown in Figure . Per the Hazard Plan the likely maximum magnitude earthquake along the Simi-Santa Rosa fault system is referenced as 6.7 with a recurring interval of 933 years. Hazards outlined in the Hazard Plan include surface fault rupture, landslides, and liquefaction caused by seismic activity. Based on the referenced California Geological Survey geological hazard maps2 for fault, landslides, and liquefaction in the Hazard Plan, portions of the District's facilities are prone to these hazards making the District's facilities susceptible to a disruption on their water distribution system in the event of an earthquake.

Based on the Hazard Plan for Ventura County, the Districts Service area is in the "Violent Ground Shaking" categorical area. The summary of impacts caused by violent ground shaking showed 65.63%

[1] Ventura County Multi-Hazard Mitigation Plan 2015

[2] https://maps.conservation.ca.gov/geologichazards/#datalist

impact to critical facilities.[1] This percentages includes public utilities, pump stations, electric substations, potable water facilities, wastewater facilities, wells, dams, reservoirs, debris basins hydro stations, meter stations, and stream and river gages for the entire county. Based on the Hazard Plan approximately 89% of Moorpark's population would be affected by shaking and 49% of the area susceptible to liquefaction. Also, the District's facilities to the north and south near the foothills are susceptible to landslides.

See *Figure 2* a map showing major fault lines applicable to VCWWD No. 1's service boundary.

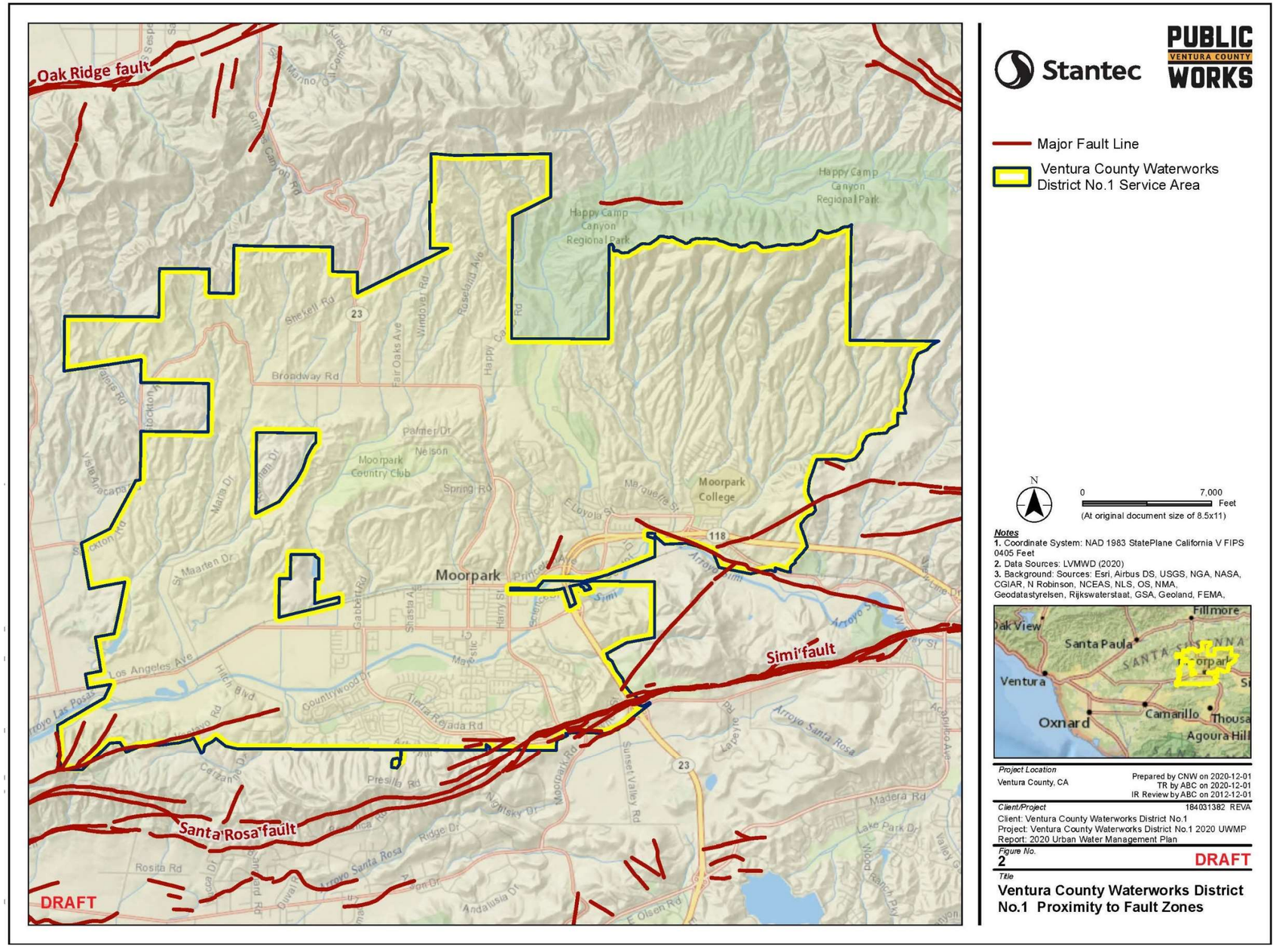


*Figure 2: Ventura County Waterworks District No. 1 Proximity to Fault Zones*

### Mitigation Measures

In the event of seismic activity causing damage to a portion of the District's distribution facilities the District can rely on its multiple reservoirs and pressure zones that are undamaged to feed the affected portions of the service area by opening division gate valves along their distribution system, as necessary.

In 2020, the district only relied on 66% of its imported water allocation. If a seismic event caused damage or a local power outage to the groundwater production facilities, the District could exercise additional imported water up to the full import allocation of 10,723 AFY from CWMD to supplement as needed.

In the event the District's imported water supply has been impacted, the District could temporarily increase its groundwater production to meet water demand until the imported water supply facilities are repaired, and the supply is restored.

In the event of a prolonged loss of imported water, the District can implement their established Water Shortage Plan from the Rules and Regulations to substantially reduce demands until supply is restored.

## Communication Protocols

The District has several communication tools and methods in place engage customers, the public, elected officials, and other agencies. These include Everbridge Mass Notification Alert system, the Citizen's Advisory Committee, outreach, and collaboration with other agencies. These methods are not limited to any single water shortage level but would be used in varying degrees at all levels. However, there is an exception with the Everbridge alert system.

Launched in 2020, the District uses the Everbridge alert system for mass communication during emergencies or pertinent information the Director deems essential. In the event of a crisis, the District has two employees readily available to send out alerts via text, email, and/or call. The District has 13,657 customers signed up for this alert system and is using social media and meetings to encourage more users.

In 1965, the District created a Citizen's Advisory Committee which has 5 members, all of whom live within the District, and holds a public meeting the second Tuesday of the month. The purpose of each Citizen's Advisory Committee is to review staff recommendations regarding annual budgets, water and sanitation rate adjustments, capital improvement projects, annexation issues, new policy items, other issues related to management of the Districts, and to make recommendations to the Board. Every meeting as a standing agenda item to discuss water supply conditions, which can be used as an opportunity to convey the water shortage levels and action plan.

The District also uses various outreach methods to communicate with customers such as e-flyers, social media (VCPWA Facebook, Twitter, and Nextdoor), website updates (vcpublicworks.org/wsd), a mobile app (VCPWA Connect), and billing inserts. The District uses these outreach methods to provide timely updates about infrastructure issues, road closures due to work, meetings, and so on. The Staff Services Specialist/PIO is responsible for creating the notifications, and the Department Director approves all notifications/posts to customers. The District recognizes that not all customers use or have access to the internet and use alternative methods such as bill inserts and messaging and newspaper ads to communicate with their customers. The District also readily provides information in Spanish and can translated their content into any language upon request. The District plans to use these methods at all water shortage levels.

In the event of an emergency, the Department Director would use the VCPWA- Alert system to send out mass communications, as necessary. The District staff would inspect facilities once it is deemed safe to do so and report back to the Agency Director.

The tools and methods outlined above augment and compliment the efforts by Calleguas and MWD. Both entities have extensive communication and outreach campaigns as outlined in their WSCPs. To ensure the collaboration and continuity of these outreach efforts, the Staff Services Specialist and Conservation/Legislative Coordinator currently attends regular meetings with both Calleguas and MWD. In the event that a water shortage is declared, the District anticipates these meetings will increase in frequency.

## Compliance and Enforcement

The District's WSCP is detailed in the District's Rules and Regulations (Part 1 – Section J). Penalties are imposed for violations of the WSCP as described in Part 1 - Section K of the District's Rules and Regulations. The penalties are based upon the number and frequency of violations and are discussed below:

a. For the first violation a written notice will be given to the customer.

b. For the second violation within the preceding twelve (12) calendar months, a penalty of one hundred dollars ($100.00) shall be imposed by written notice to the customer.

c. For the third violation within the preceding twelve (12) calendar months a penalty of two hundred and fifty dollars ($250.00) shall be imposed by written notice to the customer.

d. For the fourth violation within the preceding twelve (12) calendar months, a penalty of five hundred dollars ($500.00) shall be imposed by written notice to the customer. The District may also give written notice to the customer indicating that it will install a flow restricting device of 1 gpm capacity for services up to one- and one-half inch meter size, and comparatively sized restrictors for larger services, on the service of the customer at the premises at which the violation occurred for a period of less than forty-eight (48) hours. The charge for installing such a flow restricting device will be based upon the size of the meter and the actual cost of installation. The charge for removal of the flow restricting device and restoration of normal service shall be based on the actual cost involved.

e. If there are five violations within twelve (12) consecutive calendar months, the District may discontinue water service to the customer at the premises at which the violation occurred.

## Legal Authorities

In the event of a water shortage, the Director of the County of Ventura Water and Sanitation Department of the Public Works Agency is authorized and directed by to declare a water shortage emergency and implement provisions of the WSCP, subject to ratification by the District Board at its first regularly scheduled meeting. The Director determines the extent of conservation or water use efficiency required through the implementation and/or termination of particular conservation stages or levels. However, in the case of local emergencies, the Director of the Water and Sanitation Department has the authority to order the implementation of the appropriate stage of water conservation. In addition to coordinating efforts with any city or county within which it provides water supply services for the possible proclamation of a local

emergency. These entities include but are not limited to the City of Moorpark, Calleguas Municipal Water District, and Metropolitan Water District.

In addition, the District "shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency" (California Government Code, California Emergency Services Act, Article 2, Section 8558).

## Financial Consequences of WSCP

[This section is subject to change following Director's input on financial mitigation measures.] The District receives water revenue from a commodity charge and a tiered rate structure for water service. The rates have been designed to recover the bulk of the cost of water service in the commodity charge. An assessment of the revenue impacts as a result of the various stages of conservation previously showed that with the use of the Rate Stabilization Fund, the District would have sufficient funds to cover a water shortage without the need to increase water rates.

## Monitoring and Reporting

Under normal conditions, potable water production figures are recorded daily. Weekly and monthly reports are prepared and monitored. This data is used to measure the effectiveness of any water shortage contingency stage that may be implemented. As stages of water shortage are declared by Metropolitan and Calleguas, the District will follow implementation of those stages and continue to monitor water demand levels.

## WSCP Refinement Procedures

The District will consider revisions to the WSCP during the Annual Water Supply and Demand Assessment. If a revision is deemed necessary, District staff will make a revision and present the new content to the Citizen's Advisory Committee for input. Following the meeting, District staff will make any final adjustments and present the final, revised version to the Board of Directors for approval.

## Special Water Feature Distinction

CWC §10632 (b) requires retail suppliers to evaluate special water features that are artificially supplied with water but excludes swimming pools and spas. See Demand Reduction section on special water feature restrictions.

## Plan Adoption, Submittal, and Availability

The District WSCP was developed and is included as an appendix in the 2020 Draft 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 WSCP may be periodically amended independently of the UWMP, as needed.

The District provided notice of availability of the draft 2020 UWMP and 2020 WSCP in accordance with CWC. A public meeting will be held prior to the adoption of the District's WSCP. The public meeting will provide a platform for cities, counties, and members of the public to comment on the WSCP prior to its adoption. Notice of the public hearing was given to cities and counties within which water is supplied and to the general public.

A public hearing is scheduled to be held at Ventura County Government Center Hallof Administration Board of Supervisors Hearing Room 800 South Victoria Avenue, Ventura CA 93009 on June 22, 2021 to receive public comments.

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 2020 UWMP and WSCP for the District will be made publicly available on the District's website https://vcpublicworks.org/wsd.

# Appendix I – 2015 Ventura County Multi-Hazard Mitigation Plan

2015 Ventura County Multi-Hazard Mitigation Plan

March 26, 2021

# 2015 Ventura County Multi-Hazard Mitigation Plan

Is found online: http://vcfloodinfo.com/resources/ventura-county-hazards-mitigation-plan

# Appendix J – DWR Checklist

# Appendix J (DWR Appendix F). UWMP Checklist

This checklist is developed directly from the Urban Water Management Planning Act and SB X7-7. It is provided to support water suppliers (Suppliers) during preparation of their Urban Water Management Plans (UWMP). Two versions of the UWMP Checklist are provided below – the first one is organized according to the California Water Code and the second checklist according to subject matter. The two checklists contain duplicate information and the Supplier should use whichever checklist is more convenient*. In the event that information or recommendations in these tables are inconsistent with, conflict with, or omit the requirements of the Act or applicable laws, the Act or other laws shall prevail.

Each water supplier submitting an UWMP can also provide DWR with the UWMP location of the required element by completing the last column of either checklist. This will support DWR in its review of these UWMPs. The completed form can be included with the UWMP.

If an item does not pertain to a Supplier, then state the UWMP requirement and note that it does not apply to the Supplier. For example, if a Supplier does not use groundwater as a water supply source, then there can be a statement in the UWMP that groundwater is not a water supply source.

*For the purpose of Ventura County Waterworks District No. 1 Moorpark's 2020 UWMP, the checklist selected is organized by the CWC.

## Checklist Arranged by Water Code Section

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10608.20(e) | Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data. | Baselines and Targets | Chapter 5 | Chapter 5 |
| 10608.22 | Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100. | Baselines and Targets | Section 5.7.2 | Section 5.7.2 |
| 10608.24(a) | Retail suppliers shall meet their water use target by December 31, 2020. | Baselines and Targets | Section 5.7 | Section 5.7 |
| 10608.24(d)(2) | If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment. | Baselines and Targets | Sections 5.2 and 5.5.7 | Sections 5.2 and 5.5.7 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10608.26(a) | Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets. | Plan Adoption, Submittal, and Implementation | Chapter 10 | Chapter 10 |
| 10608.36 | Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions. | Baselines and Targets | Section 5.1 | Section 5.1 |
| 10608.4 | Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form. | Baselines and Targets | Section 5.8 and App E | Section 5.8 and App F |
| 10620(b) | Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier. | Plan Preparation | Section 2.1 | Section 2.1 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10620(d)(2) | Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable. | Plan Preparation | Section 2.5.2 | Section 2.5.2 |
| 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 | Section 7.4 | Section 7.4 |
| 10621(b) | Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. | Plan Adoption, Submittal, and Implementation | Section 10.2.1 | Section 10.2.1 |
| 10621(f) | Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021. | Plan Adoption, Submittal, and Implementation | Sections 10.3.1 and 10.4 | Sections 10.3.1 and 10.4 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 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. | Summary | Chapter 1 | Chapter 1 |
| 10631(a) | Describe the water supplier service area. | System Description | Section 3.1 | Section 3.1 |
| 10631(a) | Describe the climate of the service area of the supplier. | System Description | Section 3.3 | Section 3.3 |
| 10631(a) | Indicate the current population of the service area. | System Description and Baselines and Targets | Sections 3.4 and 5.4 | Sections 3.4 |
| 10631(a) | Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045. | System Description | Section 3.4 | Section 3.4 |
| 10631(a) | Describe other social, economic, and demographic factors affecting the supplier's water management planning. | System Description | Section 3.4 | Section 3.4 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10631(a) | Describe the land uses within the service area. | System Description | Section 3.5 | Section 3.5 |
| 10631(b) | Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045. | System Supplies | Section 6.2.8 | Section 6.2.8 |
| 10631(b) | Indicate whether groundwater is an existing or planned source of water available to the supplier. | System Supplies | Section 6.2 | Section 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. | System Supplies | Section 6.2 | Section 6.2 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 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 | Section 6.1 | Section 6.1 |
| 10631(b)(3) | Describe measures taken to acquire and develop planned sources of water. | System Supplies | Section 6.1 | Section 6.1 |
| 10631(b)(4)(A) | Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization. | System Supplies | Section 6.2.2 | Section 6.2.2 |
| 10631(b)(4)(B) | Describe the groundwater basin. | System Supplies | Section 6.2.2 | Section 6.2.2 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 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 | Section 6.2.2 | Section 6.2.2 |
| 10631(b)(4)(B) | For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions. | System Supplies | Section 6.2.3 | Section 6.2.3 |
| 10631(b)(4)(C) | Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years | System Supplies | Section 6.2.4 | Section 6.2.4 |
| 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 | Section 6.2 | Section 6.2 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10631(c) | Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis. | System Supplies | Section 6.7 | Section 6.7 |
| 10631(d)(1) | Quantify past, current, and projected water use, identifying the uses among water use sectors. | System Water Use | Section 4.2 | Section 4.2 |
| 10631(d)(3)(A) | Report the distribution system water loss for each of the 5 years preceding the plan update. | System Water Use | Section 4.3 | Section 4.3 |
| 10631(d)(3)(C) | Retail suppliers shall provide data to show the distribution loss standards were met. | System Water Use | Section 4.2 | Section 4.2 |
| 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 | Sections 9.2 and 9.3 | Sections 9.2 and 9.3 |
| 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 | Sections 9.1 and 9.3 | Sections 9.1 and 9.3 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 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 5 consecutive water years. | System Supplies | Section 6.8 | Section 6.8 |
| 10631(g) | Describe desalinated water project opportunities for long-term supply. | System Supplies | Section 6.6 | Section 6.6 |
| 10631(h) | Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source. | System Supplies | Section 2.5.1 | Section 2.5.1 |
| 10631(h) | Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types. | System Supplies | Section 2.5.1 | Section 2.5.1 |
| 10631.1(a) | Include projected water use needed for lower income housing projected in the service area of the supplier. | System Water Use | Section 4.5 | Section 4.5 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10631.2(a) | The UWMP must include energy intensity information as stated in the code. | | Section 6.4 and Appendix O | Section 6.4 |
| 10632(a) | Provide a water shortage contingency plan (WSCP) with specified elements below. | Water Shortage Contingency Planning | Chapter 8 | Chapter 8 |
| 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 | Section 8.2 | 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 | Section 8.2 | Section 8.2 |
| 10632(a)(3)(A) | Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent 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 | Section 8.3 | Section 8.3 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10632(a)(3)(B) | Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories. | Water Shortage Contingency Planning | Section 8.3 | Section 8.3 |
| 10632(a)(4)(A) | Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions. | Water Shortage Contingency Planning | Section 8.4 | Section 8.4 |
| 10632(a)(4)(B) | Specify locally appropriate demand reduction actions to adequately respond to shortages. | Water Shortage Contingency Planning | Section 8.4 | Section 8.4 |
| 10632(a)(4)(C) | Specify locally appropriate operational changes. | Water Shortage Contingency Planning | Section 8.4 | Section 8.4 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 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 | Section 8.4 | 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 | Section 8.4 | Section 8.4 |
| 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 | Section 8.5 | Section 8.5 |
| 10632(a)(5)(B)<br>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 | Section 8.5, 8.6 | Section8.5, 8.6 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10632(a)(7)(A) | Describe the legal authority that empowers the supplier to enforce shortage response actions. | Water Shortage Contingency Planning | Section 8.7 | Section 8.7 |
| 10632(a)(7)(B) | Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3. | Water Shortage Contingency Planning | Section 8.7 | 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 | Section 8.7 | Section 8.7 |
| 10632(a)(8)(A) | Describe the potential revenue reductions and expense increases associated with activated shortage response actions. | Water Shortage Contingency Planning | Section 8.8 | Section 8.8 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 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 | Section 8.8 | Section 8.8 |
| 10632(a)(8)(C) | Describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought. | Water Shortage Contingency Planning | Section 8.8 | Section 8.8 |
| 10632(a)(9) | Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance. | Water Shortage Contingency Planning | Section 8.9 | Section 8.9 |
| 10632(a)(10) | Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented. | Water Shortage Contingency Planning | Section 8.10 | Section 8.10 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 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 | Section 8.11 | Section 8.11 |
| 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) | Section 6.2 | Section 6.2 |
| 10633(c) | Describe the recycled water currently being used in the supplier's service area. | System Supplies (Recycled Water) | Section 6.2 | Section 6.2 |
| 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) | Section 6.2 | Section 6.2 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 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 a description of the actual use of recycled water in comparison to uses previously projected. | System Supplies (Recycled Water) | Section 6.2 | Section 6.2 |
| 10633(f) | Describe the actions which 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) | Section 6.2 | Section 6.2 |
| 10633(g) | Provide a plan for optimizing the use of recycled water in the supplier's service area. | System Supplies (Recycled Water) | Section 6.2 | Section 6.2 |
| 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 | Chapter 7 | Chapter 7 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10635(a) | Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years. | Water Supply Reliability Assessment | Section 7.3 | 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 | Section 7.3 | 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 5 consecutive years. | Water Supply Reliability Assessment | Section 7.3 | 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 | Section 7.3 | Section 7.3 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
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| 10635(b)(3) | Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period. | Water Supply Reliability Assessment | Section 7.3 | Section 7.3 |
| 10635(b)(4) | Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change condition, anticipated regulatory changes, and other locally applicable criteria. | Water Supply Reliability Assessment | Section 7.3 | Section 7.3 |
| 10635(c) | Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR. | Plan Adoption, Submittal, and Implementation | Sections 8.12, 10.4 | Sections 8.12, 10.4 |
| 10642 | Provide supporting documentation that the water 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 | Section 2.6 | Section 2.6 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
|---|---|---|---|---|
| 10642 | Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing. | Plan Adoption, Submittal, and Implementation | Sections 10.2.2, 10.3, and 10.5 | Sections 10.2.2, 10.3, and 10.5 |
| 10642 | The water 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 | Section 10.2 | Section 10.2 |
| 10642 | Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified. | Plan Adoption, Submittal, and Implementation | Section 10.3.1 | Section 10.3.1 |
| 10644(a) | Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library. | Plan Adoption, Submittal, and Implementation | Section 10.5 | Section 10.5 |
| 10644(a)(1) | Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption. | Plan Adoption, Submittal, and Implementation | Section 10.5 | Section 10.5 |

| Water Code Section | Summary as Applies to UWMP | Subject | 2020 Guidebook Location | 2020 UWMP Location |
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| 10644(a)(2) | The plan, or amendments to the plan, submitted to the department shall be submitted electronically. | Plan Adoption, Submittal, and Implementation | Sections 10.4.1 and 10.4.2 | Sections 10.4.1 and 10.4.2 |
| 10645(a) | Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours. | Plan Adoption, Submittal, and Implementation | Section 10.5 | Section 10.5 |
| 10645(b) | Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours. | Plan Adoption, Submittal, and Implementation | Section 10.5 | Section 10.5 |