



**Final Draft**  
2020 Urban Water  
Management Plan

Vallecitos Water District

*San Marcos, California*  
April 26, 2021



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## Acronyms and Abbreviations

Act	The California Urban Water Management Planning Act
AF	acre feet
AFY	acre feet per year
BMP	Best Management Practices
CDP	Carlsbad Desalination Project
CII	commercial, industrial, and institutional
CMWD	Carlsbad Municipal Water District
CUWCC	California Urban Water Conservation Council
CalWEP	California Water Efficiency Partnership
CWC	California Water Code
DWR	Department of Water Resources
ESP	Emergency Storage Program
EWPCF	Encina Water Pollution Control Facility
gpcd	gallons per capita per day
HDR	HDR Engineering, Inc.
HURL	High User Response and Letters
ICP	Integrated Contingency Plan
IRP	Integrated Water Resources Plan
kWh	kilowatt-hours
M	magnitude
MCE	most credible seismic event
MG	million gallons
MGD	million gallons per day
MPE	most probable seismic event
MRF	Meadowlark Reclamation Facility
MWD	Metropolitan Water District of Southern California
NSDWRC	North San Diego Water Reclamation Coalition
OMWD	Olivenhain Municipal Water District
QSA	Quantification Settlement Agreement
Rincon MWD	Rincon del Diablo Municipal Water District
RUWMP	Regional Urban Water Management Plan
SB	Senate Bill
SDCWA	San Diego County Water Authority
SDWD	San Dieguito Water District
SWP	State Water Project
SWRCB	State Water Resources Control Board
UWMP	Urban Water Management Plan
VWD	Vallecitos Water District
WSCP	Water Shortage Contingency Plan
WSDRP	Water Shortage and Drought Response Plan

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# 1 Introduction and Overview

Vallecitos Water District (VWD) is a public agency responsible for supplying water, wastewater collection, and recycled water service to a 45-square mile area within northern San Diego County that includes the City of San Marcos, parts of the cities of Vista, Carlsbad, Escondido, and unincorporated areas within the County of San Diego. Its service area includes the State Highway 78 corridor and is bordered by Interstate 15 on its eastern boundary.

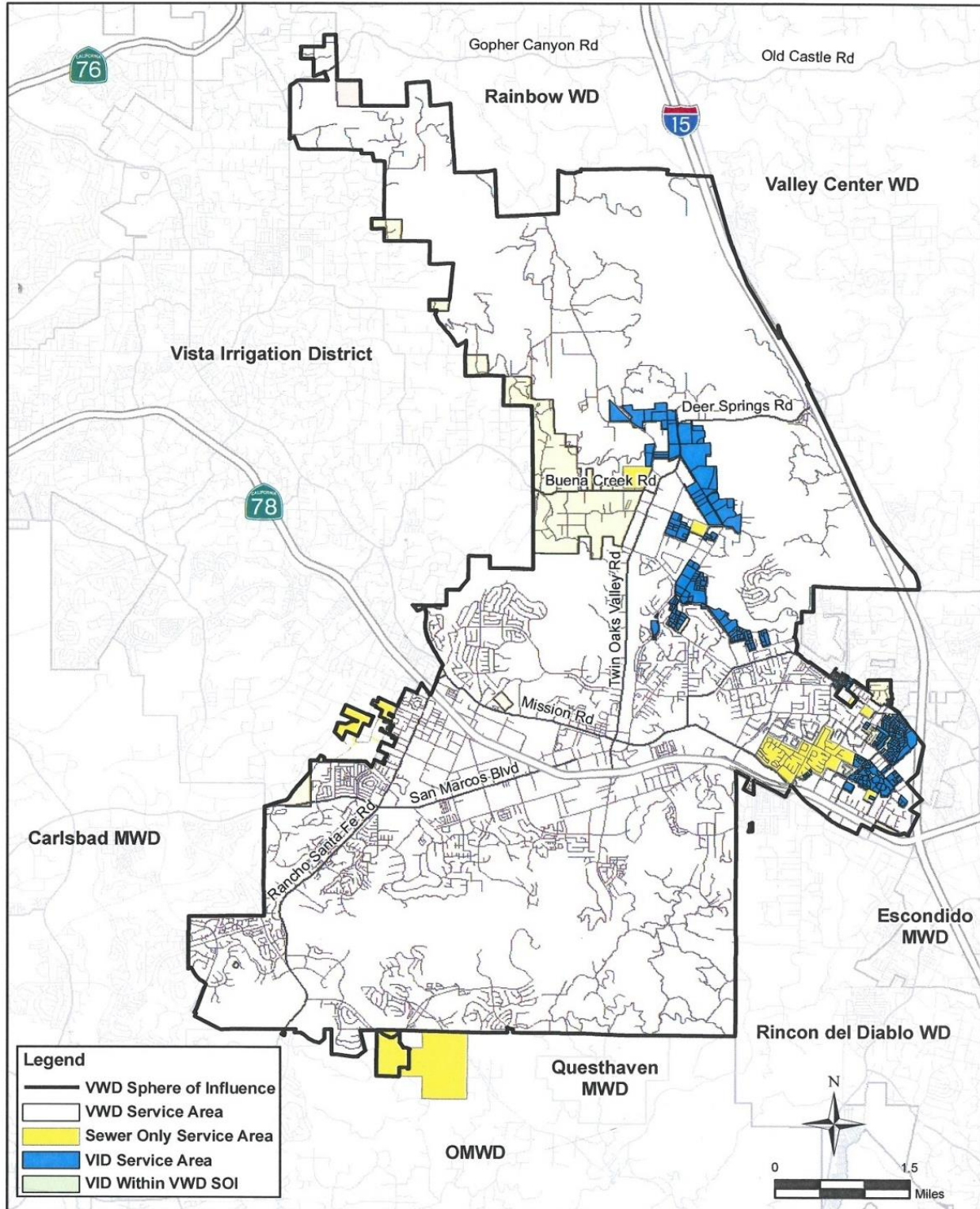
Figure 1-1 illustrates VWD's location and service boundary.

VWD is a member agency of the San Diego County Water Authority (SDCWA) and currently imports or purchases 100 percent of its potable water supply from SDCWA and, more recently, the Claude "Bud" Lewis Desalination Plant in the City of Carlsbad (via SDCWA). Through their SDCWA contract, VWD also pays for raw water treatment at Olivenhain Municipal Water District's (OMWD) David C. McCollom Water Treatment Plant. VWD serves potable water to a current population of 105,741 people, as well as commercial, light industrial, institutional, construction, landscape irrigation, and agricultural customers. VWD also provides wastewater collection services to a 23-square mile area within its water service boundary, as illustrated in Figure 1-2, that serves approximately 88,000 people, as well as commercial, light industrial, institutional, construction, landscape irrigation and agricultural customers.

Over the years, VWD has continued to make great strides to secure a sustainable and reliable water supply for the future. Since 2005, VWD added an additional 40-million-gallon potable water storage reservoir to assist in emergencies and peak demand management. VWD also increased the recycled water capacity at its Meadowlark Water Reclamation Facility from 2.25 million gallons per day (MGD) to 5.0 MGD. VWD has added potable water supply reliability through the purchase of approximately 3,500 acre-feet (AF) per year, or 1,140 million gallons (MG) per year, of desalinated seawater from the Claude "Bud" Lewis Carlsbad Desalination Plant, and through the purchase of approximately 2,750 AF per year (AFY), or 896 MG per year, from the OMWD David C. McCollom Water Treatment Plant. And finally, VWD has implemented aggressive water conservation outreach efforts, which have lowered the overall demand for imported water into the region.

VWD has prepared this 2020 Urban Water Management Plan (UWMP) in accordance with the Urban Water Management Planning Act (California Water Code [CWC] §10610 through 10656). This document covers water loss auditing as dictated by CWC §10608.34, and compliance with Senate Bill (SB) X7-7 as dictated by CWC §10608.16 through §10608.28.

This section will provide an overview of the regulatory process of this UWMP and will provide background information regarding VWD and its service area.

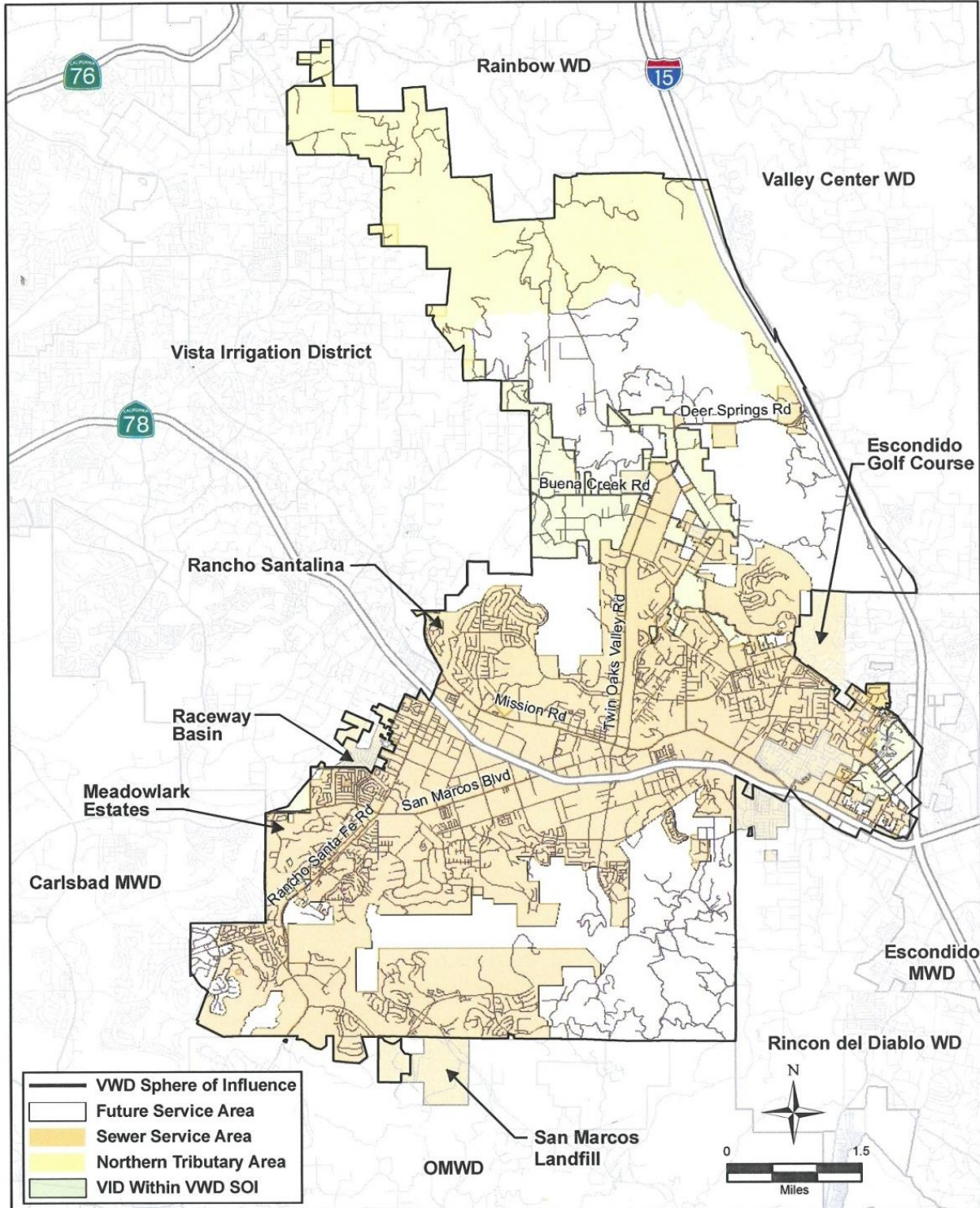


SOURCE: LAFCO SOI - Affirmed 08-06-2007  
 VWD GIS Data - 07-17-2008, provided by District

**WATER SERVICE AREA**

FIGURE 1-1





SOURCE: LAFCO SOI - Affirmed 08-06-2007  
VWD GIS Data - 07-17-2008, provided by District

**WASTEWATER SERVICE AREA**

FIGURE 1-2

## 1.1 Regulatory Overview

The VWD is an independent special district governed by five representatives voted into office by the local citizens within its service boundary. The long-term mission of the District is to meet the needs of its service area effectively and efficiently within the expressed and implied powers provided by law, as stated in its adopted Mission Statement, below.

“The mission of Vallecitos Water District is to serve as water and wastewater specialists, providing exceptional and sustainable services. The District will continue to provide exceptional and sustainable services by:

- Proactively, innovatively, and continuously improving the quality and efficiency of our operations and service;
- Supporting and retaining highly trained staff that is knowledgeable, engaged, team oriented and responsive to the community and other agencies;
- Providing support for the good of the region to remain a respected and active industry partner; and
- Providing continuous outreach and education to our customers on issues and topics that impact the services we provide and our role as water and wastewater specialists.”

The following regulations apply to this 2020 UWMP and have dictated its preparation.

### 1.1.1 California Urban Water Management Planning Act

UWMPs are prepared by California’s urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. The California Urban Water Management Planning Act (Act) requires every urban water supplier that provides water for municipal services to more than 3,000 connections or is supplying more than 3,000 AF of water annually to assess the reliability of its water sources over a 20-year planning horizon, considering normal and dry years. This assessment is to be included in the supplier’s UWMP, which is to be prepared and adopted every 5 years and submitted to the Department of Water Resources (DWR). VWD complied with the Act in 2005, 2010, and 2015 with the adoptions of its 2005 UWMP, 2010 UWMP, and 2015 UWMP, respectively.

DWR’s 2020 UWMP Guidebook for Urban Water Suppliers served as a blueprint during the preparation of this 2020 UWMP.

Significant amendments to the UWMP Act in preparation of the 2020 UWMP include the following:

- 2020 UWMP submittal date change to July 1, 2021.
- The multi-year dry year water reliability planning was modified to include a period equivalent to a drought lasting at least 5 years.
- Assessment of seismic risk to water system facilities or reference to recent multi-hazard mitigation plans.

- Specific requirements for a Water Shortage Contingency Plan (WSCP), including preparation and adoption of a stand-alone document that can be updated more frequently than every 5 years.
- Coordination of groundwater supplies and groundwater sustainability plans.
- Inclusion of a lay description for fundamental sections of the UWMP.

The UWMP Act of 1983, as amended, and the Water Conservation Act of 2009 are included in Appendix A.

### 1.1.2 Senate Bill 7 of the Seventh Extraordinary Session of 2009

The state Legislature passed SB X7-7, referred to as SB7, on November 10, 2009, which became effective February 3, 2010. This law seeks to achieve a 20 percent statewide reduction in urban per capita water use in California by December 31, 2020. The law requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020, an interim water reduction target by 2015, and incorporate this information into the 2010, 2015 and 2020 UWMPs.

Urban water providers such as VWD must include in their 2020 plans the following information: (1) baseline daily per capita water use; (2) urban water use target; (3) interim water use target; and (4) compliance daily per capita water use, including technical basis and supporting data for those determinations.

A Regional Alliance allows individual urban retail water suppliers to combine their individual targets into a regional target. An urban retail water supplier is required to meet either their own or the regional water conservation target to comply with SB7. VWD has entered a Regional Alliance with OMWD, Rincon del Diablo Municipal Water District (Rincon MWD), and San Dieguito Water District (SDWD). A copy of the “Cooperative Agreement to Establish and Carry Out a Regional Alliance in Accordance with Part 2.55 of the California Water Code” is included in Appendix B.

### 1.1.3 Senate Bills 610 and 221

CWC §10910 through 10914 and Government Code §65867.5, 66455.3 and 66473.7 (commonly referred to as SB 610 and SB 221) amended state law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires that the water purveyor of the public water system prepare a water supply assessment to be included in the environmental documentation of large proposed projects including residential developments of more than 500 dwelling units, shopping centers with more than 500,000 square feet, commercial/office projects over 250,000 square feet, and industrial buildings larger than 650,000 square feet of floor area. SB 221 requires affirmative written verification from the water purveyor of the public water system that sufficient water supplies are available for certain large residential subdivisions (greater than 500 dwelling units) of property prior to approval of the tentative map.

VWD has used documentation from the Metropolitan Water District of Southern California (MWD) and SDCWA in preparing the water supply assessments and written verifications required under state law in producing this UWMP.

## 1.2 Changes since the 2015 Urban Water Management Plan

For the 2020 UWMP, the CWC added additional reporting requirements from the 2015 UWMP, including the following:

- Formally preparing and adopting a WSCP
- Evaluating water reliability over a period of 5 consecutive dry years
- Preparation of a Drought Risk Assessment
- Addressing seismic risks
- Reporting energy intensity

While not required by the CWC or amendments to the UWMP Act, this UWMP also addresses information to demonstrate compliance with implementation of California Code of Regulations, Title 23, Policy WR P1: Reduced Reliance on the Delta through Improved Regional Water Reliance in the Delta Plan. The District's documentation for reduced reliance on the Delta is in Appendix F.

## 1.3 Executive Summary

VWD has prepared this 2020 UWMP in accordance and compliance with the UWMP Act. VWD's 2020 UWMP serves as the long-term planning document that will help to ensure a reliable water supply for the region. This Executive Summary satisfies the requirement of CWC Section 10630.5 to include a simple lay description of information necessary to provide a general understanding of the plan, including a description of VWD's reliable water supply, challenges ahead, and strategies for managing reliability risks.

### 1.3.1 Background

VWD is a public agency responsible for supplying water, wastewater collection, and recycled water service to a 27,517-acre area within northern San Diego County that includes the City of San Marcos, parts of the cities of Vista, Carlsbad, Escondido, and unincorporated areas within the County of San Diego. VWD serves potable water to a current population of 105,741 people, as well as commercial, light industrial, institutional, construction, landscape irrigation, and agricultural customers in its service area. The mission of VWD is to serve as water and wastewater specialists, providing exceptional and sustainable services.

Significant amendments to the UWMP Act in preparation of the 2020 UWMP include modifications to multi-year dry year water reliability planning drought periods; addition of seismic risk assessments or reference to recent multi-hazard mitigation plans; specific requirements for the preparation and adoption of a WSCP; coordination of groundwater supplies and Groundwater Sustainability Plans; and inclusion of a lay description for fundamental sections of the UWMP, satisfied by this Executive Summary.

For the 2020 UWMP, the Water Code has added additional reporting requirements from the 2015 UWMP, including formally preparing and adopting a WSCP; evaluating water



reliability over a period of five consecutive dry years; preparation of a DRA; addressing seismic risks; and reporting energy intensity.

### 1.3.2 Plan Preparation

The Act requires urban water suppliers to file plans with the California DWR describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. As required by law, the VWD's UWMP includes projected water supplies required to meet future demands.

VWD is an urban water supplier that provides water for municipal purposes to more than 3,000 customers and supplies more than 3,000 AF of water annually. VWD is a member of the OMWD, Rincon MWD, and SDWD. This 2020 UWMP was prepared as an individual UWMP by VWD in coordination with the other agencies in the Regional Alliance and its wholesale provider SDCWA. To adequately demonstrate regional water supply reliability through the next 25 years, this UWMP quantifies the regional mix of existing and projected local and imported supplies necessary to meet future demands within VWD's service area.

### 1.3.3 System Description

The population within VWD's service area was approximately 105,741 people in 2020 and is projected to increase to roughly 127,195 people by 2045. Approximately 32 percent of VWD's service area is currently residential and represents the majority of VWD's water demands. Most of this is single-family homes, although recent development is trending more toward multi-family residential. In 2020, VWD provided an average of 12.1 MGD of potable water for residential, commercial, light industrial, institutional, construction, landscape irrigation, and agricultural uses. The water service area is approximately 65 percent built-out, with additional development anticipated throughout the timeline of the UWMP.

VWD has over 20,600 sewer service connections and conveys an average 7.5 MGD of wastewater to the Encina Water Pollution Control Facility (EWPCF) or Meadowlark Water Reclamation Facility (MRF) for treatment. Although VWD's sewer service area can be expanded to the same size as VWD's water service area, the rural area between VWD's sewer and service area boundaries is likely to remain on septic systems. It is not likely that VWD's wastewater infrastructure will be expanded to this area in the future.

Climate conditions within VWD's service area represent a semi-arid coastal desert environment, which is characteristically Mediterranean with mild temperatures throughout the year. Prolonged rainstorms are rare. More than 80 percent of the region's rainfall occurs between December and March.

### 1.3.4 System Water Use

In 2020, total water demand in VWD's service area was 4,835 MG. By 2045, VWD's total water demands are projected to reach 8,055 MG. Current and projected water use in VWD is divided into primary categories of single-family residential, multi-family residential, commercial, industrial, institutional, governmental, landscape, and agriculture. There are also secondary categories of water use, including fire line water use, construction water, water exchanges, and other unmetered and unbilled uses. Future water use projections

were generated in the 2018 Water, Wastewater and Recycled Water Master Plan through the planning horizon year 2035 and coordinated with SDCWA projections. The system water use projections include lower income residential demands, which accounted for 4.5 percent of overall water demands in 2020.

VWD is a member of the North San Diego Water Reclamation Coalition (NSDWRC), which is a group of water and wastewater agencies that work together to identify benefits of regionalization of existing and planned recycled water systems to further maximize the use of recycled water. Regionalization of facilities will allow recycled water to play an even more significant role in meeting the future water needs in the north San Diego County area. NSDWRC developed a Regional Recycled Water Facilities Plan, which identified recycled water demands within VWD's service area that could offset potable water use.

### 1.3.5 SB7 Baselines and Targets

The Water Conservation Act of 2009 (also referred to as SB7) required urban retail water suppliers to develop urban water use targets to help reduce per capita water use by 20 percent by the year 2020. For the 2020 UWMP, VWD is required to compare 2020 per capita water use with the SB7 per capita water use baseline developed for the 2010 UWMP and water use targets that were recalculated in the 2015 UWMP.

VWD's 2015 UWMP showed the per capita water use of 117 gallons per capita per day (gpcd), which meets the 2015 interim target of 179 gpcd. The District's 2020 average per capita water use is 125 gpcd also within the 2020 target of 159 gpcd. As a member of a Regional Alliance, individual urban retail water suppliers are permitted to combine their individual targets into a regional target. An urban water supplier is required to meet either their own or the regional water conservation target to comply with SB7. In addition to VWD achieving its targeted reduction for 2020, the Olivenhain Regional is in compliance with its 2020 demand target.

### 1.3.6 System Supplies

VWD currently obtains 100 percent of its water supply from the SDCWA either directly or indirectly and anticipates relying on the SDCWA for a large portion of its water supply in the foreseeable future. Local groundwater supplies have historically not been used by VWD due to uncertain quantity and relatively poor quality. Additionally, VWD does not draw water from streams, lakes, or reservoirs for use in its potable water distribution system. In 2012, VWD expanded its water supply portfolio and operational flexibility by executing two water purchase agreements to obtain desalinated seawater from SDCWA and potable water treatment by OMWD from SDCWA-owned Olivenhain Reservoir.

VWD does not currently supply recycled water to its customers. Because VWD does not maintain a recycled water service area within its sphere of influence, all the recycled water produced and treated at EWPCF and MRF is sold to Carlsbad Municipal Water District (CMWD) and OMWD. However, VWD is actively involved in planning for the use of recycled water in the future. NSDWRC's Regional Recycled Water Facilities Plan identified potential future recycled water demands within VWD's sphere of influence. Short-term expansion projects could deliver a portion of this demand to customers as early as 2025, while the remainder could be developed in a more long-term time frame.



In 2020, VWD's net utility energy intensity was approximately 485 kilowatt-hours of energy used per MG of water. This energy intensity represents data from VWD from 2020 for local distribution.

### 1.3.7 Water Supply Reliability Assessment

The 2020 UWMP presents VWD's water reliability assessments from 2025 through 2045. Consistent with the requirements of the Act, each assessment compares total projected water supply available to VWD over the next 20 years in five-year increments based on three water supply condition scenarios: average/normal water year, single dry water year, and multiple dry water year.

Though VWD is guided by its 2018 Water, Wastewater, and Recycled Water Master Plan to ensure future reliable water supplies, it is dependent on the water supply abilities of its wholesaler, the SDCWA. According to the SDCWA's 2020 UWMP, the SDCWA anticipates meeting all future demands of its member agencies in normal and single dry-year scenarios. However, some level of shortage could potentially be experienced during the multiple dry-year scenarios. The purchase of contracted desalinated seawater supply through SDCWA helps VWD alleviate potential multiple dry-year water shortages. Desalinated water supplies are assumed to be reliable and available even during drought conditions.

The SDCWA reliability assessment reports that adequate water supply is anticipated within the Authority's service area for normal/average and single dry years through 2045. However, supply limitations that arise in multiple dry year scenarios must be addressed through implementation of extraordinary water conservation measures.

#### Single Dry-Year Water Supply and Demand Assessment

Based upon modeling performed by SDCWA, demands are expected to increase slightly in a single dry year. To meet these increased demands, VWD would purchase additional supplies from SDCWA, whose 2020 UWMP anticipates that purchased water would be available to meet these demands. In a single dry water year, supplies and demands would be equal and there would be no surplus or deficit.

#### Multiple Dry-Year Water Supply and Demand Assessment

Based upon modeling performed by SDCWA and local trends in the Authority's service area, demands are expected to increase slightly from normal in each year of the multiple dry year period. To meet these increased demands, VWD would purchase additional supplies from SDCWA, whose 2020 UWMP anticipates that purchased water would be available to meet these demands. However, because there would be a small potential reliability shortfall in the third year of a multiple dry year period, it is anticipated that SDCWA and its member agencies, including VWD, would increase conservation efforts to reduce demands. In all years of a multiple dry-year scenario, supplies and demands would be equal and there would be no surplus or deficit.

#### Drought Risk Assessment

The Act requires a water supplier to include in its 2020 UWMP a drought risk assessment (DRA). VWD's DRA assesses a projected drought over the next five-year period from

2021-2025. Near-term drought reliability of the sources of supply utilized by VWD depends on the drought impact and stress on each supply. The SDCWA 2020 UWMP shows a surplus of water supplies for all demand conditions and has determined that actions under the WSCP would not be necessary.

Seismic impacts to VWD's water supplies are evaluated on a regional scale, as seismic events along the San Andreas and San Jacinto fault systems could limit imported supplies. Impacts to VWD would be greatest with a major seismic event on the Elsinore Fault Zone, which has the potential to cut off treated and/or untreated water from Metropolitan Water District of Southern California to SDCWA for one to three months. Damage from a regional earthquake to imported supply is mitigated by major investments in emergency storage made by SDCWA. SDCWA's Emergency Storage Project includes emergency surface water storage (90,100 AF) and new distribution facilities to allow continued water service to its member agencies during a prolonged regional interruption.

### 1.3.8 Water Shortage Contingency Plan

The WSCP presents VWD's contingency plan to address drought planning, water shortage response levels and actions, and management of water allocations during a declared water emergency. The WSCP has been prepared as a separate plan that can be updated and adopted independent of the UWMP cycle. VWD will conduct an annual water supply and demand assessment and produce an Annual Assessment Report, which will document any anticipated shortage, any triggered shortage response actions, associated compliance and enforcement actions, and communication actions

Shortage response actions included in this WSCP are a mix of prohibitions on end use, consumption reduction methods, supply augmentation, and operational change measures. Customers can select the specific water conservation measures/actions that are most appropriate for their setting; however, customers must abide by water waste prohibitions, water use reductions are mandatory, and monetary penalties may be levied on customers who do not meet reduction goals.

The WSCP also discusses how VWD would respond to a catastrophic event, such as a natural disaster, that results in insufficient water to meet the region's needs or eliminates access to imported water supplies. For increased reliability, VWD subscribes to SDCWA's Integrated Contingency Plan (ICP) and Emergency Storage Program. Both were developed to protect public health and safety and to potentially limit economic damage that could occur from a severe shortage of water supplies. SDCWA's ICP provides information necessary to respond to an emergency that causes severe damage to SDCWA's water distribution system or impedes SDCWA's ability to provide reliable service to its member agencies. Additionally, the SDCWA Water Shortage and Drought Response Plan was developed in conjunction with its member agencies to guide water shortage and drought management activities in the event that the region faces supply shortages due to drought conditions.

### 1.3.9 Demand Management Measures

During the past few decades, conservation has become a vital part of VWD's overall reliability strategy. VWD's combined effort with SDCWA and its fellow member agencies



has yielded increased conservation and water knowledge through education, messaging, and financial incentives for water-efficient devices that benefit the entire region.

VWD's water conservation programs and demand management measures include water waste prevention ordinances; metering; conservation pricing through a tiered water rate structure; public education and outreach; programs to assess and manage distribution system real loss; and residential, commercial and landscape best management practices.

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## 2 Plan Preparation

### **CWC 10617**

*“Urban water supplier” means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. 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...*

### **CWC 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.*

### **CWC 10621**

*(a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.*

*(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.*

VWD retained HDR Engineering, Inc (HDR) to prepare their 2020 UWMP in accordance with the UWMP Act (CWC §10610 through 10656). This UWMP is intended to assess the adequacy of available water supplies that could be required to meet existing and future demands in the VWD service area, previously shown in Figure 1-1. Demands and supplies are assessed for a 25-year planning horizon and various demand scenarios are considered.

VWD prepares an update to its UWMP every five years in accordance with CWC sections 10610 through 10657 of the UWMP Act, which were added by Statute 1983, Chapter 1009, and became effective on January 1, 1984. The UWMP Act, which was Assembly Bill 797, requires that every urban water supplier providing water for municipal purposes to more than 3,000 customers, or supplying more than 3,000 AF of water annually, prepare and adopt a UWMP in accordance with the prescribed requirements.

The UWMP Act requires urban water suppliers to file plans with the California DWR describing and evaluating reasonable and practical efficient water use, reclamation, and conservation activities. As required by law, the Authority’s UWMP includes projected water supplies required to meet future demands. The Authority prepared UWMPs for each cycle, beginning in 1985 through 2015, and filed those plans with the DWR.

## 2.1 Basis and Approach for Preparing the UWMP

### **CWC 10644(a)(2)**

*The plan, or amendments to the plan, submitted to the department ... shall include any standardized forms, tables, or displays specified by the department.*

### **CWC 10608.52**

*(a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.*

*(b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24... The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.*

### **CWC 10620(d)(1)**

*An urban water supplier may satisfy the requirements of this part by participation in area wide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation, efficient water use, and improved local drought resilience.*

### **California Health and Safety Code 116275**

*(h) "Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.*

This 2020 UWMP was formatted to meet current requirements established by the DWR. New requirements for the 2020 UWMP also include requirements addressing several changes made to the CWC, assessments of dry-year water reliability, drought risk, seismic risk, water shortage contingency planning, and groundwater supplies coordination. To facilitate UWMP reviews, the DWR has developed a UWMP Checklist for use by DWR staff in their review of 2020 UWMPs. To expedite DWR's review and ensure completeness of VWD's plan, this checklist has been completed and is included as Appendix C.

VWD is considered an "urban retail water supplier" per CWC Sections 10608 and 10617 as it provides water for municipal purposes to more than 3,000 customers and supplies more than 3,000 AF of water annually through a single public water system. VWD is required to update its plan at least once every five years on or before July 1, in years ending in six and one pursuant to CWC section 10621. Table 2-1 gives the number of connections and volume of water supplied (in million gallons) by VWD for calendar year 2020.



**Table 2-1. Public Water Systems**

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020 (MG)
CA3710002	Vallecitos Water District	22,522	4,835
<b>TOTAL</b>			<b>4,835</b>

Source: DWR 2020

This 2020 UWMP was prepared by VWD in coordination with other agencies as an individual UWMP (Table 2-2). VWD has entered a Regional Alliance with OMWD, Rincon MWD, and SDWD. This Regional Alliance allows individual urban retail water suppliers to combine their individual targets into a regional target. An urban water supplier is required to meet either their own or the regional water conservation target to comply with SB7.

**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 an RUWMP	
✓	Water Supplier is also a member of a Regional Alliance	Olivenhain Regional Alliance
	RUWMP	

RUWMP = Regional Urban Water Management Plan

Source: DWR 2020

All figures in the 2020 UWMP are reported by calendar year and all applicable data is reported in units of MG, as detailed below in Table 2-3.

**Table 2-3. Supplier Identification**

<b>Type of Supplier</b>	
	Supplier is a wholesaler
✓	Supplier is a retailer
<b>Fiscal or Calendar Year</b>	
✓	UWMP tables are in calendar years
	UWMP tables are in fiscal years
<b>Unit of Measurement used in UWMP</b>	
Unit	MG

Source: DWR 2020

## 2.2 Agency Coordination and Outreach

### **CWC 10620(d)(3)**

*Each urban water supplier shall 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.*

### **CWC 10621(b)**

*Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.*

### **CWC 10631(h)**

*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 (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).*

### **CWC 10635(b)**

*The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.*

### **CWC 10642**

*Each urban water supplier shall encourage the 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...*

To adequately demonstrate regional water supply reliability through the next 25 years, this UWMP quantifies the regional mix of existing and projected local and imported supplies necessary to meet future demands within VWD's service area. Although this UWMP includes specific documentation regarding VWD's supplies, plans submitted by wholesalers provide further details that contribute to the diversification and reliability of supplies in the region. This is significant as VWD currently receives 100 percent of its water from the wholesale provider SDCWA.





## 2.2.1 Wholesale, Retail, and Community Coordination

Reasonable consistency among the UWMPs of VWD and its wholesaler is important to accurately identify the projected supplies available to meet regional demands. To facilitate coordination within VWD’s service area, VWD reviewed and provided comments on technical drafts of SDCWA’s UWMP and member agency supply projections, and it provided SDCWA with notification information regarding their 2020 UWMP (Table 2-4). SDCWA further coordinated its effort by working with appropriate wastewater agencies. These agencies helped prepare the water recycling element of its UWMP, which describes the wastewater treatment requirements and water recycling potential for the region.

**Table 2-4. Water Supplier Information Exchange**

The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC Section 10631	
<i>Wholesale Water Supplier Name</i>	
San Diego County Water Authority	

Notes:

VWD has provided SDCWA with its projected water use in 5-year increments for 20 years per CWC §10631. This information is also incorporated in VWD’s 2018 Master Plan and can be found online at <http://www.vwd.org/departments/engineering/capital-facilities/master-plan>.

VWD has coordinated the preparation of its UWMP with other agencies to which it serves water. In accordance with CWC §10620(d)(2), VWD served a 60-day notice to the agencies that have land use jurisdiction within its service area on March XX, 2021 stating that its UWMP is under review and may be revised in concurrence with updated land use information, demand projections, and new legislation. This 60-day notice also stated that a public hearing will be held on June 1, 2021 to receive comments, questions, and suggestions regarding VWD’s 2020 UWMP. VWD advertised this notice in the local newspaper (San Diego Union Tribune) once per week for two consecutive weeks prior to the public hearing. Copies of the 60-day notices are included in Appendix D.

Additionally, VWD made its draft UWMP available for public review on May XX, 2021 and posted the document online at [www.vwd.org](http://www.vwd.org) to engage the involvement of the population within its service area during plan preparation per CWC §10642.

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### 3 System Description

**CWC 10631(a)**

*Describe the service area of the supplier...*

VWD was formed on March 12, 1955 as a water-only district by a group of local farmers who recognized a need for a more substantial water supply to serve the area than the groundwater found in the San Marcos and Twin Oaks Valleys. Originally named the San Marcos County Water District, VWD was initially established as an independent special district pursuant to §30000 et seq., Division 12 of the CWC, with the purpose of bringing outside water into the area through the development and operation of a public water supply system that tapped Colorado River water. With the passage of a \$998,000 bond issue in 1956, water system construction began. Initially, water deliveries from the SDCWA to the San Marcos County Water District were handled through the Buena Colorado Municipal Water District. In 1981, the San Marcos County Water District became a member of the SDCWA, from which it now receives nearly all of its potable water supply. On May 1, 1989, the San Marcos County Water District’s name was changed to the Vallecitos Water District.

#### 3.1 Climate

**CWC 10631(a)**

*Describe the service area of the supplier, including... climate...*

VWD is located in a semi-arid coastal desert environment, which is characteristically Mediterranean with mild temperatures throughout the year. Prolonged rainstorms are rare. More than 80 percent of the region’s rainfall occurs between December and March. The historic average for the area, based on data since 1981, is about 13 inches of rainfall annually, with monthly mean temperatures ranging between 51 degrees during the winter and high of 83 degrees during the summer.

#### 3.2 Service Area Population, Demographics, and Socioeconomics

**CWC 10631(a)**

*Describe the service area of the supplier, including current and projected population ... The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*

VWD is located in northern San Diego County, bounded by OMWD to the south, CMWD to the west, Vista Irrigation District to the northwest, Rainbow Municipal Water District to the north, Valley Center Municipal Water District to the northeast, Rincon MWD to the east, and the City of Escondido to the southeast. VWD’s service area includes corridors on two major freeways. Interstate 15 stretches along VWD’s eastern boundary and State Highway 78 transverses though the middle of its service area.

Approximately 8,845 acres, of VWD’s 27,517 total acres, are currently residential and represent the majority of VWD’s water demands. Most of this is single-family homes, although recent development is trending more toward multi-family residential. VWD’s residential population has steadily raised over the past 4 decades. According to the San Diego Association of Governments forecast, VWD’s residential population has steadily raised over the past 4 decades. According to the San Diego Association of Governments forecast, VWD’s water service population will continue to increase from 105,741 in 2020 to 127,195 by the year 2045. Table 3-1 shows the current and projected water service population in 5-year increments over the next 20 years.

**Table 3-1. Population – Current and Projected**

	2020	2025	2030	2035	2040	2045 (opt)
<b>Population Served</b>	105,741	108,371	110,484	111,370	120,813	127,195

Notes: As estimated by the San Diego Association of Governments using Series 14 Growth Forecast (version 17) population data and data received by SDCWA

VWD’s 2020 Comprehensive Annual Financial Report noted that the portions of the City of San Marcos and San Diego County within VWD’s service area had a 2020 median per capita income of \$66,271 with a reported unemployment rate of 6.1 percent. The largest employers within the County of San Diego, making up nearly 10 percent of total employment, include the Naval Base San Diego, University of California San Diego, Sharp Healthcare, the County of San Diego, and San Diego Unified School District.

### 3.3 Water Service

VWD serves a 27,517 acre (45 square miles) potable water service area, as illustrated in Figure 1-1. VWD has approximately 22,522 water meters that delivered over 4,400 MG of potable water in 2020, not including losses. Currently, VWD delivers water through 356 miles of pipeline and operates 10 pump stations and 19 potable water storage reservoirs ranging in size from 350,000 gallons to 40 MG. VWD’s total operational storage capacity is 120.5 MG. In 2020, VWD provided an average of 12.1 MGD of potable water for residential, commercial, light industrial, institutional, construction, landscape irrigation, and agricultural uses. The water service area is approximately 60 percent built-out, and additional development is anticipated throughout the timeline of the UWMP.

### 3.4 Wastewater and Recycled Water Service

In 1958, an improvement district was formed to finance the construction of a wastewater collection system. A second improvement district was formed that same year to finance the construction of a wastewater treatment plant, which was completed in 1961. This treatment plant, now known as the MRF, was retrofitted in the early 1980s with upgraded treatment technologies and a wastewater treatment and recycled water production capacity of up to 2.25 MGD. Upgrades completed in 2008 brought MRF to its current 5.0 MGD capacity.

Today, VWD serves a sewer service area of 14,750 acres (23 square miles) that is currently much smaller in size than the water service area, as shown in Figure 1-2. This

sewer service area can be expanded to the same size as VWD's water service area through annexation of the additional parcels. However, because of its rural nature and land use designations, the Northern Tributary Area is an area that is likely to remain on septic systems; therefore, it is not likely to be an area where VWD's wastewater infrastructure will be expanded to in the future. The total size of the ultimate sewer service area is expected to be approximately 17,400 acres (square miles). The wastewater service area is approximately 65 percent built-out, and additional development is anticipated throughout the timeline of the UWMP.

VWD has over 20,600 sewer service connections with 4 lift stations and 255 miles of pipeline. The average wastewater flow in VWD's service area is currently 7.5 MGD. This wastewater is conveyed to either the EWPCF or to MRF for treatment. VWD owns approximately 23 percent of EWPCF. Expansion of MRF was completed in 2008, increasing its recycled water production capacity to 5 MGD. The CMWD and OMWD purchase 4.5 MGD for non-potable purposes such as landscape irrigation.

Although VWD produces up to 5 MGD of recycled water at MRF and maintains the 54 MG Mahr Reservoir for recycled water storage, VWD does not maintain a recycled water service area within its sphere of influence. All the recycled water produced is sold to CMWD and OMWD. CMWD originally contracted for up to 2.0 MGD during peak summer months and, in 2003, increased that amount to 3.0 MGD. As part of that agreement, VWD also provides CMWD with up to 32 MG of recycled water storage in the Mahr Reservoir. OMWD also contracts for up to 1.5 MGD of recycled water and 16 MG of recycled water storage in the Mahr Reservoir. Excess recycled water is disposed of through a failsafe pipeline that connects to the ocean outfall at the EWPCF.



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## 4 System Water Use

### **CWC 10631(d)(1)**

*For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following: single-family residential; multifamily; commercial; industrial; institutional and governmental; landscape; sales to other agencies; saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; agricultural; distribution system water loss. The water use projections shall be in the same five-year increments described in subdivision (a).*

This section describes VWD's water system demands, including current water use and future demand forecasts. VWD water demands are primarily residential but also include commercial, industrial, institutional, landscape, and agricultural irrigation. VWD has approximately 22,522 water meters that delivered over 4,400 MG of potable water in 2020, not including losses.

### 4.1 Water Uses

Current and projected water use in VWD is divided into seven primary categories: single-family residential, multi-family residential, commercial, industrial, institutional, governmental, landscape, and agriculture. There are also four secondary categories of water use, including fire line water use, construction water, water exchanges to the neighboring Vista Irrigation District, OMWD and CMWD, and other unmetered and unbilled uses. And finally, there are system losses that account for the difference between actual water deliveries to VWD from its wholesaler and the actual water demands as measured from customer water meters.

#### 4.1.1 Current Water Use

Current water use for VWD was evaluated by examining the monthly metered water deliveries during calendar year 2020. VWD provided an average of 12.1 MGD of potable water to residential, commercial, light industrial, institutional, construction, landscape irrigation, and agricultural uses in calendar year 2020. It should be noted that this average demand figure does not include water consumption through fire lines, construction meters, water exchanges, or other end delivery facilities that are typically unbilled uses such as fire hydrant testing or system flushing. System and billing losses account for approximately 8 percent of the annual volume of potable water delivered from the SDCWA.

VWD serves a predominantly residential community, where approximately 65 percent of the water use is single-family and multi-family residential. Table 4-1 summarizes the demands by use type and a summary of their 2020 demands.

**Table 4-1. Demands for Potable and Non-Potable Water – Actual**

Use Type	2020 Actual		
	Additional Description	Level of Treatment When Delivered	Volume (MG)
Single Family		Drinking Water	2,136
Multi-Family		Drinking Water	741
Commercial		Drinking Water	342
Industrial		Drinking Water	40
Landscape		Drinking Water	842
Agricultural Irrigation		Drinking Water	201
Losses		Drinking Water	400
Other Potable	Fire Lines	Drinking Water	89
Other Potable	Construction Water	Drinking Water	24
Other Potable	Unmetered Unbilled	Drinking Water	22
<b>TOTAL</b>			<b>4,835</b>

Notes:

The volumes for real losses, apparent losses and unmetered unbilled demands were generated using the AWWA Water Audit Software.

### Projected Water Use

Future water use projections were generated in the 2018 Water, Wastewater and Recycled Water Master Plan (Master Plan) through the planning horizon year 2035 and coordinated with SDCWA projections. The following steps were utilized in developing future water demand projections:

- The approved land use coverage and zoning maps were provided by the land use agencies.
- In VWD’s Geographic Information System database, all parcels in VWD’s service area were attributed with their approved land use condition and unit water demands.
- Ultimate demand projections were then estimated by applying the appropriate unit water demands to all parcels identified as being served by VWD, or another agency through an exchange agreement.
- Demand projections for years 2025, 2030, and 2035, were updated by applying the San Diego Association of Governments Regional Growth Forecast Series 14 Update coverage to these ultimate demand projections. 2040 and 2045 projects were extrapolated based on land use data and SANDAG ultimate growth projections





Table 4-2 presents the projected future potable water demands for VWD in 5-year increments up to the year 2045. The ultimate future build-out water demand projection for VWD is approximately 8,055 MG per year.

**Table 4-2. Demands for Potable and Non-potable Water – Projected**

Use Type	Projected Water Use (MG)				
	2025	2030	2035	2040	2045 (opt)
Single Family	2,803	2,911	3,023	3,235	3,557
Multi-Family	973	1,010	1,049	1,123	1,235
Commercial	448	466	484	517	569
Industrial	53	55	57	61	67
Landscape	1,105	1,147	1,191	1,275	1,402
Agricultural irrigation	263	274	284	304	334
Losses	525	545	566	606	666
Fire Lines	117	122	127	136	149
Construction Water	31	33	34	36	40
Unmetered Unbilled	29	30	31	33	36
<b>TOTAL</b>	<b>6,347</b>	<b>6,592</b>	<b>6,845</b>	<b>7,325</b>	<b>8,055</b>

Notes:

### Recycled Water

VWD is a member of the NSDWRC, which is a group of water and wastewater agencies that work together to identify benefits of regionalization of existing and planned recycled water systems to further maximize the use of recycled water. Regionalization of facilities will allow recycled water to play an even more significant role in meeting the future water needs in the north San Diego County area. The agencies involved in the NSDWRC include the OMWD, CMWD, San Elijo Joint Powers Authority, Leucadia Wastewater District, City of Oceanside, VWD, City of Escondido, Rincon MWD, and Santa Fe Irrigation District.

On February 6, 2013, the NSDWRC released a revised Regional Recycled Water Facilities Plan that identified new local and regional recycled water projects that could provide additional recycled water supplies to the local water agencies beyond what they could utilize individually. The NSDWRC developed a project feasibility study in 2017 that documented the recycled water facilities and demands for the NSDWRC regional recycled water project that included interagency connections to increase the capacity and connectivity of the agencies' combined recycled water storage and distribution systems. The Regional Recycled Water Facilities Plan and projected recycled water demands are further covered in Section 6; however, for the purpose of total water demand projections, it is important to note that the Regional Recycled Water Facilities Plan identified recycled water demands within VWD's service area that could offset potable water use. Table 4-3 lists the existing 2020 and projected future total water demands that include both potable and recycled (non-potable) water.

**Table 4-3. Total Gross Water Use (Potable and Non-Potable)**

	Total Water Use (MG)					
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable	4,835	6,347	6,592	6,845	7,325	8,055
Recycled Water Demand	0	471	471	471	771	771
<b>Total Water Use</b>	4,835	<b>6,818</b>	<b>7,063</b>	<b>7,316</b>	<b>8,096</b>	<b>8,826</b>

Notes: Projected recycled water demands taken from the North San Diego Water Reuse Coalition's Regional Recycled Water Facilities Plan, revised on February 6, 2013.

## 4.2 Distribution System Water Losses

Table 4-4 displays VWD's estimated real and apparent water loss. These are system losses that account for the difference between actual water deliveries to VWD from its wholesaler and the actual water demands as measured from customer water meters. Based on the production and sales data for 2020, the total volume of water lost was 396 MG.

**Table 4-4. 12 Month Water Loss Audit Reporting**

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss* (MG)
01/2016	285
01/2017	454
01/2018	221
01/2019	266
01/2020	396

VWD's 2016 through 2019 water loss estimates were determined by utilizing the American Water Works Association Free Water Audit Software. A copy of the VWD 2019 validated audit can be found in Appendix E.

## 4.3 Future Water Demand Projections

### **CWC 10631.1(a)**

*The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.*

Future potable water demand projections are based on the estimates used in the VWD 2018 Water, Wastewater, and Recycled Water Master Plan and coordinated with

SDCWA’s projections for its member agencies. Future recycled water demand projections are based on the North San Diego County Regional Recycled Water Project’s Regional Recycled Water Facilities Plan, revised on February 6, 2013. Future water savings are not included in the demand projections in Table 4-1 through Table 4-3. Instead, Sections 8 and 9 will describe VWD’s approach for dealing with the projected deficiency between water demands and supplies. This approach includes the use of a water shortage contingency plan, tiered water pricing, enforcement actions, and the use of demand management efforts to reduce demands on VWD’s water supply.

VWD has obtained lower income residential (those households with an income below 80 percent of the area’s median income, adjusted for family size) locations within its service area from the general plans of the County of San Diego, the City of San Marcos, the City of Vista, the City of Carlsbad, and the City of Escondido. These lower income residential demands are included in the projections given in this section.

**Table 4-5. Inclusion in Water Use Projection**

	Yes/No
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes

For calendar year 2020, the total estimated water use for lower income residents was 218 MG, or 4.5 percent of overall water demands. Demand projections for lower income residents is estimated as follows:

- 2025 – 286 MG
- 2030 – 297 MG
- 2035 – 308 MG
- 2040 – 330 MG
- 2045 – 362 MG

## 4.4 Wholesale Water Use

VWD coordinated with SDCWA to provide anticipated demands for wholesale supplies. Section 6 provides information about anticipated demands on supplies from the SDCWA through 2045. These values were calculated as the difference between VWD’s demands and verifiable local supplies.

## 4.5 Climate Change Considerations

### **CWC 10631(b)(1)**

*For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.*

Climate variability is expected to affect both demands and supplies across the VWD service area over the UWMP planning horizon. While climate change impacts can be expected, the extent to which the hydroclimatic changes will affect water resources is uncertain. As droughts in California increase in frequency and intensity due to climate change, water suppliers will need to implement stronger demand management strategies, including conservation mandates, to combat potential shortages. In addition to water supply availability due to drought, sea level rise and water management strategies resulting from climate change are also a concern.

Climate change is a significant ongoing issue to water utilities and state and federal legislators. The state is experiencing increased weather extremes and variability due to climate change that have led to significant deviations from historical averages impacting water supply planning on all levels. As noted in the 2019 San Diego Integrated Regional Water Management Plan, climate change may affect water supply availability because of droughts, seawater intrusion, changes in precipitation volumes and timing, altered fire and weather regimes, and potential changes in the availability of imported water supplies. Water quality degradation and sea level rise are also water management concerns attributed to climate change in the region.

VWD is a member agency within SDCWA's jurisdiction and supports initiatives that SDCWA is incorporating into its water management planning through SDCWA involvement in the Water Utility Climate Alliance and San Diego Regional Climate Collaborative. The 2019 San Diego Integrated Regional Water Management Plan also includes strategies for regional water planning and the program supports grant funding for supply projects, including the NSDWRC Project.

## 5 SB7 Baselines and Target Compliance

### **CW 10608.20(a)**

*(1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011.*

*(2) It is the intent of the Legislature that the urban water use targets described in paragraph (1) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.*

This section presents the methods and results of calculating VWD's baseline water use and targets for 2020 as required by the Water Conservation Act of 2009 (also referred to as SB7). A description of compliance with the 2020 target is also provided. VWD has completed the DWR required SBX7-7 tables to confirm compliance; those tables are included in Appendix C.

On November 10, 2009, California Governor Arnold Schwarzenegger signed into law a comprehensive water package made up of four bills, including SB7. SB7 mandates conservation targets for all urban retail water entities supplying potable municipal water to more than 3,000 end users or delivering more than 3,000 AF of potable water per year to end users. The conservation targets of 20 percent by 2020 on a gpcd water use basis must be complied with to be eligible for state water grants and loans. VWD is not subject to agricultural-related provisions of SB7 as VWD supplies agricultural water to less than 10,000 acres.

This section includes analysis for VWD's baselines and targets, as well as Regional Alliance targets to meet SB7 mandates for 2020. Section 2.55 of the CWC allows agencies to form a Regional Alliance and establish a regional target to satisfy SB7. The Regional Alliance includes three additional water agencies: OMWD, SDWD, and Rincon MWD. A "Cooperative Agreement to Establish and Carry Out a Regional Alliance in Accordance with Part 2.55 of the California Water Code" is attached in Appendix B.

### 5.1 Baselines and Targets

SB7 required water agencies to reduce 2010 per capita water use by 20 percent by the year 2020, which is commonly referred to within the water industry as 20x2020. In the 2010 UWMP, VWD developed a per capita water use baseline, and established water use targets for 2015 and 2020. For the 2020 UWMP, VWD is required to compare 2020 per capita water use with targets recalculated in the 2015 UWMP.

CWC §10608.12 states that urban retail water suppliers that used less than 10 percent recycled water in 2008 must utilize a 10-year baseline period for measuring its SB7 compliance that ends no earlier than December 31, 2004 and no later than December 31, 2010. Because VWD did not use recycled water within its service area in 2008, it utilized a 10-year baseline period between calendar years 1999 and 2008, which provided for the highest average baseline water usage by VWD customers and resulted in a 10-year baseline water use of 199.2 gpcd.

CWC §10608.12(b) also required that urban retail water suppliers calculate water use on a per-capita basis for a 5-year baseline period that ends no earlier than December 31,

2007 and no later than December 31, 2010. This 5-year period confirms that the selected 2020 compliance target meets the intent of CWC §10608.22, which states that an urban retail water supplier’s per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use. The 5-year baseline period range utilized by VWD was between 2004 and 2008 and resulted in a 5-year baseline water use of 198 gpcd.

DWR had established four technical methodologies for water suppliers to use in determining their SB7 water use targets. VWD chose Method 1 (80 percent of the baseline per capita water usage) and calculated the baseline and target consistent with guidance provided by DWR, which was 159.4 gpcd.

**Table 5-1. Baseline and Target Summary**

Baseline Period	Start Year	End Year	Average Baseline*	Confirmed 2020 Target*
10-15 Year	1999	2008	199	159.4
5 Year	2004	2008	198	159.4

Note:

\*All values are in gpcd.

## 5.2 2020 Compliance Daily Per Capita Water Use

VWD’s 2015 UWMP showed the per capita water use of 117 gpcd, which meets the 2015 interim target of 179 gpcd. VWD’s 2020 average per capita water use is 125 gpcd and is also within their 2020 target of 159 gpcd (Table 5-2).

**Table 5-2. 2020 Compliance**

Actual 2020*	Total Adjustments*	Adjusted 2020*	2020 Confirmed Target*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
125	0	125	159	Yes

Note:

\*All values are in gpcd

## 5.3 Regional Alliance Target

Urban retail water suppliers are eligible to form a regional alliance in accordance with CWC §10608.28(a) if the suppliers meet at least one of several specified criteria, such as (1) the suppliers are recipients of water from a common wholesale water supplier, or (2) the suppliers are located within the same hydrologic region, which for purposes of a regional alliance refers to the 10 hydrologic regions as shown in the California Water Plan.

VWD has formed a regional alliance with OMWD, SDWD, and Rincon MWD pursuant to CWC Section 10608.28(a) to cooperatively determine and report progress toward achieving their water use targets on a regional basis. All of these agencies are recipients of water from a common wholesale water supplier, in this case the SDCWA, and all of the



members are located within the South Coast Hydrologic Region as shown in the California Water Plan. Figure 5-1 illustrates the service areas of these agencies.

These agencies have entered into a cooperative agreement to establish and carry out a regional alliance, and they have jointly notified DWR of the formation of their regional alliance (this agreement is included in Appendix B). Furthermore, each member of the regional alliance has developed its own urban water use target for the year 2020 and documented compliance with the 2020 water use target, along with other supporting data and determinations, all of which is included in each member’s individual UWMP.

The Regional Alliance urban water use target was created using Option 1, which is based on the weighted average, by population, of the Regional Alliance agencies’ individual urban water use and interim urban water use targets. The Regional Alliance had a weighted 10-year baseline water demand of 253 gpcd.

To obtain the Regional Alliance weighted average 2020 target demand, the same weighted averaging approach was utilized, this time using the individual agencies’ 2020 target water demands. The Regional Alliance has a weighted 2020 demand target of 204 gpcd.

Actual 2020 water demands for the Regional Alliance agencies and the weighted average actual demand are shown below.

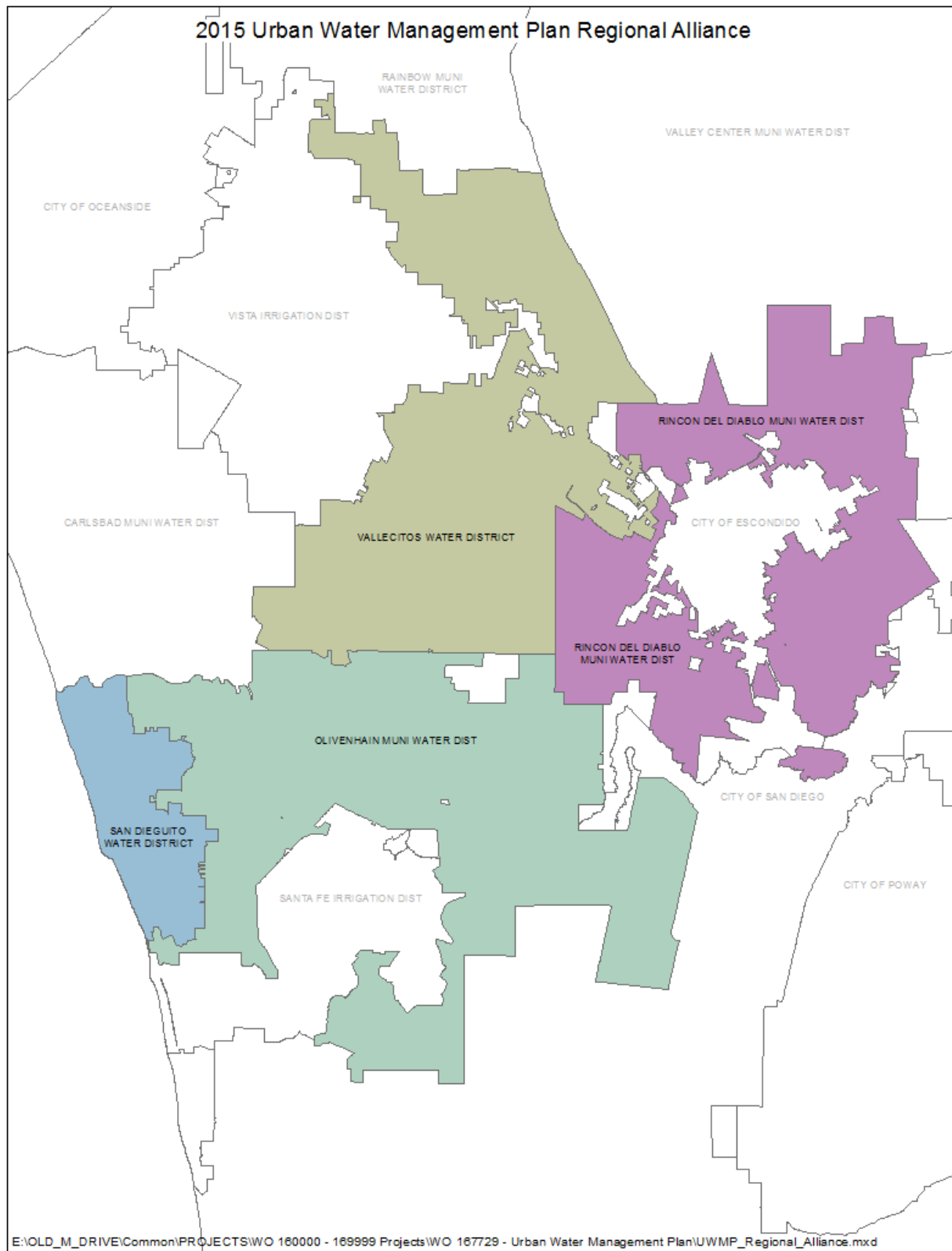
**Table 5-3. SB7 Regional Alliance – 2020 gpcd (Actual)**

Participating Member Agency Name	2020 Actual gpcd <sup>1</sup>	2020 Population	(2020 gpcd) x (2020 Population)	Regional Alliance 2020 gpcd (Actual)
OMWD	206	72,179	14,868,874	
Rincon MWD	135	32,019	4,322,565	
San Dieguito WD	129	37,856	4,883,424	
VWD	125	105,741	13,217,625	
<b>Regional Alliance Totals</b>	<b>595</b>	<b>247,795</b>	<b>37,292,488</b>	<b>150</b>

Note:

1 All participating agencies must submit individual SB7 tables, as applicable, showing the individual agency’s calculation. These tables are SB7 Tables 0 through 6, Table 7, any required supporting tables (as stated in SB7 Table 7), and SB7 Table 9, as applicable. These individual agency tables will be submitted with the individual or Regional Urban Water Management Plan.

Figure 5-1. Regional Alliance Agencies







The Regional Alliance did not make an economic adjustment to its 2020 actual water demands. The summary of results included on Table 5-4 show that the Regional Alliance is in compliance with the 2020 demand target.

**Table 5-4. SB7 Regional Alliance – 2020 Compliance**

2020 Actual gpcd	Optional Adjustment for Economic Growth <sup>1</sup>	Adjusted 2020 Actual gpcd	2020 Target gpcd <sup>2</sup>	Did Alliance Achieve Targeted Reduction for 2020?
150	0	150	204	Yes

Notes:

- 1 Adjustments for economic growth can be applied to either the individual supplier’s data or to the aggregate regional alliance data (but not both), depending on availability of suitable data and methods.
- 2 2020 Target gpcd will be taken from the Regional Alliance’s SB7 Verification Form, Weighted Target Table.

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## 6 System Supplies

### **CWC 10631**

*(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information...*

Since its formation in 1955, VWD has received 100 percent of its water supply from the SDCWA, of which it is one of 24 member agencies. SDCWA, in turn, obtains most of its water from the MWD, which obtains its water from the Sacramento-San Joaquin Delta in Northern California via the State Water Project, and from the Colorado River via the Colorado River Aqueduct. VWD is fully aware how uncertain these water supplies have become. VWD's 2007 Integrated Water Resources Plan (IRP) and the 2018 Master Plan analyzed several local water supply alternatives to supplement its existing SDCWA water supply, including seawater desalination, recycled water purchasing, treated water purchases from other agencies, and groundwater feasibility. Starting in 2012, VWD acted on these IRP recommendations and has executed two separate agreements to expand its water supply portfolio.

This section describes VWD's existing and proposed water supply resources. VWD's own wastewater and recycled water systems are also discussed. And finally, this section discusses other local water supply alternatives that VWD's IRP and Master Plan recommended for further study.

### 6.1 Purchased or Imported Water

As stated in this section's introduction, VWD has traditionally received 100 percent of its water supply from the SDCWA. But starting in 2012, VWD executed two water purchase agreements that, while still technically water purchases, have significantly expanded its water supply portfolio and operational flexibility. These include the commitment to purchase at least 1,140 MG per year of desalinated seawater from the SDCWA and at least 900 MG per year of potable water treatment from the OMWD. All VWD's supply sources are further described below.

#### 6.1.1 SDCWA Description and Supplies

The SDCWA was established pursuant to legislation adopted by the California State Legislature in 1943 to provide a supplemental supply of water as the region's civilian and military population expanded and local resources became insufficient to meet the region's water supply needs. Before 1947, the San Diego region relied on local surface water runoff in normal and wet weather years and on groundwater pumped from local aquifers during dry years when stream flows were reduced. In 1947, water began to be imported from the Colorado River via a single pipeline that connected to MWD's Colorado River Aqueduct.

Since 1950, the SDCWA became more reliant on imported water supplies from MWD to meet the needs of its member agencies. After experiencing severe shortages from MWD during the 1987 to 1992 drought, the SDCWA began aggressively pursuing actions to diversify the region's supply sources. These include the Water Conservation and Transfer

Agreement with the Imperial Irrigation District in 1998, the lining of the All-American and Coachella Canals, and the purchase of a water supply from the Carlsbad Desalination Project.

Imported water supplies are delivered to the SDCWA member agencies through a system of large-diameter pipelines, pumping stations, and reservoirs. The pipelines that deliver supplies from MWD are divided into two aqueduct alignments, both of which originate at Lake Skinner in southern Riverside County and run in a north to south direction through the SDCWA service area. MWD's ownership of these pipelines extends to a "delivery point" 6 miles into San Diego County. From there, Pipelines 1 and 2 comprise the First Aqueduct, which reaches from the delivery point to the San Vicente Reservoir. Pipelines 3, 4, and 5 form the Second Aqueduct, which provides VWD with the majority of its potable water supply.

The SDCWA has also focused on developing local and alternate water supplies.

### 6.1.2 SDCWA-Imperial Irrigation District Water Conservation and Transfer Agreement

From 1998 to 2003, the SDCWA entered into a series of agreements to obtain a portion of the Imperial Irrigation District's allocation of Colorado River water. The series of agreements resulted in the SDCWA initially receiving 10,000 AFY of water from the Imperial Irrigation District in 2003, with the volume increasing annually until it reaches 200,000 AFY in 2021. In 2015, the SDCWA received 100,000 AF of water. The initial term of the transfer agreement is 45 years, with a provision that either agency may extend the agreement for an additional 30-year term.

More information regarding the project's cost and financing, the Quantification Settlement Agreement, or other related contracts can be found in the Water Supply sections of MWD's 2015 Regional Urban Water Management Plan and SDCWA's 2015 Urban Water Management Plan.

### 6.1.3 All-American Canal and Coachella Canal Lining Projects

As part of the 2003 Quantification Settlement Agreement, the SDCWA contracted for 77,700 AFY of conserved water from projects that lined portions of the All-American and Coachella Canals. Deliveries of conserved water from the Coachella Canal reached the region in 2007 and deliveries from the All-American Canal reached the region in 2010. The project reduced the loss of water that occurred through seepage, and the conserved water is now delivered to the SDCWA.

The Coachella Canal project constructed a 37-mile-long parallel canal adjacent to the existing Coachella Canal. The lining of the All-American Canal project constructed a concrete-lined canal parallel to the 24 miles of the existing All-American Canal. The combined conserved water from both projects will provide the San Diego region with an additional 8.5 million AF over the 110-year life of the agreement.

The October 10, 2003 exchange agreement between the SDCWA and MWD provides for the delivery of conserved water from the canal lining projects. SDCWA pays MWD applicable wheeling rates. In the exchange agreement, MWD will deliver the canal lining water for the entire 110-year term of the Allocation Agreement.

More information on the cost and financing, contracts, and other information related to All-American Canal and Coachella Canal Lining Projects can be found in the Water Supply sections of MWD's 2015 Regional Urban Water Management Plan and SDCWA's 2015 Urban Water Management Plan.

#### 6.1.4 Carlsbad Seawater Desalination Facility

To continue to diversify its future water resource portfolio and provide a new drought-proof water source, the SDCWA identified seawater desalination as a potential supply for meeting future demands. The Carlsbad Desalination Facility is a fully operational, private desalination plant located at the Encina Power Station site in the City of Carlsbad. The plant was constructed and is owned by Poseidon Resources Corporation. The plant was operational on December 23, 2015.

The Carlsbad Desalination Facility now provides a highly reliable local supply of 18,250 MG per year of potable water supply for the region, available in both normal and dry hydrologic conditions. A 54-inch pipeline conveys product water from the desalination plant 10.5 miles east to the SDCWA's Second Aqueduct. The water is then conveyed 5 miles north to the SDCWA's Twin Oaks Valley Water Treatment Plant facility, where it is blended with treated imported water and subsequently distributed into SDCWA's existing aqueduct system.

More information on cost and financing, contracts, and other information related to the Carlsbad Seawater Desalination Facility can be found in the Section 4 of the SDCWA's 2015 UWMP.

#### 6.1.5 Additional VWD Water Sources

VWD currently obtains 100 percent of its water supply from the SDCWA either directly or indirectly. VWD anticipates relying on the SDCWA for a large portion of its water supply in the foreseeable future.

On August 25, 2015, VWD executed a water purchase agreement with the SDCWA to obtain at least 1,140 MG per year of desalinated seawater. This provides VWD with a drought-proof, high quality potable water supply that also can serve VWD during an emergency outage of the SDCWA aqueduct system. Although desalinated water has these reliability benefits, it is still considered a water purchase from SDCWA.

On November 21, 2012, VWD's Board of Directors authorized the execution of a water purchase agreement with OMWD for the purchase of at least 2,750 AF of treated water per year. The WPA benefits OMWD by allowing their treatment plant to operate more efficiently by reducing unused capacity. VWD benefits by the following:

1. Reduced treatment costs, allowing a partial offset to future increased costs from desalinated water.
2. Increases VWD's water portfolio by adding a supplier and a supply point.
3. Receives water in the south end of the District, avoiding power costs associated with pumping from northern reservoirs.

4. Reduces nitrification issues in the District's southern reservoirs. Less nitrification frees staff and saves on treatment chemical costs. The water will only be a few minutes old instead of days old (from Lake Skinner).
5. Supplies a water source during SDCWA potable aqueduct shutdowns.

OMWD treats raw water from Olivenhain Reservoir, which is owned by the SDCWA. As with the desalinated water agreement, this water purchase agreement with OMWD relies on SDCWA-controlled water sources and thus is also an indirect SDCWA water supply.

## 6.2 Groundwater

### **CWC 01631(b)(4)**

*If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information: the current version of any groundwater management plan adopted by the urban water supplier, a description of any groundwater basin or basins from which the urban water supplier pumps groundwater, a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years, and a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years.*

Historically, local groundwater supplies have not been used by VWD due to questionable quantity and relatively poor quality. In 1996, a draft groundwater feasibility analysis was performed for VWD to determine the quantity and quality of groundwater potentially available for use as a local groundwater supply source.

The draft groundwater feasibility analysis determined that the volume of water stored in the fractured bedrock aquifer beneath the VWD service area likely ranges between 97,000 and 389,000 AF. The estimated volume of water stored in the combined alluvium and residuum units likely ranges between 9,700 and 38,600 AF. Groundwater yields for wells would likely be small, averaging about 114 gallons per minute.

Groundwater quality in the aquifer is characterized by moderately high levels of total dissolved solids and occurrences of relatively high concentrations of bicarbonate, sodium, chloride, and nitrate. The groundwater would require treatment prior to introduction into VWD's potable water distribution system.

The 1996 draft groundwater feasibility analysis concluded that the storage capacity of the alluvium and residuum is too small to be considered as a long-term source, although the fractured bedrock aquifer may be considered further as a possible source. However, the expected yields from wells in the VWD service area, combined with the water quality issues that would need to be resolved, would not be likely to produce groundwater at an economically viable rate even in the short-term.

VWD funded an updated groundwater supply alternatives study completed in 2019 for investigating the potential for utilizing the San Marcos Groundwater Basin as a future water supply source. The study determined that a 250 AFY groundwater desalter project may be feasible if costs are less than the cost of purchasing desalinated water through SDCWA and recommended VWD monitor their current supplies until further studies and funding options are evaluated.

## 6.3 Surface Water

VWD does not draw water from streams, lakes, or reservoirs for use in its potable water distribution system. As mentioned in Section 6.1, VWD currently obtains 100 percent of its water supply from the SDCWA either directly or indirectly. There are no plans for VWD to self-supply surface water as part of its water supply.

## 6.4 Stormwater

VWD does not divert stormwater for beneficial use within its potable water distribution system. VWD currently obtains 100 percent of its water supply from the SDCWA either directly or indirectly. However, VWD will investigate the integration of stormwater capture as part of a non-potable supply source in its Recycled Water Facilities Plan. This is discussed in further detail in Section 6.8.

## 6.5 Wastewater and Recycled Water

### **CWC 10633**

*The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier.*

VWD serves a 14,750-acre sewer service area as illustrated in Figure 1-2. This sewer service area can be expanded to the same size as VWD's water service area through annexation of the additional parcels. However, because of its rural nature and land use designations, the Northern Tributary Area is likely to remain on septic systems; therefore, it is not likely to be an area where VWD's wastewater infrastructure will be expanded in the future.

Wastewater collected from the sewer service area is conveyed to either the EWPCF or to the MRF for treatment. MRF is essentially a scalping plant that extracts water for production of recycled water. Wastewater that is not rerouted to MRF flows directly to the EWPCF in the City of Carlsbad for both liquids and solids treatment. MRF does not treat for solids; instead, solids are pumped from MRF to the EWPCF for treatment.

Expansion of MRF was completed in 2008, increasing its recycled water production capacity to 5 MGD. The CMWD and OMWD purchase 4.5 MGD for non-potable purposes, such as landscape irrigation.

Although VWD produces up to 5 MGD of recycled water at MRF, it does not maintain a recycled water service area within its sphere of influence. All the recycled water produced is sold to CMWD and OMWD. Excess recycled water is disposed of through a failsafe pipeline that connects to the ocean outfall at the EWPCF.

Table 6-1 summarizes information on collection of wastewater within VWD's sewer service area.



**Table 6-1. Wastewater Collected Within Service Area in 2020**

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2020 (MG)	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? (optional)
Vallecitos Water District	Metered	630	Vallecitos Water District	Meadowlark Water Reclamation Facility	Yes	No
Vallecitos Water District	Metered	1,688	Vallecitos Water District	Encina Water Pollution Control Agency	No	No
<b>Total Wastewater Collected from Service Area in 2020</b>		<b>2,318</b>				

Notes:

As shown in Table 6-1, MRF is located within VWD’s sewer service area while the EWPCF is not. MRF is the only wastewater treatment facility within VWD’s sewer service area. Table 6-2, below, gives information on MRF’s treatment level, 2020 treatment volumes, method of disposal (for that portion of treated water that is not sold as recycled water), and discharge location.

**Table 6-2. Wastewater Treatment and Discharge Within Service Area in 2020**

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number (optional)	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2020 Volumes (MG)				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
Meadowlark Water Recycling Facility	Encina Wastewater Authority	Ocean outfall of the Encina Water Pollution Control Facility	9 000000030	Ocean outfall	No	Tertiary	630	112	0	518	
<b>Total</b>							<b>630</b>	<b>112</b>	<b>0</b>	<b>518</b>	<b>0</b>

Notes: Discharged treated wastewater assumed to be approximately 18 percent of total treated wastewater.

VWD is actively involved in planning for the use of recycled water in the near future. VWD is a member of the NSDWRC and has participated in the production of its Regional Recycled Water Facilities Plan, which investigates expanded recycled water use within the north San Diego County area. The Regional Recycled Water Facilities Plan is intended to assist the North San Diego County water and wastewater agencies in identifying the benefits of regionalization of existing and planned recycled water systems to further maximize the use of recycled water. Regionalization of facilities will allow recycled water to play an even more significant role in meeting the future water needs in the north San Diego County area. The NSDWRC intends to pursue U.S. Bureau of Reclamation Title XVI grant funds for the construction of various recycled water facilities within each of the north county agencies.

The Regional Recycled Water Facilities Plan identified 771 MG per year in potential future recycled water demands within VWD’s sphere of influence. Approximately 471 MG per year could potentially be delivered to customers as early as 2025 via short-term expansion projects. Another 300 MG per year could be developed in a more long-term time frame.

Table 6-3 summarizes the potential recycled water demands within VWD’s sphere of influence and their beneficial use types.

**Table 6-3. Current and Projected Recycled Water Direct Beneficial Uses within Service Area**

Name of Agency Producing (Treating) the Recycled Water:		Vallecitos Water District and City of Escondido						
Name of Agency Operating the Recycled Water Distribution System:		Vallecitos Water District						
Supplemental Water Added in 2020		None						
Source of 2020 Supplemental Waters		N/A						
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	Volume of Water (MG)					
			2020	2025	2030	2035	2040	2045
Landscape Irrigation (Excludes Golf Courses)	Currently no recycled water use	Tertiary	0	305	305	305	478	478
Golf Course Irrigation	Currently no recycled water user	Tertiary	0	166	166	166	293	293
<b>Total</b>			<b>0</b>	<b>471</b>	<b>471</b>	<b>471</b>	<b>771</b>	<b>771</b>



VWD does not currently own or operate a recycled water distribution system. Thus, VWD did not deliver or use recycled water within its water service area in 2020 (Table 6-4).

**Table 6-4. 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual**

Use Type	2015 Projection for 2020 (MG)	2020 Actual Use (MG)
Landscape Irrigation (excludes golf courses)	471	0
<b>Total</b>	<b>471</b>	<b>0</b>

To offset potable water use, VWD could potentially purchase recycled water from the City of Escondido’s Hale Avenue Resource Recovery Facility, an 18.0-MGD treatment facility located in the southwest section of Escondido, and construct facilities to deliver this water to customers within the VWD service area.

Escondido’s recycled water distribution system extends to the VWD boundary. Recycled water purchases from Escondido offer the advantage of being a highly reliable supply and immune from the effects of prolonged drought and SDCWA aqueduct shutdowns. Pumping and additional storage may be required to distribute the recycled water within the VWD service area, depending on the location of the customers and volume of recycled water served. Several parks, schools, and golf courses could be served by extending the recycled water system through VWD’s service area.

Currently, all of the recycled water produced at MRF is sold to the CMWD and the OMWD. However, VWD has evaluated expanding MRF’s capacity and has discovered that the production of an additional 1.5 MGD of recycled water at MRF may be possible with certain equipment and structural upgrades.

Production of recycled water to meet such demands may come from the expansion of the VWD’s MRF, purchase of recycled water from the City of Escondido’s Hale Avenue Resource Recovery Facility, or both, as shown below in Table 6-5.

**Table 6-5. Methods to Expand Future Recycled Water Use**

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use (MG)
North San Diego Water Reclamation Coalition	Regional Recycled Water Facilities Plan – Short-term Demand Projections	2025	471
North San Diego Water Reclamation Coalition	Regional Recycled Water Facilities Plan – Long-term Demand Projections	2035	300
<b>Total</b>			<b>771</b>

## 6.6 Desalinated Water Opportunities

### **CWC 10621(g)**

*Describe the opportunities for development of desalinated water...*

As stated in Section 6.1, VWD executed a water purchase agreement with the SDCWA on August 25, 2015 to obtain at least 1,140 MG per year of desalinated seawater. This provides VWD with a drought-proof potable water supply that also can serve VWD during an emergency outage of the SDCWA aqueduct system.

This desalinated water source is considered a water purchase from SDCWA and is reported as a water purchase for purposes of this UWMP. There are no other desalinated water opportunities currently being considered by VWD; however, VWD has the option of purchasing up to 2,440 MG per year as a future supply.

## 6.7 Exchanges or Transfers

### **CWC 10631(c)**

*Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

VWD has interagency service agreements with OMWD and CMWD through one of its SDCWA connections. This service is provided through an interagency service agreement entitled, "Construction of a Water Transmission and Storage System – Questhaven Pipeline," dated July 1, 1978 and its supplement dated September 1979, in which VWD is designated as the lead agency.

The OMWD capacity is limited per the agreement to 6.47 MGD and the CMWD connection capacity is limited to 8.61 MGD. Potable water quantities delivered to OMWD and CMWD are metered and reported to the SDCWA, and the SDCWA bills the respective agencies directly.

VWD has a total of 16 interagency service connections to neighboring water districts, including the interagency service connections to OMWD and CMWD as previously discussed. The remaining 14 connections are only used under emergency conditions. VWD has emergency connections with the CMWD (1), Vista Irrigation District (9), the City of Escondido (1), Rincon MWD (1), Rainbow Water District (1), and OMWD (1), as shown in Table 6-6 and on Figure 6-1. These connections are limited in their ability to deliver flows and are to be used for short-term outages within VWD or the neighboring agency. Annual water exchanges are typically low volume and cumulatively do not exceed 10 MG per year. With the improved reliability of the regional system following the implementation of the Emergency Supply Project and the delivery of desalinated water to VWD, there are no immediate plans to supplement or increase the capacity of the existing connections.



**Table 6-6. Interagency Emergency Connections**

Ref ID <sup>1</sup>	Name	Size (in)	Service to:		VWD Pressure Zone	Approx. Capacity (gpm)
			System	Connecting Agency		
3	Melrose/Carlsbad Crosstie	8	VWD	CMWD	815	900
4	Escondido Pump Connection <sup>2</sup>	8	EWD	VWD	920	1,000
5	San Elijo Hills Pump Connection <sup>2</sup>	8	OMWD	VWD	877	2,000
6	Rincon del Diablo Crosstie	8	VWD	Rincon	920	900
7	Rainbow Crosstie <sup>3</sup>	8	VWD	RMWD	900	1,800
8	Rees & El Norte VID Crosstie <sup>4</sup>	8	VWD/VID	VID/VWD	920	450
9	Mulberry Crosstie <sup>2,5</sup>	6	VWD	VID	920	900
10	Stonegate/VID Crosstie	6	VWD	VID	920	450
11	S. Santa Fe Crosstie <sup>2,5</sup>	8	VWD	VID	920	450
12	Capalina Crosstie	8	VWD	VID	920	450
13	Ormsby Crosstie	8	VWD	VID	900	450
14	Nordahl Crosstie	12	VWD	VID	920	N/A
15	Knobhill/Center St Crosstie	N/A	VWD	VID	920	N/A
16	Buena Creek Crosstie	8	VWD	VID	1028	900

Notes:

<sup>1</sup> Reference IDs refer to the locations shown in Figure 5-1.

<sup>2</sup> Connections have only been used during SDCWA shutdowns and require a portable pump and piping to be set up.

<sup>3</sup> Crosstie would be established with a couple lengths of pipe and a meter but is currently not connected.

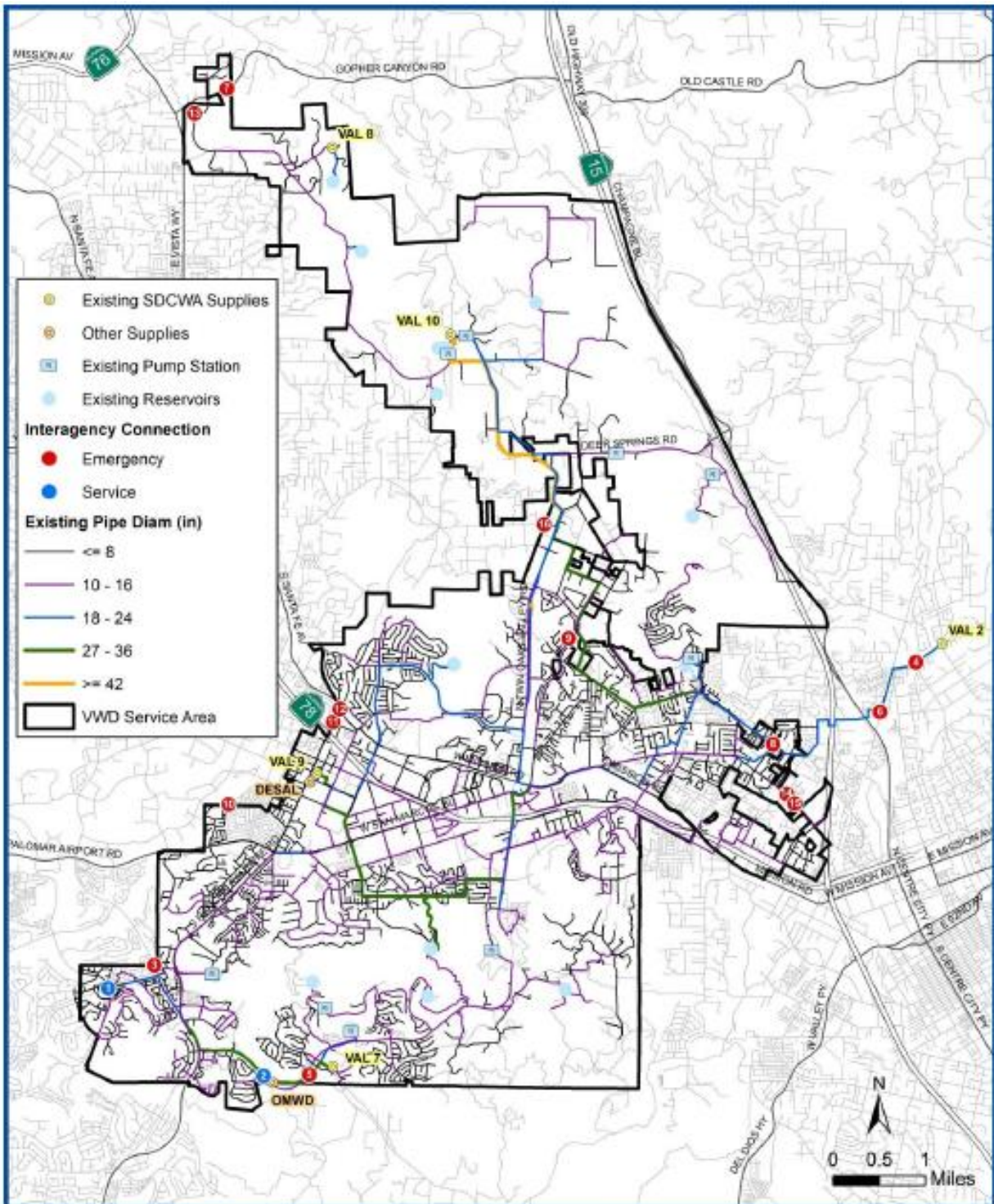
<sup>4</sup> VID can supply VWD water using a portable pump. VWD can supply VID water under gravity flow.

<sup>5</sup> Connection also utilized during scheduled VID maintenance.

Source: VWD 2018 Water, Wastewater, and Recycled Water Master Plan



Figure 6-1. Interagency Locations



Note: Refer to Table 5-7 for list of Interagency Connections.



## 6.8 Future Water Projects

VWD is continuously investigating alternative water supply sources through the following endeavors:

1. VWD's 2007 Integrated Water Resources Plan and 2018 Master Plan identified several water supply alternatives. Two of these alternatives: seawater desalination and treated water purchases from the Olivenhain Water Treatment Plant, have been implemented as discussed in Section 6.1. Other improvements that the studies recommended for further study include:
  - Recycled water purchases from the City of Escondido
  - Expanded transmission capacity from the SDCWA
  - Treated water purchases from the Escondido Vista Water Treatment Plant
  - Treated water purchases from the City of Oceanside's Weese Water Treatment Plant in addition to water conveyed by the SDCWA transmission pipeline
2. VWD is a member of the NSDWRC and has been actively involved in the production of its Regional Recycled Water Facilities Plan, which investigates expanded recycled water use within the north San Diego County area. The Facilities Plan identifies new local and regional recycled water projects that can provide additional recycled water supplies to the member agencies, including VWD.
3. VWD has also updated their Recycled Water Master Plan in 2018 that will investigate recycled water opportunities, which include:
  - Expansion of VWD's wholesale recycled water supplies to adjacent agencies
  - Development of non-potable reuse alternatives, including expansion of VWD's MRF and development of a recycled water distribution system in conjunction with the NSDWRC
  - Potable reuse opportunities by partnering with adjacent agencies
4. As mentioned in Section 6.2, VWD funded an updated groundwater supply alternatives evaluation for investigating the potential for utilizing the San Marcos Groundwater Basin as a future water supply source.
5. The North County One Water Program includes wastewater flows and facilities from two coastal treatment facilities in North San Diego County, the EWPCF and the San Elijo Water Reclamation Facility (SEWRF), represent a unique opportunity for large-scale production of purified water.

The EWPCF in the City of Carlsbad, California could accommodate an advanced water purification facility that could produce an estimated 17,800 afy to 22,200 afy or more of purified water by 2030. The EWPCF has key assets available for production of purified water such as an ocean outfall, available land for advanced treatment, treated secondary effluent and technically capable staff (refer to the Encina Wastewater Authority's [EWA] 2018 Water Reuse Feasibility Study).

The SEWRF in the Cardiff area within the City of Encinitas, California could also accommodate an advanced water purification facility that could produce an estimated 400 afy to 3,100 afy of purified water by 2030. The SEWRF also has key assets

available for production of purified water such as an ocean outfall, available land for advanced treatment, treated secondary effluent and technically capable staff (refer to the 2019 Recycled Water Expansion Plan for Santa Fe Irrigation District, San Dieguito Water District, San Elijo Joint Powers Authority, Olivenhain Municipal Water District, and Leucadia Wastewater District).

The Encina Wastewater Authority (EWA) and San Elijo Joint Powers Authority (SEJPA) have been working with multiple local water agencies to develop the North County One Water Program, building on over a decade of collaborative efforts in the region by the North San Diego Water Reuse Coalition. With the combined flows, the North County One Water Program could supply an estimated 18,000 afy to 25,000 afy or more of purified water overall for potable reuse by 2030. VWD is supportive of this future program and benefit from the purchase of 2,200 to 5,500 afy of purified water.

It is important to note that all the alternatives mentioned above, with the exception of recycled water, are considered concept-phase only, and are not included in VWD's projected water supply programs. The recycled water supply projects currently being considered by VWD as part of the North San Diego County Recycled Water Coalition are described in Section 6.5 and are summarized below in Table 6-7.

**Table 6-7. Expected Future Water Supply Projects or Programs**

Name of Future Projects or Programs	Joint Project with other Agencies?		Description	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
Expansion of the Meadowlark Water Recycling Facility	Yes	North County Recycled Water Coalition	Expansion of the treatment plant's capacity from 5 MGD to 6.5 MGD	2030	All Year Types	550 MG per year
Recycled Water from the Hale Avenue Resource Recovery Facility	Yes	North County Recycled Water Coalition	Purchase of Recycled Water from the City of Escondido	2030	All Year Types	40 MG to 771 MG per year
North County One Water Program	Yes	Encina Wastewater Authority and San Elijo Joint Powers Authority	Advanced water purification at the EWPCF and SEWRF	2030	All Year Types	717 MG to 1,792 MG per year



## 6.9 Summary of Existing and Planned Water Sources

Actual water supplies for VWD in 2020 are summarized below in Table 6-8. Please note that purchases of desalinated seawater from the Claude “Bud” Lewis Carlsbad Desalination Plant are noted as a separate supply but are purchased through SDCWA water supplies.

**Table 6-8. Water Supplies – Actual**

Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume (MG)	Water Quality	Total Right or Safe Yield
Purchased or Imported Water	From the San Diego County Water Authority	3,722	Drinking Water	N/A
Desalinated Water - Surface Water	As a local water supply owned by VWD through a Water Purchase Agreement with SDCWA	1,113	Drinking Water	N/A
<b>Total</b>		<b>4,835</b>		

Projected future water supplies for VWD are summarized below in Table 6-9. SDCWA water supplies are based on their long-range demand forecast. The Reasonably Available Volume from SDCWA is in addition to the 1,140 MG per year of contracted desalinated seawater supply from the Claude “Bud” Lewis Carlsbad Desalination Plant.

**Table 6-9. Retail Water Supplies – Projected**

Water Supply	Additional Detail on Water Supply	Projected Water Supply (MG)									
		2025		2030		2035		2040		2045 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Purchased or Imported Water	SDCWA	4,559		4,831		5,044		5,470		6,169	
Desalinated Water – Surface Water	As a local water supply owned by VWD through a water purchase Agreement with SDCWA	1,140		1,140		1,140		1,140		1,140	
Recycled Water	From the Meadowlark Water Recycling Facility and/or City of Escondido	471		471		471		771		771	
<b>Total</b>		6,170		6,442		6,655		7,381		8,080	

## 6.10 Energy Intensity

### **CWC 10631.2(a)**

*In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain: an estimate of the amount of energy used to extract or divert water supplies, an estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems, an estimate of the amount of energy used to treat water supplies, an estimate of the amount of energy used to distribute water supplies through its distribution systems, an estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies, an estimate of the amount of energy used to place water into or withdraw from storage, any other energy-related information the urban water supplier deems appropriate.*

The Energy Intensity Analysis presented in this 2020 UWMP is reported in terms of kilowatt-hours (kWh) of energy used per MG of water (kWh/MG), and is included in Table 6-10. The information in Table 6-10 represents data from VWD from 2020 for water supply distribution.

**Table 6-10. Recommended Energy Intensity – Water Supply Process Approach**

Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control							
End Date	12/30/2020	Water Management Process						Non-Consequential Hydropower (if applicable)	
		Extract and Divert	Place into Storage	Conveyance	Treatment	Distribution	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (MG)						4835	<b>4835</b>		<b>4835</b>
Energy Consumed (kWh)						2,343,524	<b>2,343,524</b>		<b>2,343,524</b>
Energy Intensity (kWh/MG)						<b>484.7</b>	<b>484.7</b>		<b>484.7</b>

# 7 Water Supply Reliability and Drought Risk Assessment

## **CWC 10635(a)**

*Every urban water supplier shall include, as part of its urban water management plan, 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 Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.*

Under the Act, all UWMPs must include an assessment of the reliability of their water supplies. The water supply and demand assessment must compare the total projected water use with the projected water supply, in 5-year increments, through the next 20 years. This section presents a comparison of the water demands and supplies within the VWD's service area, and assesses supply versus demand during normal years, single dry water years, and multiple dry water years. This section also provides a DRA that enables VWD to evaluate its risk under a severe drought lasting for the next five consecutive years.

## 7.1 Constraints on Water Sources

Though VWD is guided by its 2018 Water, Wastewater, and Recycled Water Master Plan to ensure future reliable water supplies, it is dependent on the water supply abilities of its wholesaler, the SDCWA. According to the SDCWA's 2020 UWMP, the SDCWA anticipates meeting all future demands of its member agencies in normal and single dry-year scenarios. However, some level of shortage could potentially be experienced during the multiple dry-year scenarios. Strategies to address these deficiencies, including SDCWA's Carryover Storage Program and Dry-Year Transfer Program, are discussed in Section 11.2.4 of SDCWA's 2015 UWMP.

The purchase of 1,140 MG per year of contracted desalinated seawater supply through the San Diego County Water Authority from the Claude "Bud" Lewis Carlsbad Desalination Plant helps VWD alleviate potential multiple dry-year water shortages. Other methods, including increased implementation of demand management measures and use of recycled water, are discussed in Section 7.3.

### 7.1.1 SDCWA Supplies

VWD currently purchases 100 percent of its potable water supply from SDCWA. SDCWA's supplies include imported water from the State Water Project (SWP) and the Colorado River, water available from a transfer agreement and canal lining projects, and desalinated seawater.



SWP water is imported from the Sacramento-San Joaquin Bay Delta, which is an increasing reliability concern due to effects of climate change, competing demands, and other environmental constraints. Recent legal decisions regarding Colorado river supplies and the Delta Plan, as discussed below, may restrict imported SWP water during times of drought or certain times of the year to maintain minimum flows for environmental needs or other legal agreements. During recent years, SWP supplies have faced allocations due to drought conditions; the risk of allocation is projected to continue in the next few years. As part of the 2020 UWMP update, the SDCWA evaluated the reliability of these supplies and stated that the delivery estimates are anticipated to be 51 percent of maximum potential allotment amounts on a long-term average condition, and 12 percent under a single dry-year condition.

Colorado River supplies are subject to the Quantification Settlement Agreement (QSA), which may change due to legal decisions. The 2003 QSA and related agreements, executed in October 2003, resolved longstanding disputes regarding Colorado River water use among agencies, and established a baseline water use for Imperial Irrigation District, Coachella Valley Water District, and Metropolitan. This permitted implementation of a variety of water conservation and transfer agreements, including the Water Authority's transfer agreement with Imperial Irrigation District. The 2003 QSA also provides that the Coachella Valley Water District and Metropolitan put aside, for the term of the agreement, a dispute over beneficial use of water by Imperial Irrigation District; and that Metropolitan would forbear consumptive use of water to permit the Secretary of Interior to satisfy the uses of the non-encompassed water delivered to holders of present perfected rights. Additionally, the Colorado River Basin has been experiencing a multi-year drought, which has diminished supply storage by 50 percent with respect to total capacity. Continued drought conditions and climate change effects may potentially affect Colorado River water supplies. Even with potential changes to the Quantification Settlement Agreement and climate change impacts, Colorado River supplies are considered substantially more secure than SWP supplies. As a part of the 2020 UWMP update, the SDCWA evaluated the reliability of these supplies and stated that, based on information from Metropolitan, Colorado River supply availability for an average normal year, single dry year, and multiple dry year is 1.25 million AF, which is the maximum Colorado River Aqueduct delivery capacity. This estimate includes water management programs, including the SDCWA's transfers and canal lining projects.

The SDCWA has been implementing plans to diversify its water supply with alternative sources to increase supply reliability. Through these diversification efforts, there is an increased chance the reduced availability of any one supply source would be buffered, because the region would not be reliant on a single supply source. These efforts include implementation of the Claude "Bud" Lewis Carlsbad Desalination Plant, which is a drought-proof supply that is anticipated to be reliable in normal, single dry-year, and multiple dry-year hydrologic scenarios.

Delta Plan Policy WR P1 is one of fourteen regulatory policies in the Delta Plan. The Delta Plan is a comprehensive, long-term, legally enforceable plan guiding how federal, state, and local agencies manage the Delta's water and environmental resources. The Delta Plan was adopted in 2013 by the Delta Stewardship Council. Delta Plan Policy WR P1 identifies UWMP as the tool to demonstrate consistency with the state policy that suppliers that carry out or take part in covered actions must reduce their reliance on the Delta.

VWD’s documentation on reduced reliance on the Delta, through SDCWA supplies and local projects, is documented in Appendix F.

Expanded discussion on the reliability and consistency of the SDCWA supply is in the SDCWA 2020 UWMP and Metropolitan Water District’s 2020 UWMP.

## 7.2 Reliability by Type of Year

Table 7-1 shows the basis of water year assessment for single-dry and multiple-dry year supplies expected to be available compared to those supplies in an average year. “Average Year” hydrology, as used in this UWMP plan, was taken as the average between the years 1986 and 2018. This base year information matches the SDCWA 2020 UWMP.

**Table 7-1. Basis of Water Year Data (Reliability Assessment)**

Year Type	Base Year*	Available Supplies if Year Type Repeats	
		Volume Available	% of Average Supply
Average Year	1986-2018		100
Single-Dry Year	2015		100
Consecutive Dry Years 1st Year	2011		100
Consecutive Dry Years 2nd Year	2012		100
Consecutive Dry Years 3rd Year	2013		100
Consecutive Dry Years 4th Year	2014		100
Consecutive Dry Years 5th Year	2015		100

Note:

Water years are in calendar years.

Normal year demand projections for VWD over the next 20 years were calculated in Table 4-3. In its 2020 UWMP, the SDCWA has developed long-range supply forecasts for normal year water reliability assessment for each of its member agencies. These supply forecasts are shown in Table 6-8, along with projected VWD storage and recycled water supplies over the next 20 years.

As shown in Table 7-2, based on actual data of local water supplies and the methodology used by SDCWA for imported supplies, 100 percent of supplies are available in a single dry year and in multiple dry years.

Reliability is anticipated to vary by supply; local supplies, including desalinated water, are assumed to remain consistent and reliable, even in drought conditions. The SDCWA 2020 UWMP was consulted for anticipated supply reliability of imported supplies. SDCWA

assumes no reduction in their availability of water from water transfers, canal lining projects, or regional desalination and projects full availability of these supplies due to the drought resilience of these supplies.

### 7.3 Supply and Demand Assessment

To assess water service reliability during drought events, the UWMP Act requires each urban water supplier to prepare single and multiple dry-year demand and supply projections and comparisons in 5-year increments.

The SDCWA reports that if Metropolitan, SDCWA, and member agency supplies are developed as planned, along with achievement of the SB7 water conservation targets, adequate water supply is anticipated within the SDCWA's service area for normal and single dry years, as well as multiple dry year periods, through 2045. If supply limitations arise in multiple dry-year scenarios, they will be addressed through implementation of extraordinary water conservation measures.

### 7.4 Projected Normal Year Supply and Demand

Normal year demand projections for VWD were estimated in coordination with SDCWA UWMP projections for its member agencies and the SDCWA long-range supply forecasts for normal-year water reliability assessment. Table 7-2 shows the forecasted normal water year projections for the VWD service area.

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

	Volume of Water (MG)				
	2025	2030	2035	2040	2045 (Opt)
Supply totals	6,170	6,442	6,655	7,381	8,080
Demand totals	6,818	7,063	7,316	8,096	8,826
<b>Difference</b>	<b>(648)</b>	<b>(621)</b>	<b>(661)</b>	<b>(715)</b>	<b>(745)</b>
Active and Passive Conservation	653	625	663	723	754
<b>Surplus/(Shortage)</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>9</b>

Note: SDCWA supplies assume member agency demands on SDCWA are inclusive of conservation. District demand projections do not include conservation. The District will incorporate active and passive conservation savings to mitigate potential supply shortages.

SDCWA anticipates sufficient supplies to deliver all the regional, supplemental water needed by its member agencies above normal year demand projections, if needed.

The projections show that VWD anticipates a slight shortfall in projected water supplies to meet demands (without conservation) through 2045. However, to mitigate for these projected water supply shortfalls, VWD can implement demand-reduction actions and conservation measures, as discussed in Sections 8 and 9.



## 7.5 Single Dry Year Supply and Demand

For the single dry-year scenario, supplies were calculated based on evaluating the availability of each supply. For desalinated water, it is assumed that supplies would be reliable and available at normal levels in a single dry year. Per information from the SDCWA 2020 UWMP, it is anticipated that purchased water would be available to meet demands in a single dry year. SDCWA assumes it will be able to deliver all the regional, supplemental water needed by its member agencies during this single-year drought.

Based on modeling performed by SDCWA, demands would increase by 7 percent in a single dry year; therefore, VWD would purchase additional supplies from SDCWA to meet increased demands. Table 7-3 shows VWD’s single dry-year assessment in 5-year increments through the year 2035. In a single dry water year, supplies and demands would be equal with no surplus or deficit.

**Table 7-3. Single Dry Year Supply and Demand Comparison**

	Volume of Water (MG)				
	2025	2030	2035	2040	2045 (Opt)
Supply totals	7,296	7,558	7,828	8,663	9,444
Demand totals	7,296	7,558	7,828	8,663	9,444
<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Notes:**

Based on modeling performed by SDCWA, demands would increase by 7 percent in a single dry year; therefore, VWD would purchase additional supplies from SDCWA to meet increased demands.

Per information from the SDCWA 2020 UWMP, it is anticipated that purchased water would be available to meet demands in a single dry year.

SDCWA assumes it will be able to deliver all the regional, supplemental water needed by its member agencies during this single-year drought.

## 7.6 Multiple Dry Year Supply and Demand

For the multiple dry-year scenario, supplies were also calculated by evaluating the anticipated availability of each supply. For desalinated water, it is assumed that supplies would be reliable and available at normal levels in a single dry year. Based on modeling data from SDCWA, demands would increase to 107 percent of normal in the first year, 108 percent of normal in the second and third years, and 109 percent of normal in the fourth and fifth years of a multiple dry-year period.

The demand and supply assessment assumes that VWD would purchase additional supplies from SDCWA to meet demands. SDCWA does not show a deficit of supplies or a need to utilize carryover storage supplies during an extended drought but does assume SDCWA and member agencies would implement demand management and conservation measures in response to extended drought conditions. Therefore, as shown in Table 7-4, in all years of a multiple dry-year scenario, supplies and demands would be equal with no surplus or deficit.

**Table 7-4. Multiple Dry Years Supply and Demand Comparison**

		Volume of Water (MG)				
		2025	2030	2035	2040	2045 (Opt)
First Year	Supply totals	7,296	7,558	7,828	8,663	9,444
	Demand totals	7,296	7,558	7,828	8,663	9,444
	<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Second Year	Supply totals	7,364	7,628	7,901	8,744	9,532
	Demand totals	7,364	7,628	7,901	8,744	9,532
	<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Third Year	Supply totals	7,364	7,628	7,901	8,744	9,532
	Demand totals	7,364	7,628	7,901	8,744	9,532
	<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Fourth Year	Supply totals	7,432	7,699	7,975	8,825	9,620
	Demand totals	7,432	7,699	7,975	8,825	9,620
	<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Fifth Year	Supply totals	7,432	7,699	7,975	8,825	9,620
	Demand totals	7,432	7,699	7,975	8,825	9,620
	<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Notes:

Based on modeling data from SDCWA, demands would increase to 107 percent of normal in the first year, 108 percent of normal in the second and third years, and 109 percent of normal in the fourth and fifth years of a multiple dry-year period; therefore, VWD would purchase additional supplies from SDCWA to meet increased demands.

Per information from the SDCWA 2020 UWMP, it is anticipated that purchased water would be available to meet demands during an extended drought.

SDCWA assumes it will be able to deliver all the regional, supplemental water needed by its member agencies during during an extended drought, assume SDCWA and member agencies would implement demand management and conservation measures

VWD continues to work closely with the SDCWA for future water supply planning. Based on the information provided by the SDCWA, the water supply available to VWD is considered reliable.

## 7.7 Drought Risk Assessment

### **CWC 10635(b)**

*The drought risk assessment shall include...a determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.*

### **CWC 10634**

*The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.*

Near-term drought reliability of the sources of supply utilized by VWD depends on the drought impact and stress on each supply. VWD's DRA assesses a projected drought over the next five-year period from 2021 – 2025. The historical period used in the analysis to represent the SDCWA's driest consecutive five-year period are years 2014 – 2018. Those years represent the five-year period with the lowest local water supply production from surface water and groundwater, the two local water supplies that are most susceptible to variation due to weather. The data used to calculate VWD's supply capabilities under the scenario of five consecutive dry years includes a comparison between available water supplies and water demands. For SDCWA (and, inherently, VWD) supplies, which consist of the Imperial Irrigation District water transfer, canal lining projects, and regional seawater desalination, no reduction in the availability over the five-year period is assumed due to the drought resilience of these supplies. Surface water supplies may be impacted by variations in weather and drought conditions and are considered to be available similar to usage during the 2014-2018 period.

The DRA demands for 2021 – 2025 were projected by taking 2020 demands escalating them annually for five years based on the multipliers developed by SDCWA, which were based on a weather index developed to assess the impact of dry/hot weather on water demands. The demand projection multipliers are as follows:

- 2021 – 108%
- 2022 – 112%
- 2023 – 116%
- 2024 – 120%
- 2025 – 125%

The SDCWA 2020 UWMP shows a surplus of water supplies for all demand conditions and has determined that actions under the WSCP would not be necessary. Demand projection multipliers for each of the risk assessment years are modeled after the multipliers used in the SDCWA 2020 UWMP and use 2020 demands as the baseline demand year. VWD's DRA is presented in Table 7-5.

**Table 7-5. Five-Year Drought Risk Assessment Tables to address CWC Section 10635(b)**

Year	Description	Total (MG)	
2021	Gross Water Use	5,222	
	Total Supplies	5,222	
	Surplus/Shortfall w/o WSCP Action	0	
	<i>Planned WSCP Actions (use reduction and supply augmentation)</i>		
	WSCP - supply augmentation benefit		
	WSCP - use reduction savings benefit		
	<b>Revised Surplus/(shortfall)</b>	<b>0</b>	
2022	Gross Water Use [Use Worksheet]	5,416	
	Total Supplies [Supply Worksheet]	5,416	
	Surplus/Shortfall w/o WSCP Action	0	
	<i>Planned WSCP Actions (use reduction and supply augmentation)</i>		
	WSCP - supply augmentation benefit		
	WSCP - use reduction savings benefit		
	<b>Revised Surplus/(shortfall)</b>	<b>0</b>	
	Resulting % Use Reduction from WSCP action		
2023	Gross Water Use	5,609	
	Total Supplies	5,609	
	Surplus/Shortfall w/o WSCP Action	0	
	<i>Planned WSCP Actions (use reduction and supply augmentation)</i>		
	WSCP - supply augmentation benefit		
	WSCP - use reduction savings benefit		
	<b>Revised Surplus/(shortfall)</b>	<b>0</b>	
	Resulting % Use Reduction from WSCP action		
2024	Gross Water Use	5,803	
	Total Supplies	5,803	
	Surplus/Shortfall w/o WSCP Action	0	
	<i>Planned WSCP Actions (use reduction and supply augmentation)</i>		
	WSCP - supply augmentation benefit		
	WSCP - use reduction savings benefit		
	<b>Revised Surplus/(shortfall)</b>	<b>0</b>	
	Resulting % Use Reduction from WSCP action		



**Table 7-5. Five-Year Drought Risk Assessment Tables to address CWC Section 10635(b)**

Year	Description	Total (MG)	
2025	Gross Water Use	6,044	
	Total Supplies	6,044	
	Surplus/Shortfall w/o WSCP Action	0	
	<i>Planned WSCP Actions (use reduction and supply augmentation)</i>		
	WSCP - supply augmentation benefit		
	WSCP - use reduction savings benefit		
	<b>Revised Surplus/(shortfall)</b>	<b>0</b>	
	Resulting % Use Reduction from WSCP action		

Notes:

During an extended drought, VWD would purchase additional supplies from SDCWA to meet increased demands. The SDCWA 2020 UWMP shows a surplus of water supplies for all demand conditions and has determined that actions under the WSCP would not be necessary.

## 7.8 Seismic Risk Assessment

### **CWC 10632.5(a)**

*Beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.*

Seismic impacts to VWD’s water supplies are evaluated on a regional scale, as seismic events along the San Andreas and San Jacinto fault systems could limit imported supplies.

VWD’s actions in response to a seismic event reflect actions included in the SDCWA Emergency Storage Project and the San Diego County Multi-Jurisdictional Hazard Mitigation Plan.

### 7.8.1 San Diego County Water Authority

The 2013 SDCWA Master Plan Update summarized the potential degree of damage to its pipelines and the amount of time required to restore services after a natural disaster. A 1993 report evaluated system vulnerabilities to the most probable seismic event (MPE) and maximum credible seismic event (MCE). The MPE is defined as the largest event with a 10 percent chance of occurrence over the next 50 years, while the MCE is the largest event judged to be possible given geologic criteria such as relationships between fault length, fault displacement, and slip rate.

Impacts to VWD would be greatest with a major seismic event on the Elsinore Fault Zone: all five SDCWA pipelines cross the Elsinore Fault zone and a major event on the Second Aqueduct (Pipelines 3, 4, and 5) has the potential to cut off treated and/or untreated water

from MWD to VWD for 1 to 3 months. The predicted failure from the MPE (magnitude [M] 7.0) and MCE (M7.5) on the Elsinore Fault lead to estimated repair times that range from:

- Pipeline 3: 50 to 54 days
- Pipeline 4: 38 to 40 days
- Pipeline 5: 78 to 86 days

SDCWA is currently in the process of updating its vulnerability assessment.

Damage from a regional earthquake to imported supply is mitigated by major investments in emergency storage made by SDCWA. SDCWA's Emergency Storage Project includes emergency surface water storage (90,100 AF) and new distribution facilities to allow continued water service to its member agencies during a prolonged regional interruption. The Emergency Storage Project facilities can be used to deliver emergency water supply during 2- and 6-month imported water supply interruptions, or any other emergency situation where SDCWA has insufficient water available to supply at least 75 percent of the total demand of its service area or any portion of the service area.

The Carlsbad Desalination Project (CDP) would also help mitigate SDCWA water shortages if deliveries from MWD are reduced. However, the plant may also be susceptible to a seismic event. Studies estimated that partial flows could be restored in 1 week to 1 month, and full capacity would require up to 6 months of repairs if CDP sustained damage from the MCE on the Rose Canyon Fault. Conveyance and distribution damage caused by seismic activity would take 1 week to 3 months to repair. The CDP has the capacity to produce 56,000 AFY (50,000 AFY of this total supply is owned by SDCWA and the remaining 6,000 AFY is owned by the City of San Diego). An outage at the CDP due to major (M>7) seismic activity would result in no supply being available from the CDP.

## 8 Water Shortage Contingency Plan

### **CWC 10632(a)**

Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

- (1) The analysis of water supply reliability conducted pursuant to Section 10635.*
- (2) The procedures used in conducting an annual water supply and demand assessment...*
- (3) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage...*
- (4) Shortage response actions that align with the defined shortage levels...*
- (5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments...*
- (6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.*
- (7) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4)...*
- (8) A description of the financial consequences of, and responses for, drought conditions...*
- (9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.*
- (10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.*

The WSCP presents VWD's contingency plan to address drought planning, water shortage response levels and actions, and management of water allocations during a declared water emergency. The WSCP will be re-evaluated at least every five years in coordination with the UWMP but could be updated more frequently based on lessons learned, new regulatory requirements, or other factors. The VWD WSCP can be found in Appendix G to this UWMP.

### 8.1 Annual Water Supply and Demand Assessment

#### **CWC 10632.1**

*An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan.*

The new CWC Section 10632(1) requires that urban water suppliers conduct an annual water supply and demand assessment (Annual Assessment), beginning July 1, 2022. The WSCP describes the procedures used to 1) conduct the Annual Assessment, and 2) prepare and submit an Annual Assessment Report to the state. In addition, the WSCP outlines key inputs to conduct the Annual Assessment, the decision-making process for determining water supply reliability, and the ability/flexibility for VWD to use shortage response actions not included in the WSCP, as applicable.

The VWD Board of Directors, in accordance with the provisions of the CWC, will determine if a supply shortage exists and declare any foreseen water shortage level based on the results of the Annual Assessment, which will then be included in the Annual Assessment Report submitted to the state. The evaluation is conducted to determine if a shortage declaration is needed, and at what level. The Annual Assessment Report will document any anticipated shortage, any triggered shortage response actions, associated compliance and enforcement actions, and communication actions. More information on shortage response actions is included in Section 8.3, Shortage Response Actions. Reasonable alternative actions can be used to address identified water shortages, provided that descriptions of alternative actions are submitted with the Annual Assessment Report.

## 8.2 Water Shortage Levels

All water agencies are required to administer a strategy – an adopted ordinance or terms of service – to meet water waste prevention. For compliance, VWD had adopted Ordinances No. 162 and No. 195, which are included in Appendix H. O Ordinances No. 162 and 195 established regulations to be implemented during times of declared water shortages or emergencies to conserve water. This VWD WSCP, developed as part of the 2020 UWMP process, redefined and updated the reduction goals to establish six levels of drought response. Table 8-1 presents the shortage levels and corresponding actions to be implemented in times of shortage or emergency, with increasing restriction on water use in response to worsening drought or emergency conditions and decreasing available supplies.

**Table 8-1. Water Shortage Levels**

Water Shortage Level	Percent Reduction
Stage 1: Standard Operating Condition	10
Stage 2: Drought Watch Condition	20
Stage 3: Board Declared Emergency Action	30
Stage 4: Drought Critical Condition	40
Stage 5: State and Board Declared Extreme Emergency Action	50
Stage 6: State and Board Declared Extreme Emergency Action	> 50



## 8.3 Shortage Response Actions

Shortage response actions included in this WSCP are a mix of prohibitions on end use, consumption reduction methods, supply augmentation, and operational change measures. Table 8-2 provides a summary of voluntary and mandatory prohibitions and consumption reduction methods that are implemented within the VWD service area to meet mandated water use restrictions. Customers can select the specific water conservation measures/actions that are most appropriate for their setting; however, customers must abide by water waste prohibitions, water use reductions are mandatory, and monetary penalties may be levied on customers who do not meet reduction goals.

**Table 8-2. Restrictions and Prohibitions on End Users**

Stage	Restrictions and Prohibitions on End Users	Penalty, Charge, or Other Enforcement?
2-6	Landscape - Restrict or prohibit runoff from landscape irrigation	Yes
2-6	Landscape - Limit landscape irrigation to specific times	Yes
2-6	Landscape - Limit landscape irrigation to specific days	Yes
2-6	Landscape - Prohibit certain types of landscape irrigation	Yes
2-6	Landscape - Prohibit irrigation 48 hours after rain	Yes
2-6	Landscape - Other landscape restriction or prohibition	Yes
2-6	CII - Lodging establishment must offer opt out of linen service	Yes
1-6	CII - Restaurants may only serve water upon request	Yes
2-6	Water Features - Restrict water use for decorative water features, such as fountains	Yes
2-6	Other water feature or swimming pool restriction	Yes
2-6	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Yes
2-6	Other - Require automatic shut of hoses	Yes
2-6	Other - Prohibit use of potable water for construction and dust control	Yes
2-6	Other - Prohibit use of potable water for washing hard surfaces	Yes
2-6	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Yes

Note:

CII = Commercial, industrial, and institutional

## 8.4 Drought Response Plan

VWD's established drought levels are explained in the following sections. Table 8-1 provides a summary of VWD's drought response levels, which align with the SDCWA model drought response plan.

- **Level 1 – Drought Watch:** With this alert, VWD will increase public outreach and take action to encourage voluntary conservation practices.
- **Level 2 – Drought Alert:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 20 percent. These practices include limiting landscape irrigation and repairing leaks within 5 days of notification.
- **Level 3 – Drought Alert:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 30 percent. These practices include additional limitations on landscape irrigation and repairing leaks within 4 days of notification.
- **Level 4 – Drought Critical:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 40 percent. Additional conservation practices include the prohibition of filling pools or fountains and washing vehicles and require repair of leaks within 72 hours of notification. With minor exceptions, no new potable water annexations will be allowed during a Level 4 Drought condition.
- **Level 5 – Drought Critical:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 50 percent. Additional conservation practices include prohibition on outdoor landscape irrigation, the prohibition of filling pools or fountains and washing vehicles and require repair of leaks within 48 hours of notification. With minor exceptions, no new potable water services will be allowed during a Level 5 drought condition.
- **Level 6 – Drought Emergency:** With this alert, VWD will implement mandatory conservation practices to reduce water use above 50 percent for VWD to have adequate supplies to meet anticipated demands. Additional conservation practices include prohibited landscape irrigation, excluding commercial growers or nurseries, and the repair of leaks within 24 hours of notification.

## 8.5 Penalties and Charges

The VWD takes progressive action when responding to water waste prohibitions. Violators are typically contacted first by phone and given an opportunity to voluntarily comply. Ongoing water wasters are subsequently sent a Notice of Violation, followed by a fine. Administrative fines can be levied for each violation of a provision of the ordinances as follows:

- First violation: \$100 fine
- Second violation: \$200 fine if it occurred within 1 year of the prior violation.
- Each additional violation: \$500 fine if it occurred within 1 year of the prior violation.

- Enforcement for further violations increases in severity and may include installation of a flow-restricting device in the meter, imprisonment, a fine up to \$1,000, and/or discontinuing service to the property where the violation occurred.

Additionally, VWD will initiate drought patrols, if enacted by the Governor’s Executive Order.

## 8.6 Determining Water Shortage Reductions

Currently the VWD is using the SWRCB emergency regulation method to measure and determine actual water savings made from implementing the WSCP. The SWRCB uses 2013 water production data and requires water agencies to report monthly water production as compared to 2013. The VWD has maintained a 25 percent reduction as compared to 2013.

The section below includes consumption reduction methods implemented by the VWD.

- **Expand Public Information Campaign** – enlarge media campaign; create bill envelope snipes and inserts with conservation information; articles submitted to local newspapers; conduct water efficiency workshops for different customer sectors.
- **Offer Water Use Surveys** – actively reach out to high water users to offer water use surveys.
- **Provide Rebates or Giveaways of Plumbing Fixtures and Devices** – as offered by the MWD, issue free rain barrels.
- **Provide Rebates for Landscape Irrigation Efficiency** – as offered by the MWD.
- **Increase Water Waste Patrols** – implement Water Waste Patrols.
- **Other** – Implement High User Response and Letters (HURL) Program targeting highest water users.

**Table 8-3. Consumption Reduction Methods**

Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference
1-6	Expand Public Information Campaign	As part of ordinances, but also to meet Governor’s mandate.
1-6	Offer Water Use Surveys	Available at all times.
1-6	Provide Rebates on Plumbing Fixtures and Devices	Available at all times.
1-6	Provide Rebates for Landscape Irrigation Efficiency	Available at all times.
2-6	Increase Water Waste Patrols	Implemented after Governor’s mandate.
4-6	Moratorium or Net Zero Demand Increase on Annexations or New Connections	Would be invoked at Level 4.
2-6	Implement or Modify Drought Rate Structure or Surcharge	Is available if District fails to meet reduction mandates.
2-6	Other	HURL Program.



## 8.7 Revenue and Expenditure Impacts

Implementation of the WSCP will reduce revenues from water sales, but not from fixed meter charges. VWD sets fixed meter charges, called Ready-To-Serve charges, to recover approximately 80 percent of VWD's fixed costs (repairs, replacement, maintenance, meter reading, billing, regulatory, safety, general and administrative, etc.). Reduced sales do not impact revenues from Ready-To-Serve charges. Fiscal impact from implementing WSCP is limited to water sales revenue, which is mostly offset from decreased water costs.

### 8.7.1 Drought Rate Structures and Surcharges

VWD's rate structure includes higher per unit (1 unit = 748 gallons) charges in tiers of higher use to encourage conservation. VWD may implement a drought rate structure when a Level 2 drought alert is declared. The drought rate structure has the ability to determine whether to impose additional tiers and higher rates in the higher tiers, escalating in correlation with the percentage of cutback from mandated supply reduction (i.e., the higher the supply reduction, the higher the rate.)

### 8.7.2 Use of Financial Reserves

VWD budgets water sales assuming compliance with any drought or supply restrictions whether encouraged through voluntary conservation or mandate. Funding for replacement reserves are planned for ceiling of those reserves and may be used for revenue short falls from conservation beyond the levels budgeted. Reserves that surpass favorable budget variances are transferred to rate stabilization funds.

### 8.7.3 Other Measures

During the budget and/or rate setting process, a revenue requirement is determined assuming conservation targets are achieved, and reserve levels are at their highest. Rates are recommended to achieve that revenue requirement; however, not before cost cutting measures and capital deferrals are considered to reduce the revenue requirement.

## 8.8 Catastrophic Supply Interruption Planning

A catastrophic water shortage occurs when a disaster, such as earthquake, results in insufficient available water to meet the region's needs or eliminates access to imported water supplies. For increased reliability, VWD subscribes to SDCWA's ICP and Emergency Storage Program (ESP). Both were developed to protect public health and safety and to potentially limit economic damage that could occur from a severe shortage of water supplies.

### 8.8.1 Integrated Contingency Plan

SDCWA's ICP provides information necessary to respond to an emergency that causes severe damage to SDCWA's water distribution system or impedes SDCWA's ability to provide reliable service to its member agencies. The ICP describes the situations and incidents that will trigger the activation of SDCWA's ICP and Emergency Operations

Center. It also provides direction and strategies for responding to a crisis. SDCWA’s ICP includes:

- Authorities, policies, and procedures associated with emergency response activities.
- Emergency Operations Center activities, including activation and deactivation guidelines.
- Multi-agency and multi-jurisdictional coordination, particularly between SDCWA, its member agencies, and MWD in accordance with Standardized Emergency Management System and National Incident Management System guidelines.
- Incident Command System management and organization and emergency staffing required to assist in mitigating any significant emergency or disaster.
- Mutual Aid Agreement and covenants that outline the terms and conditions under which mutual aid assistance will be provided.
- Hazard-specific action plans and Incident Command System position checklists.

In addition, the plan uses a step-by-step approach to emergency response planning by providing tools such as resource and information lists, personnel rosters, pertinent policies and procedures, and reference materials.

Separate from the ICP, the District has a direct connection to the Claude “Bud” Lewis Desalination Plant in Carlsbad.

## 8.8.2 SDCWA Water Shortage and Drought Response Plan

SDCWA, in conjunction with its member agencies, developed a Water Shortage and Drought Response Plan (WSDRP) in 2006, which was subsequently updated in 2012, to guide water shortage and drought management activities in the event that the region faces supply shortages due to drought conditions. The goal of the WSDRP is to provide a balanced, flexible, systematic approach to identifying regional actions necessary to reduce the impacts that occur from water shortages. The WSDRP includes three stages: voluntary supply management, supply enhancement, and mandatory cutbacks. During each of the stages, SDCWA may implement voluntary or mandatory drought contingency measures to prepare and respond to drought conditions. The 2012 update to the WSDRP revised the regional supply allocation methodology for guiding decisions when normal demands cannot be met.

The WSDRP also includes provisions whereby SDCWA would implement and utilize supplies governed by the ESP during a prolonged drought or other water shortage situation where imported and local supplies do not meet 75 percent of the Water Authority’s member agencies urban demands. The ESP is a system of reservoirs, pipelines, and other facilities designed to store and move water around the County of San Diego in the event of a natural disaster. A natural disaster, such as an earthquake, could potentially disrupt water service in San Diego, especially because the pipelines that carry imported water to San Diego County from Metropolitan cross several major fault lines on their way to San Diego County. The ESP was completed in late 2014, providing 90,100 AF of stored water for emergency purposes to meet the region’s needs through at least 2045.

## 8.9 Plan Adoption and Submittal

### **CWC 10632(c)**

*The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.*

A public hearing, conducted by the VWD, was held on **XXX XX, 2021**, as a video conference. Members of the public were able to participate via a webinar link or telephone connection to listen and/or view the meeting proceedings and provide public comments and input on the draft WSCP. Following adoption of the WSCP, VWD will submit the plan to DWR and, no later than 30 days after filing the WSCP, VWD will make the WSCP available to the public.

## 9 Demand Management Measures

### **CWC 10631(e)**

*Provide a description of the supplier's water demand management measures. This description shall include...a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.*

This section briefly overviews VWD's conservation programs and their history. The section then discusses the urban water conservation Best Management Practices (BMPs) as proposed by the California Urban Water Conservation Council (CUWCC) and VWD's compliance strategies for these BMPs. CUWCC is now known as the California Water Efficiency Partnership (CalWEP).

### 9.1 Demand Management Measures for Retail Agencies

During the past few decades, conservation has become a vital part of VWD's overall reliability strategy. This is like its water wholesaler, the SDCWA, which has projected that conservation will account for 11 percent of its water diversification strategy for 2011 and increase to 17 percent by 2020. With a similar vested interest in water savings, VWD, as well as the other 24 member agencies of the SDCWA and the MWD, collaborate on programs that benefit the entire region. The combined effort has yielded increased conservation and water knowledge through education, messaging, and financial incentives for water-efficient devices.

VWD started a water conservation program in 1975, and with the support of the Board of Directors, the program expanded significantly during the drought of 1976-77. At the program's inception, efforts steered toward a long-term public information program and active cooperation with regional water conservation programs of the SDCWA. Though the drought ended, many of the programs that emerged during that time remained focused on switching from an "emergency situation" agenda to a long-term public information effort aimed at outreach in wise water management.

Through the addition of a Water Conservation Supervisor and Resources Assistant, the framework of a long-term conservation program continued to serve as a backdrop for the next major drought of 1987-1992. With the additional staff and a clear understanding of the importance of conservation, VWD aggressively revamped the conservation program and developed a variety of innovative and effective approaches to demand management. VWD reaffirmed its commitment to conservation and became one of the original signatories to the "Memorandum of Understanding Regarding Urban Water Conservation" in California on September 16, 1991. The CUWCC (now CalWEP), of which VWD is a long-time member, emerged from the Memorandum of Understanding, as well as urban water conservation practices known as the BMPs, which are aimed at reducing California's long-term urban water demands.

To assist in achieving goals set by CalWEP, the structure of VWD's conservation department was later changed to include a Public Information/Conservation Supervisor

and 2.75 Public Information Representatives (with the part time position dedicated to social media).

As conservation and public information go hand in hand, all members of the conservation department now have the responsibility for water conservation programs and related outreach. This proved to be extremely valuable in 2015 during state-mandated drought restrictions. On May 5, 2015, the state adopted new regulations and mandated a 24 percent reduction in potable water use for Vallecitos from 2013 demands. On March 9, 2016, the SWRCB changed Vallecitos' water conservation target to 16 percent due to VWD's direct connection to the seawater desalination plant in Carlsbad. Since the mandate, Vallecitos has achieved a 25.6 percent water conservation reduction.

### 9.1.1 Water Waste Prevention Ordinances

For compliance, VWD had adopted Ordinances No. 162 and 195, which are included in Appendix H for reference. Ordinance 162 was patterned after the conservation actions of its water wholesaler (SDCWA) and establishes regulations to be implemented during times of declared water shortages or emergencies to conserve water. The VWD WSCP revised and established six standard levels of drought response with corresponding actions to be implemented in times of shortage or emergency, with increasing restriction on water use in response to worsening drought or emergency conditions and decreasing available supplies.

- **Level 1 – Drought Watch:** With this alert, VWD will increase public outreach and take action to encourage voluntary conservation practices.
- **Level 2 – Drought Alert:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 20 percent. These practices include limiting landscape irrigation and repairing leaks within 5 days of notification.
- **Level 3 – Drought Alert:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 30 percent. These practices include additional limitations on landscape irrigation and repairing leaks within 4 days of notification.
- **Level 4 – Drought Critical:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 40 percent. Additional conservation practices include the prohibition of filling pools or fountains and washing vehicles and require repair of leaks within 72 hours of notification. With minor exceptions, no new potable water annexations will be allowed during a Level 4 Drought condition.
- **Level 5 – Drought Critical:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 50 percent. Additional conservation practices include prohibition on outdoor landscape irrigation, the prohibition of filling pools or fountains and washing vehicles and require repair of leaks within 48 hours of notification. With minor exceptions, no new potable water services will be allowed during a Level 5 drought condition.
- **Level 6 – Drought Emergency:** With this alert, VWD will implement mandatory conservation practices to reduce water use above 50 percent for VWD to have adequate supplies to meet anticipated demands. Additional conservation practices

include prohibited landscape irrigation, excluding commercial growers or nurseries, and the repair of leaks within 24 hours of notification.

Table 8-1 provides a summary of the conservation practices required at the six stages of drought conditions.

Ordinance 195 was previously implemented in response to Governor Brown's issued Executive Order No. B-29-15, directing that the SWRCB develop and impose restrictions on urban water users to achieve a statewide 25 percent reduction in potable urban water use.

### 9.1.2 Metering

Some of the requirements associated with meeting this BMP are including meters for all new service connections; establishing a program to retrofit existing unmetered connections; reading meters and billing customers by volume of use; billing intervals of no greater than bi-monthly; performing at least five meter readings for every 12-month period; and preparing a written plan that includes a census of all meters by size, type, year installed, and customers served. Also included are barrier identifications to retrofitting mixed commercial accounts with dedicated meters and conducting feasibility studies to assess the merits of a program to provide incentives to switch mixed-use accounts dedicated to irrigation meters.

Metering of all water use and billing by volume has long been the standard practice at VWD. As directed by the BMP, all new and existing water service connections are metered. For large parcels and commercial developments, separate, dedicated irrigation meters are placed where needed. Customers are billed based on monthly reads and according to "Tier Ranges" adopted by VWD on July 1, 2003. The Tier Ranges are divided into four step pricing tiers with separate use requirements for residential, irrigation, agriculture, and commercial/industrial, in an effort to promote conservation by charging a higher rate for each incremental use of water.

The District currently uses Automated Meter Reading. A sending device (MXU) in each meter box transmits a read to a Vehicle Gateway Base-station in the truck of a meter reader. Routes are uploaded to the Vehicle Gateway Base-station, read by driving through a neighborhood, and then downloaded into the District's billing system.

The District currently specifies Omni and iPerl meters for new development and replacement of old meters. These meters store 30 days of 10-minute interval reads. If a customer is concerned about a high usage read or suspects a leak, meter department staff can download the 30 days of water usage with a portable device known as a UniPro to discern usage behavior patterns, distinguish irrigation from domestic use, and collaborate evidence of a leak. There are currently 365 iPerl meters and 150 Omni meters installed in the District.

The next evolution in meter reading technology is Advanced Metering Infrastructure. The District currently specifies Sensus meters (iPerls and Omnis) for new construction and employs Sensus Automated Meter Reading technology. Implementation of Sensus Advanced Metering Infrastructure would cost approximately \$5.3 million.



### 9.1.3 Conservation Pricing

This BMP promotes water conserving retail water rate structures. When creating a rate case, professional judgments are made to determine whether costs are accounted to a variable or fixed cost center by the staff of the agency. The final water rate case is an accumulation of all the decisions and judgments made by staff and supplemented by the financial projections leading an agency to establish its final water rate recommendation. The BMP is not intended to supplant this process, but rather to reinforce the need for water agencies to establish a strong nexus between volume-related system costs and volumetric commodity rates.

VWD customers are billed based on monthly reads and according to “Tier Ranges.” The “Tier Ranges” are divided into three step pricing tiers with separate use requirements for residential, irrigation, agriculture, and commercial/industrial. This is an effort to meet this BMP and promote conservation and wise water use by charging a higher rate for each incremental use of water. Commodity charges are currently approximately 66 percent of the revenue generated by water rates. Drought conditions have exacerbated the percentage.

### 9.1.4 Public Education and Outreach

The primary basis for this BMP is to use public information programs as an effective tool to inform customers about the need for water conservation and ways they can conserve, and to influence customer behavior to conserve. The program should include, when possible, but should not be limited to, providing speakers to employees, creating social marketing elements that are designed to change attitudes to influence behavior; using paid and public service advertising; using bill inserts; providing information on customers’ bills showing use for the last billing period compared to the same period the year before; providing public information to promote water conservation measures and shaping water conservation messages; training stakeholders outside the utility staff in water conservation priorities and techniques and coordinating with other government agencies, industry groups, public interest groups and the media.

Through a dedicated staff, VWD meets this BMP requirement through a variety of programs and strategically targeted communication. This includes internal and external, in-house produced periodicals such as a quarterly “Splash!” newsletter mailed to all customers, use of VWD’s website located at [www.vwd.org](http://www.vwd.org), a Speaker’s Bureau covering a range of topics, and an employee newsletter. Also critical to outreach success are visibility at community events, press releases, brochures, paid newspaper advertisements, bill inserts and bill messages, free water-wise workshops, promotional events, displays, open house events, the Lending Library, classroom presentations, field trips for area schools, and facility tours. Some specific recent examples include banners at local schools, paid newspaper advertisements, and bill messages to remind people to conserve during the drought, school presentations covering water history and demonstrating water conservation techniques, as well as conservation advice available online at VWD’s website. VWD has also started using other forms of communications such as automated phone calls, movie theater ads, and social networking sites such as Facebook. The recently installed sustainable demonstration garden is another avenue that opens communication dialogue with customers to discuss ways to reduce outdoor water use.



VWD's outreach is directed to reach the diverse social, cultural, and economic elements of the population within the service area. This is accomplished by mailing the quarterly newsletter to all residents within our service area, instead of limiting distribution to actual water customers. Brochures, envelope snipes, and bill inserts are periodically mailed to VWD customers informing them of current water conditions. To assist our Spanish speaking customers, many of VWD's outreach materials are printed in Spanish and VWD's website contains a link that can convert the website text into Spanish.

The school outreach portion of this BMP has been established for water agencies to reach younger water users at an early age and enforce the need to engage in water conservation as a life-long behavior. Some targets associated with achieving success include implementing a school education program to promote water conservation and water conservation-related benefits through instructional assistance, educational materials, and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Educational materials shall meet the state education framework requirements and grade-appropriate materials shall be distributed. Also, when mutually beneficial, the water wholesale agency may operate all or part of the education program. For such cases it may be beneficial for the retail agency to assume responsibility for CUWCC reporting of this BMP; under this arrangement, a water wholesale agency may aggregate all or portions of the reporting and coverage requirements of the retail agencies joining into the mutual consent.

The VWD Education Program is designed to meet BMP requirements and establish standards adopted by the California State Board of Education in October 1998. Implemented in conjunction with the SDCWA, the presentations are designed to increase water knowledge among VWD's most impressionable users. The VWD Education Program includes:

- **Kindergarten** – In-class presentation to bring the science of the water cycle together with an effort to personalize the student's scientific knowledge of the role of water.
- **First Grade** – In-class presentation to help students comprehend the role of water in essential industries and introduce water conservation.
- **Second Grade** – Through a partnership with the City of San Marcos, VWD covers the cost to transport students to Jack's Pond Park and Nature Center where they are exposed to nature by having hands-on time with native plant exhibits. They also listen to a presentation on the importance of water in the ecosystem and the development of human settlements.
- **Fourth Grade** – In-class presentation and "water awareness calendar" poster contest to deepen the student's understanding of the water cycle.
- **Fifth Grade** – Field trips for fifth grade classes where students learn about water conservation, water treatment, the water conservation garden, and wastewater collections.
- **Kindergarten through Fifth Grade** – VWD covers the cost for the San Diego County Office of Education's "Green Machine" to be brought directly to the classroom. This hands-on agricultural program teaches the students about how

they get their food and explores the journey from “seed to table” by explaining soil science, integrated pest management, and the water cycle.

- **Fourth through Sixth Grade** – VWD covers the cost for the “Splash Science Mobile Lab” to make visits to area schools. This self-contained mobile laboratory is offered through the San Diego County Office of Education. It provides a hands-on experience where students learn about water by using cooperative learning skills, microscopes with live specimens, chemistry experiments, and state-of-the-art computers.

VWD has also partnered with the City of San Marcos to help create a conservation barn at Jack’s Pond Park to educate fourth through sixth grade students on various environmental topics. Inside the barn are seven rooms—each with a specific educational theme such as wildlife and habitat, native plants, and the water cycle. There are also many hands-on displays such as microscopes for examining life in the pond and an interactive wastewater treatment plant model.

- **Seventh through Twelfth Grade** – VWD outreaches to older students in a variety of ways, including:
  - In-class presentations on requested topics for middle schools and high schools.
  - VWD covers the cost to transport students to VWD’s MRF for facility tours to learn about wastewater treatment and recycling.
  - VWD participates in the San Marcos Unified School District’s annual Future Fair by setting up a booth to discuss water issues with the high school students.
  - Throughout the year, VWD partners with local schools on a variety of special projects. As an example, in 2015 VWD provided plants for students to install to create a native plant demonstration garden at Alvin Dunn Elementary School.
  - In-class presentations are currently under development for high school students, such as “Careers in the Water Industry,” “Cost of Water,” “Water Bill of Rights,” and the classroom activity, “Value of Water.”
- **Private Schools** – Smaller private schools and home schools within VWD’s service area are each invited to a special 2-day Splash Science Mobile Lab event at Jack’s Pond Park. The City of San Marcos’ Jack’s Pond Park and Nature Center is opened in conjunction with the Splash Science Mobile Lab event, and the Nature Center’s Director offers nature walks discussing storm water issues, local flora and fauna, and water allocation topics.
- **Colleges** – Although not a requirement of this BMP, VWD also works with local colleges to help educate students about the importance of water conservation. VWD participates in an annual environmental fair at Palomar College, and in 2010, VWD partnered with the college to create the sustainable demonstration garden that now graces the front of VWD’s administration building. VWD also currently serves on Palomar College’s “Water Technical Advisory Board.” Environmental architecture and design students designed the garden, which includes native plants, and a 2,500-gallon-capacity rainwater collection system that supplies water

to solar-powered ornamental water features. One of the water features includes a casted bronze hand depicting the value of water, which was created by Palomar College's sculpture and foundry departments. VWD also partnered with California State University San Marcos on two significant projects: a three-part Community Forum Series – “Fresh Perspectives on California's Water Future” as well as a Certificate in Water Resources Management and Leadership.

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

The goals of modern water loss control methods include both an increase in water use efficiency in the utility operations and proper economic valuation of water losses to support water loss control activities. Agencies are expected to use the AWWA Free Water Audit Software to complete their standard water audit and water balance. Instrumental to VWD complying with this BMP is a host of programs targeted at averting unbilled water loss before they happen. These programs include:

- **Water Audits:** Monthly water audits that compare total water sales with water acquisitions to determine the amount of unaccounted water. Regular audits allow VWD to develop new programs to enhance water loss reduction as needed.
- **Leak Detection:** VWD's distribution system is constantly monitored for leaks by a centralized control system, electric leak detection devices, and visual inspections.
- **Water System Improvements:** A state-of-the-art telemetry room uses a computerized Supervisory Control and Data Acquisition System to monitor water flow more efficiently. Routine and preventative maintenance is performed on the entire delivery system.
- **Meter Maintenance and Replacement Program:** Meters within VWD are replaced every 15 years to prevent malfunction and leakage.
- **Prosecution for Water Theft:** VWD personnel continually monitor for water theft and prosecute as necessary.
- **Water Loss Billing:** Whenever possible, the parties responsible for water loss (for example, damaged fire hydrants, dig-ins, etc.) are billed for the cost of required repairs and for all water lost.

A copy of the District's AWWA Water Audit is included as Appendix E.

### 9.1.6 Water Conservation Program Coordination and Staffing Support

The Water Conservation Department is managed by Chris Robbins, Water Conservation/Public Information Supervisor, who has over 21 years in the water conservation field. Staffing for the Department is 2.75 full time employees with a budget of nearly half a million dollars. Mr. Robbins can be reached at (760) 744-0460 ext. 314 or at [crobbs@vwd.org](mailto:crobbs@vwd.org).

## 9.2 Other Demand Management Measures

To address the need for water conservation in the face of projected droughts and potential state-mandated water-use restrictions, VWD developed an outreach plan that targets its high usage customers. Rather than expending efforts on achieving usage reductions across all its customers, the District focused the HURL Program on those customers who have the highest usage patterns.

### 9.2.1 HURL Objectives

- Implement an outreach campaign for high use customers with greatest conservation potential.
- Focus special efforts on customers with high potential for water waste.
- Evaluate conservation results.

#### HURL Data Analysis

After developing objectives, the District needed to perform an analysis of its highest water using customers. This was accomplished using the following parameters:

- Tier 4 (highest level within the District) customers were queried by a finance analyst.
- March 2014 to February 2015 usage was evaluated in relation to the Tier 4 Limit.
- Customers were ranked by highest usage in relation to meter size with a higher weighting for recent months.
- Sent initial letters by customer category (starting with single-family residential).
- Made follow-up phone calls.

#### Letters

The HURL letter was designed to solicit the homeowners' assistance in achieving the 24 percent reduction. It made suggestions on ways to save water while reinforcing Governor Brown's mandate. To date, over 420 HURL letters have been issued to District customers.

#### Phone Calls

A phone bank effort was made during the evening hours (to reach more customers) the last week of April 2015. A phone script was developed to ensure that all staff followed a similar dialogue when engaging customers. Subsequently, staff have made HURL calls to customers based on updated data extracts on a case-by-case basis.

#### Results

District customers achieved 33.8 percent conservation in June 2015 and 37.8 percent in July 2015, significantly exceeding the District's mandated target of 24 percent.

## 9.3 Implementation over the Past Five Years

Demand management measures have been implemented per Sections 9.1.1 through 9.1.6. Additional demand management measures not covered under those sections include residential, commercial and landscape BMPs as follows:

### 9.3.1 BMP Category 3: Residential

Residential water users throughout California depend on a reliable and safe supply of water for their homes. This BMP is designed to establish the best and most proven water conservation methods and measures that residents, working in conjunction with water agencies, can implement. The practices encourage homeowners, multi-family property owners, and tenants to increase water use efficiency and reliability. As required by the BMP, retail water agencies implement water-use efficiency through residential assistance programs such as landscape surveys and water-efficient appliance and fixture rebates and incentives.<sup>1</sup>

In meeting this BMP, VWD participates in a free water audit program to encourage water savings. As 50 to 70 percent of the water used in San Diego County is used on landscaping, customers can see significant savings by having an audit performed on their property. Audits assist customers by offering instrumental ways to save water in their own homes by reviewing landscaping irrigation systems as well as inspecting indoor and outdoor plumbing fixtures for leaks. VWD staff may suggest outdoor irrigation adjustments according to season and soil moisture composition, as well as recommend proper lawn maintenance and tips on low water-use landscaping. Once complete, an educational packet with information about other water conservation programs is also offered. Also available for distribution are free faucet aerators, low-flow showerheads, and booklets outlining effective irrigation practices, drought-tolerant plant selections, and simple tips to reduce water waste indoors and outdoors.

To further encourage customers to reduce outdoor water use, VWD participates in a regional landscape contest to award customers whose yards best exhibit the beauty of low-water gardening. Contest winners receive a gift certificate to a local nursery and are recognized at an award ceremony or at a VWD board meeting.

### 9.3.2 BMP Category 4: Commercial, Industrial, and Institutional

Commercial, industrial, and institutional (CII) usage makes up a large percentage of total water demand for California. CII water use varies dramatically between business sectors within a water agency's territory. The goal is to implement comprehensive yet flexible BMPs, allowing each water agency to tailor the implementation of each practice to fit local needs and opportunities. The end result is a practice that is successful and will produce the greatest amount of cost-effective water savings.

Through collaboration with SDCWA's CII Program, VWD meets BMP Category 4 requirements through a rebate program<sup>1</sup> that offers CII customers financial incentives to migrate to water-efficient equipment. Participants also benefit long term, experiencing savings in water, wastewater, and energy costs. VWD's CII offerings have included partial

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<sup>1</sup> Rebates and incentives are dependent on funding by VWD's wholesalers (SDCWA and MWD).

reimbursement for pre-rinse spray valves, ultra-low flush toilets, urinals (waterless models included), water brooms, single-load high-efficiency washers, cooling tower conductivity controllers, multi-load high-efficiency washers, and weather-based irrigation controllers. The CII program is regularly promoted through VWD's website, mailings, bill inserts, letters, display ads, articles, and newsletters.

### 9.3.3 BMP Category 5: Landscape

Irrigation accounts for a large portion of urban water use in California. This water use varies dramatically depending on water pricing and availability, plant choice, geographic locations, seasonal conditions, and the level of commitment to sound water efficiency practices. The goal of this BMP is that irrigators, with assistance from the water agency, will achieve a higher level of water use efficiency consistent with the actual irrigation needs of the plant materials. Reaching this goal would reduce overall demands for water, reduce demands during the peak summer months, and still result in a healthy and vibrant landscape for California.

VWD meets this BMP with its own in-house audit program and a partnership with the Mission Resource Conservation District to provide audits at no charge to VWD customers. For small residential or commercial properties, VWD has the flexibility to use in-house certified landscape irrigation auditors who can conduct the landscape audits or contract staff. On larger properties, such as homeowners' associations or agricultural users, Mission Resources Conservation District is hired to conduct a more extensive audit.

Regardless of the size of the property, all audits include a face-to-face meeting where a walkthrough is performed to identify plant types, irrigation system design, equipment problems, and scheduling. This is completed with the goal of providing cost-effective opportunities at the property – from simple repairs to new ways to schedule irrigation. On large property audits, the audit concludes with a detailed report of graphs and charts showing a sample of the landscaped area, plant material identification, hydrozoning, weather data, and water savings potential.

## 9.4 Planned Implementation to Achieve Water use Targets

The actual per capita daily water use for the 2020 was 125 gpcd, which is below the 2020 target, as shown in Section 5. The current water conservation goals have effectively provided the reduction necessary to comply with SB7. Demand management measures delineated in Section 9 present VWD's plan to maintain conservation to ensure that the demands do not increase again if drought alert levels are decreased and water awareness wanes.

## 9.5 Members of the CalWEP

VWD is currently a member of the CalWEP.



## 10 Plan Adoption, Submittal, and Implementation

### **CWC 10621**

*(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.*

*(d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).*

### **CWC 10635(d)**

*The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.*

### **CWC 10642**

*Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies.*

*After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.*

### **CWC 10644(a)(1)**

*An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.*

### **CWC 10645(a)**

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

In accordance with CWC §10621 and §10642, VWD has notified all cities and counties that have land use jurisdiction within its service area that it is reviewing and considering



amendments to its UWMP. VWD served 60-day notices to these agencies on March XX, 2021 that its UWMP was under review and may be revised in concurrence with updated land use information, demand projections, and new legislations. This 60-day notice also stated that a public hearing will be held on June 1, 2021 at 5:00 p.m. at VWD's administrative headquarters to receive comments, questions, and suggestions regarding VWD's 2020 UWMP, and to address water supply reliability and management by VWD for at least the next 20 years. Copies of the 60-day notices are included in Appendix D.

VWD advertised the notice of public hearing in the local newspaper (San Diego Union Tribune) once a week for two consecutive weeks prior to the public hearing. This notice included the date, time, and location of the public hearing noted above. A copy of this public hearing notice is included in Appendix D.

VWD held the public hearing at its regularly scheduled Board of Directors meeting on June 1, 2021 in which the following was accomplished:

- Community input was taken regarding the 2020 UWMP.
- The economic impacts of the 2020 UWMP were considered.
- Information was provided on VWD's baseline values, water use targets, and implementation plan required per SB7.
- The VWD Board of Directors adopted Method 1 (80 percent of the urban retail water supplier's baseline per capita daily water use) for determining its urban water use target per SB7.

A copy of the approved VWD Board meeting minutes for the public hearing is included in Appendix D.

VWD's Board of Directors adopted its 2020 UWMP at its regularly scheduled meeting on June 15, 2021. Copies of the approved VWD Board meeting minutes and the approved and signed resolution are included in Appendix H.

VWD's 2020 UWMP will be provided to DWR per CWC §10621 both in hard copy and electronically by July 1, 2021. In addition, VWD's 2015 UWMP will be provided to the California State Library and the agencies listed in Table 10-1 that have land use jurisdiction within its service area per CWC §10644 no later than 30 days following its adoption. Copies of these letters of transmittal are included in Appendix D.

**Table 10-1. Notification to Cities and Counties**

Name	60 Day Notice (yes/no)	Notice of Public Hearing (yes/no)
<b>City Name</b>		
Carlsbad	Yes	Yes
Escondido	Yes	Yes
Vista	Yes	Yes
San Marcos	Yes	Yes
<b>County Name</b>		
San Diego	Yes	Yes



No later than 30 days after filing a copy of the 2020 UWMP with DWR, VWD will make a hard copy of its 2020 UWMP available for public review at the Engineering Desk of its administrative headquarters during normal business hours. The final 2020 UWMP will also be made available on VWD's website at [www.vwd.org](http://www.vwd.org).

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# Appendix A. Urban Water Management Planning Act (amended) and Water Conservation Act



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# Appendix A. California Water Code – Urban Water Management Planning

**This material is for informational purposes only and not to be used in place of official California Water Code (Water Code).**

This document presents updated sections of Water Code as of January 1, 2020, as compiled by DWR staff. The selection focuses on the portions of code directly relevant to preparation of the urban water management plan and contextually relevant to urban water suppliers and the Department of Water Resources (DWR). This includes the Urban Water Management Planning Act and the Sustainable Water Use and Demand Reduction (SB X7-7), and more. Further legislative information is available on the California Legislative Information website at

<https://leginfo.legislature.ca.gov/>.

The following Water Code sections are included in this appendix.

- **Sustainable Water Use and Demand Reduction (SB X7-7)  
Water Code Division 6, Part 2.55**
  - **Chapter 1. General Declarations and Policy**, Sections 10608 – 10608.8
  - **Chapter 2. Definitions**, Section 10608.12
  - **Chapter 3. Urban Retail Water Suppliers**, Sections 10608.16 – 10608.44
  - **Chapter 4. Agricultural Water Suppliers**, Section 10608.48
  - **Chapter 5. Sustainable Water Management**, Section 10608.50
  - **Chapter 6. Standardized Data Collection**, Section 10608.52
  - **Chapter 7. Funding Provisions**, Sections 10608.56 – 10608.60
  - **Chapter 8. Quantifying Agricultural Water Use Efficiency**, Section 10608.64

- **Urban Water Management Planning Act  
Water Code Division 6, Part 2.6**
  - **Chapter 1. General Declaration and Policy**, Sections 10610 – 10610.4
  - **Chapter 2. Definitions**, Sections 10611 – 10618
  - **Chapter 3. Urban Water Management Plans**
    - Article 1. General Provisions, Sections 10620 – 10621
    - Article 2. Contents of Plans, Sections 10630 – 10634
    - Article 2.5. Water Service Reliability, Section 10635
    - Article 3. Adoption and Implementation of Plans, Sections 10640 – 10645
  - **Chapter 4. Miscellaneous Provisions**, Sections 10650 – 10657

**PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION  
CHAPTER 1. General Declaration and Policy [10608 – 10608.8]**

**10608.** The Legislature finds and declares all of the following:

- (a) Water is a public resource that the California Constitution protects against waste and unreasonable use.
- (b) Growing population, climate change, and the need to protect and grow California’s economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.
- (c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.
- (d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.
- (e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.
- (f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time,

providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

- (g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.
- (h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.
- (i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

**10608.4.** It is the intent of the Legislature, by the enactment of this part, to do all of the following:

- (a) Require all water suppliers to increase the efficiency of use of this essential resource.
- (b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.
- (c) Measure increased efficiency of urban water use on a per capita basis.
- (d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.
- (e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.
- (f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

- (g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.
- (h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.
- (i) Require implementation of specified efficient water management practices for agricultural water suppliers.
- (j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.
- (k) Advance regional water resources management.

**10608.8.** (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

- (b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.
- (c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population

growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

- (d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

## **CHAPTER 2. Definitions [10608.12]**

**10608.12.** Unless the context otherwise requires, the following definitions govern the construction of this part:

- (a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.
- (b) "Base daily per capita water use" means any of the following:
  - (1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
  - (2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the

calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

- (3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.
- (c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.
- (d) "CII water use" means water used by commercial water users, industrial water users, institutional water users, and large landscape water users.
- (e) "Commercial water user" means a water user that provides or distributes a product or service.
- (f) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.
- (g) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.
- (h) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:
- (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.
  - (2) The net volume of water that the urban retail water supplier places into long-term storage.
  - (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.
  - (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.
- (i) "Industrial water user" means a water user that is primarily a

manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.

- (j) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.
- (k) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.
- (l) "Large landscape" means a nonresidential landscape as described in the performance measures for CII water use adopted pursuant to Section 10609.10.
- (m) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.
- (n) "Performance measures" means actions to be taken by urban retail water suppliers that will result in increased water use efficiency by CII water users. Performance measures may include, but are not limited to, educating CII water users on best management practices, conducting water use audits, and preparing water management plans. Performance measures do not include process water.
- (o) "Potable reuse" means direct potable reuse, indirect potable reuse for groundwater recharge, and reservoir water augmentation as those terms are defined in Section 13561.
- (p) "Process water" means water used by industrial water users for producing a product or product content or water used for research and development. Process water includes, but is not limited to, continuous manufacturing processes, and water used for testing, cleaning, and maintaining equipment. Water used to cool machinery or buildings used in the manufacturing process or necessary to maintain product quality or chemical characteristics for product manufacturing or control rooms, data centers, laboratories, clean rooms, and other industrial facility units that



are integral to the manufacturing or research and development process is process water. Water used in the manufacturing process that is necessary for complying with local, state, and federal health and safety laws, and is not incidental water, is process water. Process water does not mean incidental water uses.

- (q) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050.
- (r) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:
  - (1) The capture and reuse of stormwater or rainwater.
  - (2) The use of recycled water.
  - (3) The desalination of brackish groundwater.
  - (4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.
- (s) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.
- (t) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.
- (u) "Urban water use objective" means an estimate of aggregate efficient water use for the previous year based on adopted water use efficiency standards and local service area characteristics for that year, as described in Section 10609.20.
- (v) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.
- (w) "Urban wholesale water supplier" means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

### **CHAPTER 3. Urban Retail Water Suppliers [10608.16 – 10608.44]**

**10608.16.** (a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.

- (1) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.

**10608.20.** (a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

- (2) It is the intent of the Legislature that the urban water use targets described in paragraph (1) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

(b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

- (1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.
- (2) The per capita daily water use that is estimated using the sum of the following performance standards:
  - (A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2017 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.
  - (B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail

water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.

(3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.

(4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:

(A) Consider climatic differences within the state.

(B) Consider population density differences within the state.

(C) Provide flexibility to communities and regions in meeting the targets.

(D) Consider different levels of per capita water use according to plant water needs in different regions.

(E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.

(F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.

(c) If the department adopts a regulation pursuant to paragraph (4) of

subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

- (d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.
- (e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the 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.
- (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.
- (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).
- (h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:
  - (A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.

- (B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.
- (2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its internet website, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.
- (i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.
- (j) (1) An urban retail water supplier is granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow the use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.
- (2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water

supplier and urban retail water suppliers.

**10608.22.** Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

**10608.24.** (a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

- (b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.
- (c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.
- (d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:
  - (A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.
  - (B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.
  - (C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.
- (2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.
- (e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial

percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

- (f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.
- (2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

**10608.26.** (a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

- (1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.
  - (2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.
  - (3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.
- (b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.
- (c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under

federal Executive Order 13514.

(d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

(2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

**10608.28.** (a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

- (1) Through an urban wholesale water supplier.
- (2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).
- (3) Through a regional water management group as defined in Section 10537.
- (4) By an integrated regional water management funding area.
- (5) By hydrologic region.
- (6) Through other appropriate geographic scales for which computation methods have been developed by the



department.

- (b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

**10608.32.** All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

**10608.34.** (a) (1) On or before January 1, 2017, the department shall adopt rules for all of the following:

- (A) The conduct of standardized water loss audits by urban retail water suppliers in accordance with the method adopted by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0.
- (B) The process for validating a water loss audit report prior to submitting the report to the department. For the purposes of this section, "validating" is a process whereby an urban retail water supplier uses a technical expert to confirm the basis of all data entries in the urban retail water supplier's water loss audit report and to appropriately characterize the quality of the reported data. The validation process shall follow the principles and terminology laid out by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0. A validated water loss audit report shall include the name and technical qualifications of the person engaged for validation.
- (C) The technical qualifications required of a person to

- engage in validation, as described in subparagraph (B).
- (D) The certification requirements for a person selected by an urban retail water supplier to provide validation of its own water loss audit report.
- (E) The method of submitting a water loss audit report to the department.
- (2) The department shall update rules adopted pursuant to paragraph (1) no later than six months after the release of subsequent editions of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36. Except as provided by the department, until the department adopts updated rules pursuant to this paragraph, an urban retail water supplier may rely upon a subsequent edition of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36 or the Free Water Audit Software.
- (b) (1) On or before October 1 of each year until October 1, 2023, each urban retail water supplier reporting on a calendar year basis shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year as prescribed by the department pursuant to subdivision (a).
- (2) On or before January 1 of each year until January 1, 2024, each urban retail water supplier reporting on a fiscal year basis shall submit a completed and validated water loss audit report for the previous fiscal year as prescribed by the department pursuant to subdivision (a).
- (3) On or before January 1, 2024, and on or before January 1 of each year thereafter, each urban retail water supplier shall submit a completed and validated water loss audit report for the previous calendar year or previous fiscal year as part of the report submitted to the department pursuant to subdivision (a) of Section 10609.24 and as prescribed by the department pursuant to subdivision (a).
- (4) Water loss audit reports submitted on or before October 1, 2017, may be completed and validated with assistance as described in subdivision (c).

- (c) Using funds available for the 2016–17 fiscal year, the board shall contribute up to four hundred thousand dollars (\$400,000) towards procuring water loss audit report validation assistance for urban retail water suppliers.
- (d) Each water loss audit report submitted to the department shall be accompanied by information, in a form specified by the department, identifying steps taken in the preceding year to increase the validity of data entered into the final audit, reduce the volume of apparent losses, and reduce the volume of real losses.
- (e) At least one of the following employees of an urban retail water supplier shall attest to each water loss audit report submitted to the department:
  - (1) The chief financial officer.
  - (2) The chief engineer.
  - (3) The general manager.
- (f) The department shall deem incomplete and return to the urban retail water supplier any final water loss audit report found by the department to be incomplete, not validated, unattested, or incongruent with known characteristics of water system operations. A water supplier shall resubmit a completed water loss audit report within 90 days of an audit being returned by the department.
- (g) The department shall post all validated water loss audit reports on its internet website in a manner that allows for comparisons across water suppliers. The department shall make the validated water loss audit reports available for public viewing in a timely manner after their receipt.
- (h) Using available funds, the department shall provide technical assistance to guide urban retail water suppliers' water loss detection programs, including, but not limited to, metering techniques, pressure management techniques, condition-based assessment techniques for transmission and distribution pipelines, and utilization of portable and permanent water loss detection devices.
- (i) No earlier than January 1, 2019, and no later than July 1, 2020, the board shall adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. In

adopting these rules, the board shall employ full life-cycle cost accounting to evaluate the costs of meeting the performance standards. The board may consider establishing a minimum allowable water loss threshold that, if reached and maintained by an urban water supplier, would exempt the urban water supplier from further water loss reduction requirements.

**10608.35.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and make a recommendation to the Legislature, by January 1, 2020, on the feasibility of developing and enacting water loss reporting requirements for urban wholesale water suppliers.

(b) The studies and investigations shall include an evaluation of the suitability of applying the processes and requirements of Section 10608.34 to urban wholesale water suppliers.

(c) In conducting necessary studies and investigations and developing its recommendation, the department shall solicit broad public participation from stakeholders and other interested persons.

**10608.36.** Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

**10608.40.** Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

**10608.42.** (a) The department shall review the 2015 urban water management plans and report to the Legislature by July 1, 2017, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.

- (b) A report to be submitted pursuant to subdivision (a) shall be submitted in compliance with Section 9795 of the Government Code.

**10608.43.** The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

- (a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.
- (b) Evaluation of water demands for manufacturing processes, goods, and cooling.
- (c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.
- (d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.
- (e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

**10608.44.** Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in

Section 10608.16.

#### **CHAPTER 4. Agricultural Water Suppliers [10608.48]**

**10608.48.** (a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).

- (b) Agricultural water suppliers shall implement both of the following critical efficient management practices:
  - (1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).
  - (2) Adopt a pricing structure for water customers based at least in part on quantity delivered.
- (c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:
  - (1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.
  - (2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.
  - (3) Facilitate the financing of capital improvements for on-farm irrigation systems.
  - (4) Implement an incentive pricing structure that promotes one or more of the following goals:
    - (A) More efficient water use at the farm level.
    - (B) Conjunctive use of groundwater.
    - (C) Appropriate increase of groundwater recharge.
    - (D) Reduction in problem drainage.

- (E) Improved management of environmental resources.
  - (F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.
- (5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.
  - (6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.
  - (7) Construct and operate supplier spill and tailwater recovery systems.
  - (8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.
  - (9) Automate canal control structures.
  - (10) Facilitate or promote customer pump testing and evaluation.
  - (11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.
  - (12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:
    - (A) On-farm irrigation and drainage system evaluations.
    - (B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.
    - (C) Surface water, groundwater, and drainage water quantity and quality data.
    - (D) Agricultural water management educational programs and materials for farmers, staff, and the public.
  - (13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.
  - (14) Evaluate and improve the efficiencies of the supplier's

pumps.

- (d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.
- (e) The department shall require information about the implementation of efficient water management practices to be reported using a standardized form developed pursuant to Section 10608.52. (f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.
- (f) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.
- (g) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.



- (h) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

## **CHAPTER 5. Sustainable Water Management [10608.50]**

**10608.50.** (a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

- (1) Revisions to the requirements for urban and agricultural water management plans.
- (2) Revisions to the requirements for integrated regional water management plans.
- (3) Revisions to the eligibility for state water management grants and loans.
- (4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.
- (5) Increased funding for research, feasibility studies, and project construction.
- (6) Expanding technical and educational support for local land use and water management agencies.

- (b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

## **CHAPTER 6. Standardized Data Collection [10608.52]**

**10608.52.** (a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

- (b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

## **CHAPTER 7. Funding Provisions [10608.56 – 10608.60]**

**10608.56.** (a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

- (b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.
- (c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita

reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

- (d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.
- (e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.
- (f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

**10608.60.** (a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public

Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

- (b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

## **CHAPTER 8. Quantifying Agricultural Water Use Efficiency [10608.64]**

**10608.64.** The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

## **PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 – 10609.42]**

### **CHAPTER 9. Urban Water Use Objectives and Water Use Reporting [10609 – 10609.38]**

**10609.** (a) The Legislature finds and declares that this chapter establishes a method to estimate the aggregate amount of water that would have been delivered the previous year by an urban retail water supplier if all that water had been used efficiently. This estimated aggregate water use is the urban retail water supplier's urban water use objective. The method is based on water use efficiency standards and local service area characteristics for that year. By comparing the amount of water actually used in the previous year with the urban water use objective, local urban water suppliers will be in a better position to help eliminate unnecessary use of water; that is, water used in excess of that needed to accomplish the intended beneficial use.

- (b) The Legislature further finds and declares all of the following:
- (1) This chapter establishes standards and practices for the following water uses:
    - (A) Indoor residential use.
    - (B) Outdoor residential use.
    - (C) CII water use.
    - (D) Water losses.
    - (E) Other unique local uses and situations that can have a material effect on an urban water supplier's total water use.
  - (2) This chapter further does all of the following:
    - (A) Establishes a method to calculate each urban water use objective.
    - (B) Considers recycled water quality in establishing efficient irrigation standards.
    - (C) Requires the department to provide or otherwise identify data regarding the unique local conditions to support the calculation of an urban water use objective.
    - (D) Provides for the use of alternative sources of data if alternative sources are shown to be as accurate as, or more accurate than, the data provided by the department.
    - (E) Requires annual reporting of the previous year's water use with the urban water use objective.
    - (F) Provides a bonus incentive for the amount of potable recycled water used the previous year when comparing the previous year's water use with the urban water use objective, of up to 10 percent of the urban water use objective.
  - (3) This chapter requires the department and the board to solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter.

- (4) This chapter preserves the Legislature’s authority over long-term water use efficiency target setting and ensures appropriate legislative oversight of the implementation of this chapter by doing all of the following:
  - (A) Requiring the Legislative Analyst to conduct a review of the implementation of this chapter, including compliance with the adopted standards and regulations, accuracy of the data, use of alternate data, and other issues the Legislative Analyst deems appropriate.
  - (B) Stating legislative intent that the director of the department and the chairperson of the board appear before the appropriate Senate and Assembly policy committees to report on progress in implementing this chapter.
  - (C) Providing one-time-only authority to the department and board to adopt water use efficiency standards, except as explicitly provided in this chapter. Authorization to update the standards shall require separate legislation.
- (c) It is the intent of the Legislature that the following principles apply to the development and implementation of long-term standards and urban water use objectives:
  - (1) Local urban retail water suppliers should have primary responsibility for meeting standards-based water use targets, and they shall retain the flexibility to develop their water supply portfolios, design and implement water conservation strategies, educate their customers, and enforce their rules.
  - (2) Long-term standards and urban water use objectives should advance the state’s goals to mitigate and adapt to climate change.
  - (3) Long-term standards and urban water use objectives should acknowledge the shade, air quality, and heat-island reduction benefits provided to communities by trees through the support of water-efficient irrigation practices that keep trees healthy.

- (4) The state should identify opportunities for streamlined reporting, eliminate redundant data submissions, and incentivize open access to data collected by urban and agricultural water suppliers.

**10609.2.** (a) The board, in coordination with the department, shall adopt long-term standards for the efficient use of water pursuant to this chapter on or before June 30, 2022.

(b) Standards shall be adopted for all of the following:

- (1) Outdoor residential water use.
- (2) Outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.
- (3) A volume for water loss.

(c) When adopting the standards under this section, the board shall consider the policies of this chapter and the proposed efficiency standards' effects on local wastewater management, developed and natural parklands, and urban tree health. The standards and potential effects shall be identified by May 30, 2022. The board shall allow for public comment on potential effects identified by the board under this subdivision.

(d) The long-term standards shall be set at a level designed so that the water use objectives, together with other demands excluded from the long-term standards such as CII indoor water use and CII outdoor water use not connected to a dedicated landscape meter, would exceed the statewide conservation targets required pursuant to Chapter 3 (commencing with Section 10608.16).

(e) The board, in coordination with the department, shall adopt by regulation variances recommended by the department pursuant to Section 10609.14 and guidelines and methodologies pertaining to the calculation of an urban retail water supplier's urban water use objective recommended by the department pursuant to Section 10609.16.

**10609.4.** (a) (1) Until January 1, 2025, the standard for indoor residential water use shall be 55 gallons per capita daily.

(2) Beginning January 1, 2025, and until January 1, 2030, the

standard for indoor residential water use shall be the greater of 52.5 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(3) Beginning January 1, 2030, the standard for indoor residential water use shall be the greater of 50 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(b) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and may jointly recommend to the Legislature a standard for indoor residential water use that more appropriately reflects best practices for indoor residential water use than the standard described in subdivision (a). A report on the results of the studies and investigations shall be made to the chairpersons of the relevant policy committees of each house of the Legislature by January 1, 2021, and shall include information necessary to support the recommended standard, if there is one. The studies and investigations shall also include an analysis of the benefits and impacts of how the changing standard for indoor residential water use will impact water and wastewater management, including potable water usage, wastewater, recycling and reuse systems, infrastructure, operations, and supplies.

(2) The studies, investigations, and report described in paragraph (1) shall include collaboration with, and input from, a broad group of stakeholders, including, but not limited to, environmental groups, experts in indoor plumbing, and water, wastewater, and recycled water agencies.

**10609.6.** (a) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor residential use for adoption by the board in accordance with this chapter.

(2) (A) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).

(B) The standards shall apply to irrigable lands.



- (C) The standards shall include provisions for swimming pools, spas, and other water features. Ornamental water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, shall be analyzed separately from swimming pools and spas.
- (b) The department shall, by January 1, 2021, provide each urban retail water supplier with data regarding the area of residential irrigable lands in a manner that can reasonably be applied to the standards adopted pursuant to this section.
- (c) The department shall not recommend standards pursuant to this section until it has conducted pilot projects or studies, or some combination of the two, to ensure that the data provided to local agencies are reasonably accurate for the data's intended uses, taking into consideration California's diverse landscapes and community characteristics.

**10609.8.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor irrigation of landscape areas with dedicated irrigation meters or other means of calculating outdoor irrigation use in connection with CII water use for adoption by the board in accordance with this chapter.

- (b) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).
- (c) The standards shall include an exclusion for water for commercial agricultural use meeting the definition of subdivision (b) of Section 51201 of the Government Code.

**10609.9.** For purposes of Sections 10609.6 and 10609.8, "principles of the model water efficient landscape ordinance" means those provisions of the model water efficient landscape ordinance applicable to the establishment or determination of the amount of water necessary to efficiently irrigate both new and existing landscapes. These provisions include, but are not limited to, all of the following:

- (a) Evapotranspiration adjustment factors, as applicable.
- (b) Landscape area.
- (c) Maximum applied water allowance.
- (d) Reference evapotranspiration.
- (e) Special landscape areas, including provisions governing evapotranspiration adjustment factors for different types of water used for irrigating the landscape.

**10609.10.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, performance measures for CII water use for adoption by the board in accordance with this chapter.

- (b) Prior to recommending performance measures for CII water use, the department shall solicit broad public participation from stakeholders and other interested persons relating to all of the following:
  - (1) Recommendations for a CII water use classification system for California that address significant uses of water.
  - (2) Recommendations for setting minimum size thresholds for converting mixed CII meters to dedicated irrigation meters, and evaluation of, and recommendations for, technologies that could be used in lieu of requiring dedicated irrigation meters.
  - (3) Recommendations for CII water use best management practices, which may include, but are not limited to, water audits and water management plans for those CII customers that exceed a recommended size, volume of water use, or other threshold.
- (c) Recommendations of appropriate performance measures for CII water use shall be consistent with the October 21, 2013, report to the Legislature by the Commercial, Industrial, and Institutional Task Force entitled "Water Use Best Management Practices," including the technical and financial feasibility recommendations provided in that report, and shall support the economic productivity of California's commercial, industrial, and institutional sectors.

- (d) (1) The board, in coordination with the department, shall adopt performance measures for CII water use on or before June 30, 2022.

- (a) Each urban retail water supplier shall implement the performance measures adopted by the board pursuant to paragraph (1).

**10609.12.** The standards for water loss for urban retail water suppliers shall be the standards adopted by the board pursuant to subdivision (i) of Section 10608.34.

**10609.14.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and, no later than October 1, 2021, recommend for adoption by the board in accordance with this chapter appropriate variances for unique uses that can have a material effect on an urban retail water supplier's urban water use objective.

- (b) Appropriate variances may include, but are not limited to, allowances for the following:
  - (1) Significant use of evaporative coolers.
  - (2) Significant populations of horses and other livestock.
  - (3) Significant fluctuations in seasonal populations.
  - (4) Significant landscaped areas irrigated with recycled water having high levels of total dissolved solids.
  - (5) Significant use of water for soil compaction and dust control.
  - (6) Significant use of water to supplement ponds and lakes to sustain wildlife.
  - (7) Significant use of water to irrigate vegetation for fire protection.
  - (8) Significant use of water for commercial or noncommercial agricultural use.
- (c) The department, in recommending variances for adoption by the board, shall also recommend a threshold of significance for each recommended variance.
- (d) Before including any specific variance in calculating an urban retail water supplier's water use objective, the urban retail water supplier shall request and receive approval by the board for the inclusion of that variance.
- (e) The board shall post on its Internet Web site all of the following:

- (1) A list of all urban retail water suppliers with approved variances.
- (2) The specific variance or variances approved for each urban retail water supplier.
- (3) The data supporting approval of each variance.

**10609.15.** To help streamline water data reporting, the department and the board shall do all of the following:

- (a) Identify urban water reporting requirements shared by both agencies, and post on each agency's Internet Web site how the data is used for planning, regulatory, or other purposes.
- (b) Analyze opportunities for more efficient publication of urban water reporting requirements within each agency, and analyze how each agency can integrate various data sets in a publicly accessible location, identify priority actions, and implement priority actions identified in the analysis.
- (c) Make appropriate data pertaining to the urban water reporting requirements that are collected by either agency available to the public according to the principles and requirements of the Open and Transparent Water Data Act (Part 4.9 (commencing with Section 12400)).

**10609.16.** The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, guidelines and methodologies for the board to adopt that identify how an urban retail water supplier calculates its urban water use objective. The guidelines and methodologies shall address, as necessary, all of the following:

- (a) Determining the irrigable lands within the urban retail water supplier's service area.
- (b) Updating and revising methodologies described pursuant to subparagraph (A) of paragraph (1) of subdivision (h) of Section 10608.20, as appropriate, including methodologies for calculating the population in an urban retail water supplier's service area.
- (c) Using landscape area data provided by the department or alternative data.

- (d) Incorporating precipitation data and climate data into estimates of a urban retail water supplier's outdoor irrigation budget for its urban water use objective.
- (e) Estimating changes in outdoor landscape area and population, and calculating the urban water use objective, for years when updated landscape imagery is not available from the department.
- (f) Determining acceptable levels of accuracy for the supporting data, the urban water use objective, and compliance with the urban water use objective.

**10609.18.** The department and the board shall solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter. The board shall hold at least one public meeting before taking any action on any standard or variance recommended by the department.

**10609.20.** (a) Each urban retail water supplier shall calculate its urban water use objective no later than January 1, 2024, and by January 1 every year thereafter.

- (b) The calculation shall be based on the urban retail water supplier's water use conditions for the previous calendar or fiscal year.
- (c) Each urban water supplier's urban water use objective shall be composed of the sum of the following:
  - (1) Aggregate estimated efficient indoor residential water use.
  - (2) Aggregate estimated efficient outdoor residential water use.
  - (3) Aggregate estimated efficient outdoor irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use.
  - (4) Aggregate estimated efficient water losses.
  - (5) Aggregate estimated water use in accordance with variances, as appropriate.
- (d) (1) An urban retail water supplier that delivers water from a groundwater basin, reservoir, or other source that is augmented by potable reuse water may adjust its urban water use objective by a bonus incentive calculated pursuant to this subdivision.

- (2) The water use objective bonus incentive shall be the volume of its potable reuse delivered to residential water users and to landscape areas with dedicated irrigation meters in connection with CII water use, on an acre-foot basis.
- (3) The bonus incentive pursuant to paragraph (1) shall be limited in accordance with one of the following:
  - (A) The bonus incentive shall not exceed 15 percent of the urban water supplier's water use objective for any potable reuse water produced at an existing facility.
  - (B) The bonus incentive shall not exceed 10 percent of the urban water supplier's water use objective for any potable reuse water produced at any facility that is not an existing facility.
- (4) For purposes of this subdivision, "existing facility" means a facility that meets all of the following:
  - (A) The facility has a certified environmental impact report, mitigated negative declaration, or negative declaration on or before January 1, 2019.
  - (B) The facility begins producing and delivering potable reuse water on or before January 1, 2022.
  - (C) The facility uses microfiltration and reverse osmosis technologies to produce the potable reuse water.
- (e)
  - (1) The calculation of the urban water use objective shall be made using landscape area and other data provided by the department and pursuant to the standards, guidelines, and methodologies adopted by the board. The department shall provide data to the urban water supplier at a level of detail sufficient to allow the urban water supplier to verify its accuracy at the parcel level.
  - (2) Notwithstanding paragraph (1), an urban retail water supplier may use alternative data in calculating the urban water use objective if the supplier demonstrates to the department that the alternative data are equivalent, or superior, in quality and accuracy to the data provided by the department. The department may provide technical assistance to an urban retail water supplier in evaluating whether the alternative data are appropriate for use in calculating the supplier's urban water use objective.

**10609.21.** (a) For purposes of Section 10609.20, and notwithstanding paragraph (4) of subdivision (d) of Section 10609.20, "existing facility" also includes the North City Project, phase one of the Pure Water San Diego Program, for which an environmental impact report was certified on April 10, 2018.

(b) This section shall become operative on January 1, 2019.

**10609.22.** (a) An urban retail water supplier shall calculate its actual urban water use no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use for the previous calendar or fiscal year.

(c) Each urban water supplier's urban water use shall be composed of the sum of the following:

- (1) Aggregate residential water use.
- (2) Aggregate outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.
- (3) Aggregate water losses.

**10609.24.** (a) An urban retail water supplier shall submit a report to the department no later than January 1, 2024, and by January 1 every year thereafter. The report shall include all of the following:

- (1) The urban water use objective calculated pursuant to Section 10609.20 along with relevant supporting data.
- (2) The actual urban water use calculated pursuant to Section 10609.22 along with relevant supporting data.
- (3) Documentation of the implementation of the performance measures for CII water use.
- (4) A description of the progress made towards meeting the urban water use objective.
- (5) The validated water loss audit report conducted pursuant to Section 10608.34.

(b) The department shall post the reports and information on its internet website.



- (c) The board may issue an information order or conservation order to, or impose civil liability on, an entity or individual for failure to submit a report required by this section.

**10609.25.** As part of the first report submitted to the department by an urban retail water supplier no later than January 1, 2024, pursuant to subdivision (a) of Section 10609.24, each urban retail water supplier shall provide a narrative that describes the water demand management measures that the supplier plans to implement to achieve its urban water use objective by January 1, 2027.

**10609.26.** (a) (1) On and after January 1, 2024, the board may issue informational orders pertaining to water production, water use, and water conservation to an urban retail water supplier that does not meet its urban water use objective required by this chapter. Informational orders are intended to obtain information on supplier activities, water production, and conservation efforts in order to identify technical assistance needs and assist urban water suppliers in meeting their urban water use objectives.

(2) In determining whether to issue an informational order, the board shall consider the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet the urban water use objective.

(3) The board shall share information received pursuant to this subdivision with the department.

(4) An urban water supplier may request technical assistance from the department. The technical assistance may, to the extent available, include guidance documents, tools, and data.

(b) On and after January 1, 2025, the board may issue a written notice to an urban retail water supplier that does not meet its urban water use objective required by this chapter. The written notice may warn the urban retail water supplier that it is not meeting its urban water use objective described in Section 10609.20 and is not making adequate progress in meeting the urban water use objective, and may request that the urban retail water supplier

address areas of concern in its next annual report required by Section 10609.24. In deciding whether to issue a written notice, the board may consider whether the urban retail water supplier has received an informational order, the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet its urban water use objective.

- (c) (1) On and after January 1, 2026, the board may issue a conservation order to an urban retail water supplier that does not meet its urban water use objective. A conservation order may consist of, but is not limited to, referral to the department for technical assistance, requirements for education and outreach, requirements for local enforcement, and other efforts to assist urban retail water suppliers in meeting their urban water use objective.
- (2) In issuing a conservation order, the board shall identify specific deficiencies in an urban retail water supplier's progress towards meeting its urban water use objective, and identify specific actions to address the deficiencies.
- (3) The board may request that the department provide an urban retail water supplier with technical assistance to support the urban retail water supplier's actions to remedy the deficiencies.
- (d) A conservation order issued in accordance with this chapter may include requiring actions intended to increase water-use efficiency, but shall not curtail or otherwise limit the exercise of a water right, nor shall it require the imposition of civil liability pursuant to Section 377.

**10609.27.** Notwithstanding Section 10609.26, the board shall not issue an information order, written notice, or conservation order pursuant to Section 10609.26 if both of the following conditions are met:

- (a) The board determines that the urban retail water supplier is not meeting its urban water use objective solely because the volume of water loss exceeds the urban retail water supplier's standard for water loss.

- (b) Pursuant to Section 10608.34, the board is taking enforcement action against the urban retail water supplier for not meeting the performance standards for the volume of water losses.

**10609.28.** The board may issue a regulation or informational order requiring a wholesale water supplier, an urban retail water supplier, or a distributor of a public water supply, as that term is used in Section 350, to provide a monthly report relating to water production, water use, or water conservation.

**10609.30.** On or before January 10, 2024, the Legislative Analyst shall provide to the appropriate policy committees of both houses of the Legislature and the public a report evaluating the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. The board and the department shall provide the Legislative Analyst with the available data to complete this report.

- (a) The report shall describe all of the following:

- (1) The rate at which urban retail water users are complying with the standards, and factors that might facilitate or impede their compliance.
- (2) The accuracy of the data and estimates being used to calculate urban water use objectives.
- (3) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.
- (4) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.
- (5) The early indications of how implementing this chapter might impact the efficiency of statewide urban water use.
- (6) Recommendations, if any, for improving statewide urban water use efficiency and the standards and practices described in this chapter.
- (7) Any other issues the Legislative Analyst deems appropriate.

**10609.32.** It is the intent of the Legislature that the chairperson of the board and the director of the department appear before the appropriate policy committees of both houses of the Legislature on or around January 1, 2026, and report on the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. It is the intent of the Legislature that the topics to be covered include all of the following:

- (a) The rate at which urban retail water suppliers are complying with the standards, and factors that might facilitate or impede their compliance.
- (b) What enforcement actions have been taken, if any.
- (c) The accuracy of the data and estimates being used to calculate urban water use objectives.
- (d) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.
- (e) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.
- (f) An assessment of how implementing this chapter is affecting the efficiency of statewide urban water use.

**10609.34.** Notwithstanding Section 15300.2 of Title 14 of the California Code of Regulations, an action of the board taken under this chapter shall be deemed to be a Class 8 action, within the meaning of Section 15308 of Title 14 of the California Code of Regulations, provided that the action does not involve relaxation of existing water conservation or water use standards.

**10609.36.** (a) Nothing in this chapter shall be construed to determine or alter water rights. Sections 1010 and 1011 apply to water conserved through implementation of this chapter.

- (b) Nothing in this chapter shall be construed to authorize the board to update or revise water use efficiency standards authorized by this chapter except as explicitly provided in this chapter. Authorization to update the standards beyond that explicitly provided in this chapter shall require separate legislation.

- (c) Nothing in this chapter shall be construed to limit or otherwise affect the use of recycled water as seawater barriers for groundwater salinity management.

**10609.38.** The board may waive the requirements of this chapter for a period of up to five years for any urban retail water supplier whose water deliveries are significantly affected by changes in water use as a result of damage from a disaster such as an earthquake or fire. In establishing the period of a waiver, the board shall take into consideration the breadth of the damage and the time necessary for the damaged areas to recover from the disaster.

## **PART 2.6. URBAN WATER MANAGEMENT PLANNING**

### **CHAPTER 1. General Declaration and Policy [10610 – 10610.4]**

**10610.** This part shall be known and may be cited as the "Urban Water Management Planning Act."

**10610.2.** (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate, and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years now and into the

foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.

- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
  - (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
  - (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
  - (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
  - (9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.
- (b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

**10610.4.** The Legislature finds and declares that it is the policy of the state as follows:

- (a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
- (b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
- (c) Urban water suppliers shall be required to develop water management plans to achieve the efficient use of available supplies and strengthen local drought planning.

**CHAPTER 2. Definitions [10611 – 10618]**

**10611.** Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

**10611.3.** "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

**10611.5.** "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

**10612.** "Drought risk assessment" means a method that examines water shortage risks based on the driest five-year historic sequence for the agency's water supply, as described in subdivision (b) of Section 10635.

**10613.** "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

**10614.** "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

**10615.** "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

**10616.** "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

**10616.5.** "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

**10617.** "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. 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 subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

**10617.5.** "Water shortage contingency plan" means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.

**10618.** "Water supply and demand assessment" means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.

### **CHAPTER 3. Urban Water Management Plans**

#### **ARTICLE 1. General Provisions [10620 – 10621]**

**10620.** (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

- (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.
- (c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
- (d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce



preparation costs and contribute to the achievement of conservation, efficient water use, and improved local drought resilience.

- (2) Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.
  - (3) Each urban water supplier shall 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.
- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
  - (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

**10621.** (a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.

- (b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
- (c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage

contingency plan as part of the supplier's general rate case filings.

- (d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).
- (e) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.
- (f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

### **CHAPTER 3. Urban Water Management Plans**

#### **ARTICLE 2. Contents of Plans [10630 – 10634]**

**10630.** It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.

**10630.5.** Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

**10631.** A plan shall be adopted in accordance with this chapter that shall do all of the following:

- (a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including,

where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

- (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following:
- (1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.
  - (2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.
  - (3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.
  - (4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:
    - (A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.
    - (B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.

For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

- (C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
  - (D) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- (c) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.
- (d) (1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors,

including, but not necessarily limited to, all of the following:

- (A) Single-family residential.
  - (B) Multifamily.
  - (C) Commercial.
  - (D) Industrial.
  - (E) Institutional and governmental.
  - (F) Landscape.
  - (G) Sales to other agencies.
  - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
  - (I) Agricultural.
  - (J) Distribution system water loss.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).
- (3) (A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.
- (B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.
- (C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.
- (4) (A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

- (B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:
  - (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.
  - (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.
- (e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:
  - (1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.
    - (B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:
      - (i) Water waste prevention ordinances.
      - (ii) Metering.
      - (iii) Conservation pricing.
      - (iv) Public education and outreach.
      - (v) Programs to assess and manage distribution system real loss.
      - (vi) Water conservation program coordination and staffing support.
      - (vii) Other demand management measures that have a significant impact on water use as measured in

gallons per capita per day, including innovative measures, if implemented.

- (2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.
- (f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
- (g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
- (h) 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 (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

**10631.1.** (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

**10631.2.** (a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

- (1) An estimate of the amount of energy used to extract or divert water supplies.
- (2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.
- (3) An estimate of the amount of energy used to treat water supplies.
- (4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.
- (5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.
- (6) An estimate of the amount of energy used to place water into or withdraw from storage.
- (7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.



- (c) The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.

**10632.** (a) Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

- (1) The analysis of water supply reliability conducted pursuant to Section 10635.
- (2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:
  - (A) The written decision making process that an urban water supplier will use each year to determine its water supply reliability.
  - (B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:
    - (i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.
    - (ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.
    - (iii) Existing infrastructure capabilities and plausible constraints.
    - (iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.
    - (v) A description and quantification of each source of water supply.

- (3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.
- (B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.
- (4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:
- (A) Locally appropriate supply augmentation actions.
- (B) Locally appropriate demand reduction actions to adequately respond to shortages.
- (C) Locally appropriate operational changes.
- (D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.
- (E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.
- (5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

- (A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.
  - (B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.
  - (C) Any other relevant communications.
- (6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.
- (7) (A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.
- (A) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.
  - (B) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.
- (8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:
- (A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).
  - (B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

- (C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.
- (9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.
- (10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.
- (b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.
- (c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

**10632.1.** An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.

**10632.2.** An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in

subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

**10632.3.** 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.

**10632.5.** (a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

- (b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.
- (c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

**10633.** The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the

amount of wastewater collected and treated and the methods of wastewater disposal.

- (b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
- (c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- (d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
- (e) 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 pursuant to this subdivision.
- (f) A description of actions, including financial incentives, 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.
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

**10634.** The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

**CHAPTER 3. Urban Water Management Plans****ARTICLE 2.5. Water Service Reliability [10635]**

**10635.** (a) Every urban water supplier shall include, as part of its urban water management plan, 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 Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) 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. The drought risk assessment shall include each of the following:

- (1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.
- (2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.
- (3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.
- (4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate

change conditions, anticipated regulatory changes, and other locally applicable criteria.

- (d) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.
- (e) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.
- (f) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

### **CHAPTER 3. Urban Water Management Plans**

#### **ARTICLE 3. Adoption and Implementation of Plans [10640 – 10645]**

**10640.** (a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

- (b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.



**10641.** An urban water supplier required to prepare a plan or a water shortage contingency plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

**10642.** Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

**10643.** An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

**10644.** (a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its

water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

- (c) (1) (A) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before July 1, in the years ending in seven and two, a report summarizing the status of the plans and water shortage contingency plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans and water shortage contingency plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan and water shortage contingency plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans and water shortage contingency plans submitted pursuant to this part.

(B) The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.

(C) The department shall submit the report to the Legislature for the 2015 plans by July 1, 2017, and the report to the Legislature for the 2020 plans and water shortage contingency plans by July 1, 2022.

- (2) A report to be submitted pursuant to subparagraph (A) of paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

- (d) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

**10645.** (a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

- (b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

#### **CHAPTER 4. Miscellaneous Provisions [10650 – 10657]**

**10650.** Any actions or proceedings, other than actions by the board, to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

- (a) An action or proceeding alleging failure to adopt a plan or a water shortage contingency plan shall be commenced within 18 months after that adoption is required by this part.
- (b) Any action or proceeding alleging that a plan or water shortage contingency plan, or action taken pursuant to either, does not comply with this part shall be commenced within 90 days after filing of the plan or water shortage contingency plan or an amendment to either pursuant to Section 10644 or the taking of that action.

**10651.** In any action or proceeding to attack, review, set aside, void, or annul a plan or a water shortage contingency plan, or an action taken pursuant to either by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

**10652.** The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the

preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

**10653.** The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the board and the Public Utilities Commission, for the preparation of water management plans, water shortage contingency plans, or conservation plans; provided, that if the board or the Public Utilities Commission requires additional information concerning water conservation, drought response measures, or financial conditions to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan that complies with analogous federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

**10654.** An urban water supplier may recover in its rates the costs incurred in preparing its urban water management plan, its drought risk assessment, its water supply and demand assessment, and its water shortage contingency plan and implementing the reasonable water conservation measures included in either of the plans.

**10655.** If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

**10656.** An urban water supplier is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.

**10657.** The department may adopt regulations regarding the definitions of water, water use, and reporting periods, and may adopt any other regulations deemed necessary or desirable to implement this part. In developing regulations pursuant to this section, the department shall solicit broad public participation from stakeholders and other interested persons.

# Appendix B. Changes to the California Water Code Since 2015 UWMP

## **This material is for informational purposes only and not to be used in place of official California Water Code (Water Code).**

This document presents changes made to Water Code statutes that appeared in the 2015 Urban Water Management Plan Guidebook and it includes updated Water Code statues (as of January 1, 2020). The information presented focuses on Water Code sections affecting urban water suppliers and the California Department of Water Resources (DWR), as compiled by DWR staff.

- Section 10608 – 10608.44
- Section 10609 – 10609.38
- Sections 10610 – 10657

[Note to reader: ~~Strikeouts~~indicated text removed from the 2015 version while *italic* text represents new language since 2015.]

### **PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 – 10609.42]**

#### **CHAPTER 1. General Declarations and Policy [10608 – 10608.8]**

**10608.** The Legislature finds and declares all of the following:

- (a) Water is a public resource that the California Constitution protects against waste and unreasonable use.
- (b) Growing population, climate change, and the need to protect and grow California’s economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.
- (c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.
- (d) Reduced water use through conservation provides significant

energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.

- (e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.
- (f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.
- (g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.
- (h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.
- (i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

**10608.4.** It is the intent of the Legislature, by the enactment of this part, to do all of the following:

- (a) Require all water suppliers to increase the efficiency of use of this essential resource.
- (b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.
- (c) Measure increased efficiency of urban water use on a per capita basis.
- (d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.

- (e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.
- (f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.
- (g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.
- (h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.
- (i) Require implementation of specified efficient water management practices for agricultural water suppliers.
- (j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.
- (k) Advance regional water resources management.

**10608.8.** (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

(b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4



(commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

- (c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.
- (d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

## **PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 – 10609.42]**

### **CHAPTER 2. Definitions [10608.12 – 10608.12.]**

**10608.12.** Unless the context otherwise requires, the following definitions govern the construction of this part:

- (a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.
- (b) "Base daily per capita water use" means any of the following:
  - (1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier

than December 31, 2004, and no later than December 31, 2010.

- (2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
  - (3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.
- (c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.
- (d) "*CII water use*" means water used by commercial water users, industrial water users, institutional water users, and large landscape water users.
- (e) "Commercial water user" means a water user that provides or distributes a product or service.
- ~~(e)~~(f) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.
- ~~(f)~~(g) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.
- ~~(g)~~(h) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:
- (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.
  - (2) The net volume of water that the urban retail water supplier places into long-term storage.

- (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.
- (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.
- ~~(h)~~(i) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.
- ~~(i)~~(j) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.
- ~~(j)~~(k) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.
- ~~(k)~~(l) "*Large landscape*" means a nonresidential landscape as described in the performance measures for CII water use adopted pursuant to Section 10609.10.
- (m) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.
- (n) "*Performance measures*" means actions to be taken by urban retail water suppliers that will result in increased water use efficiency by CII water users. Performance measures may include, but are not limited to, educating CII water users on best management practices, conducting water use audits, and preparing water management plans. Performance measures do not include process water.
- (o) "*Potable reuse*" means direct potable reuse, indirect potable reuse for groundwater recharge, and reservoir water augmentation as those terms are defined in Section 13561.
- (p) "Process water" means water used by industrial water users for producing a product or product content or water used for research and development, including, but not limited to, continuous

manufacturing processes, water used for testing and maintaining equipment ~~used in producing a~~. *Water used to cool machinery or buildings used in the manufacturing process or necessary to maintain product ~~or quality or chemical characteristics for product content,~~ and water used in combined heat and power facilities used in producing a product or product content.* *manufacturing or control rooms, data centers, laboratories, clean rooms, and other industrial facility units that are integral to the manufacturing or research and development process is process water. Water used in the manufacturing process that is necessary for complying with local, state, and federal health and safety laws, and is not incidental water, is process water.* Process water does not mean incidental water ~~uses not related to the production of a product or product content,~~ including, but not limited to, ~~water used for~~ restrooms, landscaping, air conditioning, heating, kitchens, and laundry.

- ~~(m)~~(q) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050 ~~that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:~~
- ~~(1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:~~
    - ~~(A) Metered.~~
    - ~~(B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.~~
    - ~~(C) Treated to a minimum tertiary level.~~
    - ~~(D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.~~
  - ~~(2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.~~
- ~~(n)~~(r) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable

local water reliability or any of the following alternative sources of water:

- (1) The capture and reuse of stormwater or rainwater.
- (2) The use of recycled water.
- (3) The desalination of brackish groundwater.
- (4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.

~~(e)~~(s) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.

~~(p)~~(t) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.

~~(a)~~(u) "*Urban water use objective*" means an estimate of aggregate efficient water use for the previous year based on adopted water use efficiency standards and local service area characteristics for that year, as described in Section 10609.20.

(v) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.

~~(r)~~(w) "Urban wholesale water supplier" means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

## **PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 – 10609.42]**

### **CHAPTER 3. Urban Retail Water Suppliers [10608.16 – 10608.44]**

**10608.16.** (a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.

(b) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.

**10608.20.** (a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

(2) It is the intent of the Legislature that the urban water use targets described in paragraph (1) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

(b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

(1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.

(2) The per capita daily water use that is estimated using the sum of the following performance standards:

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the ~~department's 2016~~ *department's 2017* report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.

(B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by

2020.

- (3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.
- (4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:
  - (A) Consider climatic differences within the state.
  - (B) Consider population density differences within the state.
  - (C) Provide flexibility to communities and regions in meeting the targets.
  - (D) Consider different levels of per capita water use according to plant water needs in different regions.
  - (E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.
  - (F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.
- (c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).



- (d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.
- (e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the 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.
- (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.
- (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).
- (h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:
  - (A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.
  - (B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.
- (2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its internet ~~Web~~ *website*, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

- (i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with ~~subdivision (l) of Section 10608.12~~, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.
- (j) (1) An urban retail water supplier is granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow the use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.
- (2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water supplier and urban retail water suppliers.

**10608.22.** Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

**10608.24.** (a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

- (b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.
- (c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.
- (d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:
  - (A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.
  - (B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.
  - (C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.
- (2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.
- (e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.
- (f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a

water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

- (2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

**10608.26.** (a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

- (1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.
- (2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.
- (3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

(b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under federal Executive Order 13514.

(d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

- (2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

**10608.28.** (a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

- (1) Through an urban wholesale water supplier.
  - (2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).
  - (3) Through a regional water management group as defined in Section 10537.
  - (4) By an integrated regional water management funding area.
  - (5) By hydrologic region.
  - (6) Through other appropriate geographic scales for which computation methods have been developed by the department.
- (b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

**10608.32.** All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may

be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

**10608.34.** (a) (1) On or before January 1, 2017, the department shall adopt rules for all of the following:

- (A) The conduct of standardized water loss audits by urban retail water suppliers in accordance with the method adopted by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0.
  - (B) The process for validating a water loss audit report prior to submitting the report to the department. For the purposes of this section, “validating” is a process whereby an urban retail water supplier uses a technical expert to confirm the basis of all data entries in the urban retail water supplier’s water loss audit report and to appropriately characterize the quality of the reported data. The validation process shall follow the principles and terminology laid out by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0. A validated water loss audit report shall include the name and technical qualifications of the person engaged for validation.
  - (C) The technical qualifications required of a person to engage in validation, as described in subparagraph (B).
  - (D) The certification requirements for a person selected by an urban retail water supplier to provide validation of its own water loss audit report.
  - (E) The method of submitting a water loss audit report to the department.
- (2) The department shall update rules adopted pursuant to paragraph (1) no later than six months after the release of subsequent editions of the American Water Works Association’s Water Audits and Loss Control Programs, Manual M36. Except as provided by the department, until the department adopts updated rules pursuant to this paragraph,

an urban retail water supplier may rely upon a subsequent edition of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36 or the Free Water Audit Software.

~~(b) On or before October 1, 2017, and on or before October~~(b)

- (1) On or before October 1 of each year until October 1, 2023, each urban retail water supplier reporting on a calendar year basis shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year as prescribed by the department pursuant to subdivision (a).*
  - (2) On or before January 1 of each year until January 1, 2024, each urban retail water supplier reporting on a fiscal year basis shall submit a completed and validated water loss audit report for the previous fiscal year as prescribed by the department pursuant to subdivision (a).*
  - (3) On or before January 1, 2024, and on or before January 1 of each year thereafter, each urban retail water supplier shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year as part of the report submitted to the department pursuant to subdivision (a) of Section 10609.24 and as prescribed by the department pursuant to subdivision (a).*
  - (4) Water loss audit reports submitted on or before October 1, 2017, may be completed and validated with assistance as described in subdivision (c).*
- (c) Using funds available for the 2016–17 fiscal year, the board shall contribute up to four hundred thousand dollars (\$400,000) towards procuring water loss audit report validation assistance for urban retail water suppliers.
- (d) Each water loss audit report submitted to the department shall be accompanied by information, in a form specified by the department, identifying steps taken in the preceding year to increase the validity of data entered into the final audit, reduce the volume of apparent losses, and reduce the volume of real losses.

- (e) At least one of the following employees of an urban retail water supplier shall attest to each water loss audit report submitted to the department:
  - (1) The chief financial officer.
  - (2) The chief engineer.
  - (3) The general manager.
- (f) The department shall deem incomplete and return to the urban retail water supplier any final water loss audit report found by the department to be incomplete, not validated, unattested, or incongruent with known characteristics of water system operations. A water supplier shall resubmit a completed water loss audit report within 90 days of an audit being returned by the department.
- (g) The department shall post all validated water loss audit reports on its internet ~~Web site~~ *website* in a manner that allows for comparisons across water suppliers. The department shall make the validated water loss audit reports available for public viewing in a timely manner after their receipt.
- (h) Using available funds, the department shall provide technical assistance to guide urban retail water suppliers' water loss detection programs, including, but not limited to, metering techniques, pressure management techniques, condition-based assessment techniques for transmission and distribution pipelines, and utilization of portable and permanent water loss detection devices.
- (i) No earlier than January 1, 2019, and no later than July 1, 2020, the board shall adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. In adopting these rules, the board shall employ full life-cycle cost accounting to evaluate the costs of meeting the performance standards. The board may consider establishing a minimum allowable water loss threshold that, if reached and maintained by an urban water supplier, would exempt the urban water supplier from further water loss reduction requirements.

**10608.35.** *(a) The department, in coordination with the board, shall conduct necessary studies and investigations and make a recommendation to the Legislature, by January 1, 2020, on the feasibility of developing and*



*enacting water loss reporting requirements for urban wholesale water suppliers.*

*(b) The studies and investigations shall include an evaluation of the suitability of applying the processes and requirements of Section 10608.34 to urban wholesale water suppliers.*

*(c) In conducting necessary studies and investigations and developing its recommendation, the department shall solicit broad public participation from stakeholders and other interested persons.*

**10608.36.** Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

**10608.40.** Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

**10608.42.** (a) The department shall review the 2015 urban water management plans and report to the Legislature by July 1, 2017, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.

(b) A report to be submitted pursuant to subdivision (a) shall be submitted in compliance with Section 9795 of the Government Code.

**10608.43.** The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in

the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

- (a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.
- (b) Evaluation of water demands for manufacturing processes, goods, and cooling.
- (c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.
- (d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.
- (e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

**10608.44.** Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

## **PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 – 10609.42]**

### **CHAPTER 4. Agricultural Water Suppliers [10608.48 – 10608.48.]**

**10608.48.** (a) *On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).*

- (b) *Agricultural water suppliers shall implement both of the following critical efficient management practices:*

- (1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).*
  - (2) Adopt a pricing structure for water customers based at least in part on quantity delivered.*
- (c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:*
- (1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.*
  - (2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.*
  - (3) Facilitate the financing of capital improvements for on-farm irrigation systems.*
  - (4) Implement an incentive pricing structure that promotes one or more of the following goals:*
    - (A) More efficient water use at the farm level.*
    - (B) Conjunctive use of groundwater.*
    - (C) Appropriate increase of groundwater recharge.*
    - (D) Reduction in problem drainage.*
    - (E) Improved management of environmental resources.*
    - (F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.*
  - (5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.*
  - (6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.*
  - (7) Construct and operate supplier spill and tailwater recovery systems.*

- (8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.*
  - (9) Automate canal control structures.*
  - (10) Facilitate or promote customer pump testing and evaluation.*
  - (11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.*
  - (12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:*
    - (A) On-farm irrigation and drainage system evaluations.*
    - (B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.*
    - (C) Surface water, groundwater, and drainage water quantity and quality data.*
    - (D) Agricultural water management educational programs and materials for farmers, staff, and the public.*
  - (13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.*
  - (14) Evaluate and improve the efficiencies of the supplier's pumps.*
- (d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.*

- (e) *The department shall require information about the implementation of efficient water management practices to be reported using a standardized form developed pursuant to Section 10608.52.*
- (f) *An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.*
- (g) *On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.*
- (h) *The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.*
- (i) (1) *The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).*
- (2) *The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.*

**PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION  
[10608 – 10609.42]****CHAPTER 5. Sustainable Water Management [10608.50 – 10608.50.]**

**10608.50.** (a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

- (1) Revisions to the requirements for urban and agricultural water management plans.
  - (2) Revisions to the requirements for integrated regional water management plans.
  - (3) Revisions to the eligibility for state water management grants and loans.
  - (4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.
  - (5) Increased funding for research, feasibility studies, and project construction.
  - (6) Expanding technical and educational support for local land use and water management agencies.
- (b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

**PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION  
[10608 – 10609.42]****CHAPTER 6. Standardized Data Collection [10608.52 – 10608.52.]**

**10608.52.** (a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

- (b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

**PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION  
[10608 – 10609.42]****CHAPTER 7. Funding Provisions [10608.56 – 10608.60]**

**10608.56.** (a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

- (b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.
- (c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The

supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

- (d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.
- (e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.
- (f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

**10608.60.** (a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.



- (b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

**PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION  
[10608 – 10609.42]**

**CHAPTER 8. Quantifying Agricultural Water Use Efficiency  
[10608.64 – 10608.64.]**

**10608.64.** The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

**PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION  
[10608 – 10609.42]**

**CHAPTER 9. Urban Water Use Objectives and Water Use Reporting  
[10609 – 10609.38]**

**10609.** (a) *The Legislature finds and declares that this chapter establishes a method to estimate the aggregate amount of water that would have been delivered the previous year by an urban retail water supplier if all that water had been used efficiently. This estimated aggregate water use is the urban retail water supplier's urban water use objective. The method is based on water use efficiency standards and local service area characteristics for that year. By comparing the amount of water actually used in the previous year with the urban water use objective, local urban water suppliers will be in a better position to help eliminate unnecessary use of water; that is, water used in excess of that needed to accomplish the intended beneficial use.*

*(b) The Legislature further finds and declares all of the following:*

*(1) This chapter establishes standards and practices for the following water uses:*

*(A) Indoor residential use.*

*(B) Outdoor residential use.*

*(C) CII water use.*

*(D) Water losses.*

*(E) Other unique local uses and situations that can have a material effect on an urban water supplier's total water use.*

*(2) This chapter further does all of the following:*

*(A) Establishes a method to calculate each urban water use objective.*

*(B) Considers recycled water quality in establishing efficient irrigation standards.*

*(C) Requires the department to provide or otherwise identify data regarding the unique local conditions to support the calculation of an urban water use objective.*

*(D) Provides for the use of alternative sources of data if alternative sources are shown to be as accurate as, or more accurate than, the data provided by the department.*

*(E) Requires annual reporting of the previous year's water use with the urban water use objective.*

*(F) Provides a bonus incentive for the amount of potable recycled water used the previous year when comparing the previous year's water use with the urban water use objective, of up to 10 percent of the urban water use objective.*

*(3) This chapter requires the department and the board to solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter.*

- (4) *This chapter preserves the Legislature’s authority over long-term water use efficiency target setting and ensures appropriate legislative oversight of the implementation of this chapter by doing all of the following:*
- (A) *Requiring the Legislative Analyst to conduct a review of the implementation of this chapter, including compliance with the adopted standards and regulations, accuracy of the data, use of alternate data, and other issues the Legislative Analyst deems appropriate.*
  - (B) *Stating legislative intent that the director of the department and the chairperson of the board appear before the appropriate Senate and Assembly policy committees to report on progress in implementing this chapter.*
  - (C) *Providing one-time-only authority to the department and board to adopt water use efficiency standards, except as explicitly provided in this chapter. Authorization to update the standards shall require separate legislation.*
- (c) *It is the intent of the Legislature that the following principles apply to the development and implementation of long-term standards and urban water use objectives:*
- (1) *Local urban retail water suppliers should have primary responsibility for meeting standards-based water use targets, and they shall retain the flexibility to develop their water supply portfolios, design and implement water conservation strategies, educate their customers, and enforce their rules.*
  - (2) *Long-term standards and urban water use objectives should advance the state’s goals to mitigate and adapt to climate change.*
  - (3) *Long-term standards and urban water use objectives should acknowledge the shade, air quality, and heat-island reduction benefits provided to communities by trees through the support of water-efficient irrigation practices that keep trees healthy.*
  - (4) *The state should identify opportunities for streamlined*

*reporting, eliminate redundant data submissions, and incentivize open access to data collected by urban and agricultural water suppliers.*

**10609.2.** (a) *The board, in coordination with the department, shall adopt long-term standards for the efficient use of water pursuant to this chapter on or before June 30, 2022.*

(b) *Standards shall be adopted for all of the following:*

(1) *Outdoor residential water use.*

(2) *Outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.*

(3) *A volume for water loss.*

(c) *When adopting the standards under this section, the board shall consider the policies of this chapter and the proposed efficiency standards' effects on local wastewater management, developed and natural parklands, and urban tree health. The standards and potential effects shall be identified by May 30, 2022. The board shall allow for public comment on potential effects identified by the board under this subdivision.*

(d) *The long-term standards shall be set at a level designed so that the water use objectives, together with other demands excluded from the long-term standards such as CII indoor water use and CII outdoor water use not connected to a dedicated landscape meter, would exceed the statewide conservation targets required pursuant to Chapter 3 (commencing with Section 10608.16).*

(e) *The board, in coordination with the department, shall adopt by regulation variances recommended by the department pursuant to Section 10609.14 and guidelines and methodologies pertaining to the calculation of an urban retail water supplier's urban water use objective recommended by the department pursuant to Section 10609.16.*

**10609.4.** (a) (1) *Until January 1, 2025, the standard for indoor residential water use shall be 55 gallons per capita daily.*

(2) *Beginning January 1, 2025, and until January 1, 2030, the standard for indoor residential water use shall be the greater of 52.5 gallons per capita daily or a standard recommended*

*pursuant to subdivision (b).*

*(3) Beginning January 1, 2030, the standard for indoor residential water use shall be the greater of 50 gallons per capita daily or a standard recommended pursuant to subdivision (b).*

*(b) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and may jointly recommend to the Legislature a standard for indoor residential water use that more appropriately reflects best practices for indoor residential water use than the standard described in subdivision (a). A report on the results of the studies and investigations shall be made to the chairpersons of the relevant policy committees of each house of the Legislature by January 1, 2021, and shall include information necessary to support the recommended standard, if there is one. The studies and investigations shall also include an analysis of the benefits and impacts of how the changing standard for indoor residential water use will impact water and wastewater management, including potable water usage, wastewater, recycling and reuse systems, infrastructure, operations, and supplies.*

*(2) The studies, investigations, and report described in paragraph (1) shall include collaboration with, and input from, a broad group of stakeholders, including, but not limited to, environmental groups, experts in indoor plumbing, and water, wastewater, and recycled water agencies.*

**10609.6.** *(a) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor residential use for adoption by the board in accordance with this chapter.*

*(2) (A) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).*

*(B) The standards shall apply to irrigable lands.*

*(C) The standards shall include provisions for swimming pools, spas, and other water features. Ornamental water features that are artificially supplied with water, including ponds,*

*lakes, waterfalls, and fountains, shall be analyzed separately from swimming pools and spas.*

- (b) The department shall, by January 1, 2021, provide each urban retail water supplier with data regarding the area of residential irrigable lands in a manner that can reasonably be applied to the standards adopted pursuant to this section.*
- (c) The department shall not recommend standards pursuant to this section until it has conducted pilot projects or studies, or some combination of the two, to ensure that the data provided to local agencies are reasonably accurate for the data's intended uses, taking into consideration California's diverse landscapes and community characteristics.*

**10609.8.** *(a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor irrigation of landscape areas with dedicated irrigation meters or other means of calculating outdoor irrigation use in connection with CII water use for adoption by the board in accordance with this chapter.*

- (b) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).*
- (c) The standards shall include an exclusion for water for commercial agricultural use meeting the definition of subdivision (b) of Section 51201 of the Government Code.*

**10609.9.** *For purposes of Sections 10609.6 and 10609.8, "principles of the model water efficient landscape ordinance" means those provisions of the model water efficient landscape ordinance applicable to the establishment or determination of the amount of water necessary to efficiently irrigate both new and existing landscapes. These provisions include, but are not limited to, all of the following:*

- (a) Evapotranspiration adjustment factors, as applicable.*
- (b) Landscape area.*
- (c) Maximum applied water allowance.*

- (d) Reference evapotranspiration.*
- (e) Special landscape areas, including provisions governing evapotranspiration adjustment factors for different types of water used for irrigating the landscape.*

**10609.10.** *(a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, performance measures for CII water use for adoption by the board in accordance with this chapter.*

- (b) Prior to recommending performance measures for CII water use, the department shall solicit broad public participation from stakeholders and other interested persons relating to all of the following:*

- (1) Recommendations for a CII water use classification system for California that address significant uses of water.*

- (2) Recommendations for setting minimum size thresholds for converting mixed CII meters to dedicated irrigation meters, and evaluation of, and recommendations for, technologies that could be used in lieu of requiring dedicated irrigation meters.*

- (3) Recommendations for CII water use best management practices, which may include, but are not limited to, water audits and water management plans for those CII customers that exceed a recommended size, volume of water use, or other threshold.*

- (c) Recommendations of appropriate performance measures for CII water use shall be consistent with the October 21, 2013, report to the Legislature by the Commercial, Industrial, and Institutional Task Force entitled "Water Use Best Management Practices," including the technical and financial feasibility recommendations provided in that report, and shall support the economic productivity of California's commercial, industrial, and institutional sectors.*

- (d) (1) The board, in coordination with the department, shall adopt performance measures for CII water use on or before June 30, 2022.*

- (2) Each urban retail water supplier shall implement the performance measures adopted by the board pursuant to paragraph (1).*

**10609.12.** *The standards for water loss for urban retail water suppliers shall be the standards adopted by the board pursuant to subdivision (i) of Section 10608.34.*

**10609.14.** *(a) The department, in coordination with the board, shall conduct necessary studies and investigations and, no later than October 1, 2021, recommend for adoption by the board in accordance with this chapter appropriate variances for unique uses that can have a material effect on an urban retail water supplier's urban water use objective.*

*(b) Appropriate variances may include, but are not limited to, allowances for the following:*

- (1) Significant use of evaporative coolers.*
- (2) Significant populations of horses and other livestock.*
- (3) Significant fluctuations in seasonal populations.*
- (4) Significant landscaped areas irrigated with recycled water having high levels of total dissolved solids.*
- (5) Significant use of water for soil compaction and dust control.*
- (6) Significant use of water to supplement ponds and lakes to sustain wildlife.*
- (7) Significant use of water to irrigate vegetation for fire protection.*
- (8) Significant use of water for commercial or noncommercial agricultural use.*

*(c) The department, in recommending variances for adoption by the board, shall also recommend a threshold of significance for each recommended variance.*

*(d) Before including any specific variance in calculating an urban retail water supplier's water use objective, the urban retail water supplier shall request and receive approval by the board for the inclusion of that variance.*

*(e) The board shall post on its Internet Web site all of the following:*

- (1) A list of all urban retail water suppliers with approved variances.*
- (2) The specific variance or variances approved for each urban retail water supplier.*



*(3) The data supporting approval of each variance.*

**10609.15.** *To help streamline water data reporting, the department and the board shall do all of the following:*

- (a) Identify urban water reporting requirements shared by both agencies, and post on each agency's Internet Web site how the data is used for planning, regulatory, or other purposes.*
- (b) Analyze opportunities for more efficient publication of urban water reporting requirements within each agency, and analyze how each agency can integrate various data sets in a publicly accessible location, identify priority actions, and implement priority actions identified in the analysis.*
- (c) Make appropriate data pertaining to the urban water reporting requirements that are collected by either agency available to the public according to the principles and requirements of the Open and Transparent Water Data Act (Part 4.9 (commencing with Section 12400)).*

**10609.16.** *The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, guidelines and methodologies for the board to adopt that identify how an urban retail water supplier calculates its urban water use objective. The guidelines and methodologies shall address, as necessary, all of the following:*

- (a) Determining the irrigable lands within the urban retail water supplier's service area.*
- (b) Updating and revising methodologies described pursuant to subparagraph (A) of paragraph (1) of subdivision (h) of Section 10608.20, as appropriate, including methodologies for calculating the population in an urban retail water supplier's service area.*
- (c) Using landscape area data provided by the department or alternative data.*
- (d) Incorporating precipitation data and climate data into estimates of a urban retail water supplier's outdoor irrigation budget for its urban water use objective.*
- (e) Estimating changes in outdoor landscape area and population, and calculating the urban water use objective, for years when updated landscape imagery is not available from the department.*

*(f) Determining acceptable levels of accuracy for the supporting data, the urban water use objective, and compliance with the urban water use objective.*

**10609.18.** *The department and the board shall solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter. The board shall hold at least one public meeting before taking any action on any standard or variance recommended by the department.*

**10609.20.** *(a) Each urban retail water supplier shall calculate its urban water use objective no later than January 1, 2024, and by January 1 every year thereafter.*

*(b) The calculation shall be based on the urban retail water supplier's water use conditions for the previous calendar or fiscal year.*

*(c) Each urban water supplier's urban water use objective shall be composed of the sum of the following:*

*(1) Aggregate estimated efficient indoor residential water use.*

*(2) Aggregate estimated efficient outdoor residential water use.*

*(3) Aggregate estimated efficient outdoor irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use.*

*(4) Aggregate estimated efficient water losses.*

*(5) Aggregate estimated water use in accordance with variances, as appropriate.*

*(d) (1) An urban retail water supplier that delivers water from a groundwater basin, reservoir, or other source that is augmented by potable reuse water may adjust its urban water use objective by a bonus incentive calculated pursuant to this subdivision.*

*(2) The water use objective bonus incentive shall be the volume of its potable reuse delivered to residential water users and to landscape areas with dedicated irrigation meters in connection with CII water use, on an acre-foot basis.*

*(3) The bonus incentive pursuant to paragraph (1) shall be limited in accordance with one of the following:*



*(b) This section shall become operative on January 1, 2019.*

**10609.22.** *(a) An urban retail water supplier shall calculate its actual urban water use no later than January 1, 2024, and by January 1 every year thereafter.*

*(b) The calculation shall be based on the urban retail water supplier's water use for the previous calendar or fiscal year.*

*(c) Each urban water supplier's urban water use shall be composed of the sum of the following:*

- (1) Aggregate residential water use.*
- (2) Aggregate outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.*
- (3) Aggregate water losses.*

**10609.24.** *(a) An urban retail water supplier shall submit a report to the department no later than January 1, 2024, and by January 1 every year thereafter. The report shall include all of the following:*

- (1) The urban water use objective calculated pursuant to Section 10609.20 along with relevant supporting data.*
- (2) The actual urban water use calculated pursuant to Section 10609.22 along with relevant supporting data.*
- (3) Documentation of the implementation of the performance measures for CII water use.*
- (4) A description of the progress made towards meeting the urban water use objective.*
- (5) The validated water loss audit report conducted pursuant to Section 10608.34.*

*(b) The department shall post the reports and information on its internet website.*

*(c) The board may issue an information order or conservation order to, or impose civil liability on, an entity or individual for failure to submit a report required by this section.*

**10609.25.** *As part of the first report submitted to the department by an urban retail water supplier no later than January 1, 2024, pursuant to*

*subdivision (a) of Section 10609.24, each urban retail water supplier shall provide a narrative that describes the water demand management measures that the supplier plans to implement to achieve its urban water use objective by January 1, 2027.*

**10609.26.** *(a) (1) On and after January 1, 2024, the board may issue informational orders pertaining to water production, water use, and water conservation to an urban retail water supplier that does not meet its urban water use objective required by this chapter. Informational orders are intended to obtain information on supplier activities, water production, and conservation efforts in order to identify technical assistance needs and assist urban water suppliers in meeting their urban water use objectives.*

*(2) In determining whether to issue an informational order, the board shall consider the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet the urban water use objective.*

*(3) The board shall share information received pursuant to this subdivision with the department.*

*(4) An urban water supplier may request technical assistance from the department. The technical assistance may, to the extent available, include guidance documents, tools, and data.*

*(b) On and after January 1, 2025, the board may issue a written notice to an urban retail water supplier that does not meet its urban water use objective required by this chapter. The written notice may warn the urban retail water supplier that it is not meeting its urban water use objective described in Section 10609.20 and is not making adequate progress in meeting the urban water use objective, and may request that the urban retail water supplier address areas of concern in its next annual report required by Section 10609.24. In deciding whether to issue a written notice, the board may consider whether the urban retail water supplier has received an informational order, the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24,*

*and actions the urban retail water supplier has implemented or will implement in order to help meet its urban water use objective.*

- (c) (1) On and after January 1, 2026, the board may issue a conservation order to an urban retail water supplier that does not meet its urban water use objective. A conservation order may consist of, but is not limited to, referral to the department for technical assistance, requirements for education and outreach, requirements for local enforcement, and other efforts to assist urban retail water suppliers in meeting their urban water use objective.*
- (2) In issuing a conservation order, the board shall identify specific deficiencies in an urban retail water supplier's progress towards meeting its urban water use objective, and identify specific actions to address the deficiencies.*
- (3) The board may request that the department provide an urban retail water supplier with technical assistance to support the urban retail water supplier's actions to remedy the deficiencies.*
- (d) A conservation order issued in accordance with this chapter may include requiring actions intended to increase water-use efficiency, but shall not curtail or otherwise limit the exercise of a water right, nor shall it require the imposition of civil liability pursuant to Section 377.*

**10609.27.** *Notwithstanding Section 10609.26, the board shall not issue an information order, written notice, or conservation order pursuant to Section 10609.26 if both of the following conditions are met:*

- (a) The board determines that the urban retail water supplier is not meeting its urban water use objective solely because the volume of water loss exceeds the urban retail water supplier's standard for water loss.*
- (b) Pursuant to Section 10608.34, the board is taking enforcement action against the urban retail water supplier for not meeting the performance standards for the volume of water losses.*

**10609.28.** *The board may issue a regulation or informational order requiring a wholesale water supplier, an urban retail water supplier, or a distributor of a public water supply, as that term is used in Section 350, to provide a monthly*

*report relating to water production, water use, or water conservation.*

**10609.30.** *On or before January 10, 2024, the Legislative Analyst shall provide to the appropriate policy committees of both houses of the Legislature and the public a report evaluating the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. The board and the department shall provide the Legislative Analyst with the available data to complete this report.*

*(a) The report shall describe all of the following:*

- (1) The rate at which urban retail water users are complying with the standards, and factors that might facilitate or impede their compliance.*
- (2) The accuracy of the data and estimates being used to calculate urban water use objectives.*
- (3) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.*
- (4) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.*
- (5) The early indications of how implementing this chapter might impact the efficiency of statewide urban water use.*
- (6) Recommendations, if any, for improving statewide urban water use efficiency and the standards and practices described in this chapter.*
- (7) Any other issues the Legislative Analyst deems appropriate.*

**10609.32.** *It is the intent of the Legislature that the chairperson of the board and the director of the department appear before the appropriate policy committees of both houses of the Legislature on or around January 1, 2026, and report on the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. It is the intent of the Legislature that the topics to be covered include all of the following:*

- (a) The rate at which urban retail water suppliers are complying with the standards, and factors that might facilitate or impede their compliance.*

- (b) What enforcement actions have been taken, if any.*
- (c) The accuracy of the data and estimates being used to calculate urban water use objectives.*
- (d) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.*
- (e) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.*
- (f) An assessment of how implementing this chapter is affecting the efficiency of statewide urban water use.*

**10609.34.** *Notwithstanding Section 15300.2 of Title 14 of the California Code of Regulations, an action of the board taken under this chapter shall be deemed to be a Class 8 action, within the meaning of Section 15308 of Title 14 of the California Code of Regulations, provided that the action does not involve relaxation of existing water conservation or water use standards.*

**10609.36.** *(a) Nothing in this chapter shall be construed to determine or alter water rights. Sections 1010 and 1011 apply to water conserved through implementation of this chapter.*

- (b) Nothing in this chapter shall be construed to authorize the board to update or revise water use efficiency standards authorized by this chapter except as explicitly provided in this chapter. Authorization to update the standards beyond that explicitly provided in this chapter shall require separate legislation.*
- (c) Nothing in this chapter shall be construed to limit or otherwise affect the use of recycled water as seawater barriers for groundwater salinity management.*

**10609.38.** *The board may waive the requirements of this chapter for a period of up to five years for any urban retail water supplier whose water deliveries are significantly affected by changes in water use as a result of damage from a disaster such as an earthquake or fire. In establishing the period of a waiver, the board shall take into consideration the breadth of the damage and the time necessary for the damaged areas to recover from the disaster.*



**PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 – 10657]**  
**CHAPTER 1. General Declaration and Policy [10610 – 10610.4]**

**10610.** This part shall be known and may be cited as the "Urban Water Management Planning Act."

**10610.2.** (a) The Legislature finds and declares all of the following:

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate, *and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.*
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years *now and into the foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.*
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
  - (8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
  - (9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.
- (b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

**10610.4.** The Legislature finds and declares that it is the policy of the state as follows:

- (a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
- (b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
- (c) Urban water suppliers shall be required to develop water management plans to ~~actively pursue~~*achieve* the efficient use of available supplies *and strengthen local drought planning*.

## **PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 – 10657]**

### **CHAPTER 2. Definitions [10611 – 10618]**

**10611.** Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

**10611.3.** *"Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.*

**10611.5.** *"Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.*

**10612.** "~~Customer~~" means ~~a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.~~ "*Drought risk assessment*" means a method that examines water shortage risks based on the driest five-year historic sequence for the agency's water supply, as described in subdivision (b) of Section 10635.

**10613.** "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

**10614.** "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

**10615.** "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

**10616.** "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

**10616.5.** "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

**10617.** "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. 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 subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

**10617.5.** *"Water shortage contingency plan" means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.*

**10618.** *"Water supply and demand assessment" means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.*

## **PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 – 10657]**

### **CHAPTER 3. Urban Water Management Plans [10620 – 10645]**

#### **ARTICLE 1. General Provisions [10620 – 10621]**

**10620.** (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

- (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.
- (c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
- (d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation~~and~~, efficient water use, *and improved local drought resilience.*
  - (2) *Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.*

- (3) Each urban water supplier shall 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.
- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
- (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

**10621.** (a) Each urban water supplier shall update its plan at least once every five years on or before ~~December 31~~ *July 1*, in years ending in *six and one, incorporating updated and new information from the five and zero, except as provided in subdivision (d).* years preceding each update.

- (b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
- (c) *An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.*
- (d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).
- ~~(d)~~ (e) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.
- (f) *Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.*

**PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 – 10657]****CHAPTER 3. Urban Water Management Plans [10620 – 10645]****ARTICLE 2. Contents of Plans [10630 – 10634]**

**10630.** It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, *while accounting for impacts from climate change.*

**10630.5.** *Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency’s strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency’s plan.*

**10631.** A plan shall be adopted in accordance with this chapter that shall do all of the following:

- (a) Describe the service area of the supplier, including current and projected population, climate, and other *social, economic, and demographic* factors affecting the supplier’s water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. *The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier’s water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.*
- (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a)–, *providing supporting and related information, including all of the following:*

- (1) *A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.*
- (2) *When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.*
- (3) *For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.*
- (4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:
  - ~~(1) A copy of~~(A) *The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.*
  - ~~(2)~~(B) *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For ~~basins~~ a basin that ~~have~~has not been adjudicated, information as to whether the department has identified the basin ~~or basins~~ as overdrafted or has projected that the basin will*

~~become overdrafted if present management conditions continue, as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).~~

~~(3)-(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.~~

~~(4)-(D) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.~~

~~(c)-(1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:~~

~~(A) An average water year.~~

~~(B) A single dry water year.~~

~~(C) Multiple dry water years.~~

~~(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.~~



- ~~(d)~~ Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.
- ~~(e)~~ ~~(1)~~ ~~Quantify~~ *(d) (1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:*
- (A) Single-family residential.
  - (B) Multifamily.
  - (C) Commercial.
  - (D) Industrial.
  - (E) Institutional and governmental.
  - (F) Landscape.
  - (G) Sales to other agencies.
  - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
  - (I) Agricultural.
  - (J) Distribution system water loss.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).
- (3) ~~(A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the~~ *The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.*
- (B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology

developed by the American Water Works Association.

~~(4) (A) If available~~(C) *In the plan due July 1, 2021, and applicable in each update thereafter, data shall be included to show whether the urban retail water supplier, water met the distribution loss standards enacted by the board pursuant to Section 10608.34.*

(4) (A) *Water use projections may, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.*

(B) *To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:*

(i) *Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.*

(ii) *Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.*

~~(f)~~ (e) *Provide a description of the supplier's water demand management measures. This description shall include all of the following:*

(1) (A) *For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.*

(B) *The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*

- (i) Water waste prevention ordinances.
  - (ii) Metering.
  - (iii) Conservation pricing.
  - (iv) Public education and outreach.
  - (v) Programs to assess and manage distribution system real loss.
  - (vi) Water conservation program coordination and staffing support.
  - (vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.
- (2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.
- ~~(g)~~ (f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in ~~average~~, *normal and single-dry*, and ~~multiple-dry~~ *water years and for a period of drought lasting five consecutive* water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.
- ~~(h)~~ (g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
- ~~(i)~~ For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be

~~deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.~~

- ~~(j)~~-(h) 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~~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 ~~(e)~~-(f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and ~~(e)~~-(f).

**10631.1.** (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

- (b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

**10631.2.** (a) In addition to the requirements of Section 10631, an urban water management plan ~~may, but is not required to,~~shall include any of the following information *that the urban water supplier can readily obtain*:

- (1) An estimate of the amount of energy used to extract or divert water supplies.

- (2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.
  - (3) An estimate of the amount of energy used to treat water supplies.
  - (4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.
  - (5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.
  - (6) An estimate of the amount of energy used to place water into or withdraw from storage.
  - (7) Any other energy-related information the urban water supplier deems appropriate.
- (b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

~~**10631.5.** (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).~~

- ~~(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).~~
- ~~(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management~~

~~grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.~~

~~(4) (A) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.~~

~~(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.~~

~~(b) (1) The department, in consultation with the state board and the California Bay Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:~~

~~(A) Consider the conservation measures described in the~~

~~Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.~~

~~(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.~~

~~(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:~~

~~(i) Compliance on an individual basis.~~

~~(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.~~

~~(B) The department may require additional information for any determination pursuant to this section.~~

~~(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.~~

- ~~(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).~~
- ~~(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.~~
- ~~(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.~~
- ~~(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.~~

~~**10631.7.** The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's~~



~~recommendations and comments regarding the panel process and the panel's recommendations.~~

*(c) The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.*

**10632.** ~~(a) The plan shall provide an~~ *Every urban water supplier shall prepare and adopt a water shortage contingency analysis that includes plan as part of its urban water management plan that consists of each of the following elements that are within the authority of the urban water supplier:*

- ~~(1) Stages~~ *The analysis of action water supply reliability conducted pursuant to be undertaken by Section 10635.*
- (2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:*
  - (A) The written decision making process that an urban water supplier in response will use each year to determine its water supply shortages reliability.*
  - (B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:*
    - (i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.*
    - (ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.*
    - (iii) Existing infrastructure capabilities and plausible constraints.*
    - (iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.*

- (v) A description and quantification of each source of water supply.*
- ~~(3) (A) Six standard water shortage levels corresponding to progressive ranges of up to a 10, 20, 30, 40, and 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.~~
- ~~(2) An estimate of the minimum water supply available during each of the next three water years shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the driest three-year historic sequence for the agency's water supply.~~
- ~~(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other disaster potential emergency events.~~
- ~~(4) (B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.~~
- ~~(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:~~
- ~~(A) Locally appropriate supply augmentation actions.~~
  - ~~(B) Locally appropriate demand reduction actions to adequately respond to shortages.~~
  - ~~(C) Locally appropriate operational changes.~~
  - ~~(D) Additional, mandatory prohibitions against specific water use practices during water shortages, including,~~

~~but not limited to, prohibiting the use of potable water for street cleaning that are in addition to state-mandated prohibitions and appropriate to the local conditions.~~

- ~~(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.~~
- ~~(6) Penalties or charges for excessive use, where applicable.~~
- ~~(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.~~
- (E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.*
- (5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:*
- (A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.*
  - (B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.*
  - (C) Any other relevant communications.*
- (6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.*

- (7) (A) *A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.*
- (B) *A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.*
- (C) *A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.*
- (8) ~~A draft water~~ *A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:*
- (A) *A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*
- (B) *A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*
- (C) *A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.*
- (9) *For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.*
- (10) *Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency resolution or ordinance plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.*

~~(9) A mechanism for determining actual reductions in water use pursuant to the urban~~(b) *For purposes of developing the water shortage contingency analysis.*~~(b) Commencing with the urban water management plan update due July 1, 2016, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the~~an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

(c) *The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.*

**10632.1.** *An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.*

**10632.2.** *An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.*

**10632.3.** *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.*

**10632.5.** *(a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.*

*(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.*

*(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.*

**10633.** The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
- (c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

- (d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.
- (e) 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 pursuant to this subdivision.
- (f) A description of actions, including financial incentives, 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.
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

**10634.** The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

## **PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 – 10657]**

### **CHAPTER 3. Urban Water Management Plans [10620 – 10645]**

#### **ARTICLE 2.5. Water Service Reliability [10635 – 10635.]**

**10635.** (a) Every urban water supplier shall include, as part of its urban water management plan, 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 ~~multiple dry~~ *a drought lasting five*

*consecutive* water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

~~(b)~~ *(b) 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. The drought risk assessment shall include each of the following:*

- (1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.*
- (2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.*
- (3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.*
- (4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.*

*(c) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.*

~~(e)~~ *(d) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.*



- ~~(d)~~ (e) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

## **PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 – 10657]**

### **CHAPTER 3. Urban Water Management Plans [10620 – 10645]**

#### **ARTICLE 3. Adoption and Implementation of Plans [10640 – 10645]**

**10640.** (a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

- (b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.*

**10641.** An urban water supplier required to prepare a *plan or a water shortage contingency plan* may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

**10642.** Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of *both the plan and the water shortage contingency plan*. Prior to adopting a ~~plan~~*neither*, the urban water supplier shall make *both the plan and the water shortage contingency plan* available for public inspection and shall hold a public hearing *or hearings* thereon. Prior to ~~the hearing~~*any of these hearings*, notice of the time and place of *the* hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. *Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of*

*Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.*

~~After the hearing, the plan shall be adopted as prepared or as modified after the hearing.~~

**10643.** An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

**10644.** (a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

~~(b) (1)~~ (b) *If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.*

(c) (1) (A) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before ~~December 31~~ *July 1*, in the years ending in ~~sixseven~~ and ~~onetwo~~, a report summarizing the status of the plans *and water shortage contingency plans* adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans *and water shortage contingency plans*. The department shall provide a copy of the report to each urban water supplier that has submitted its plan *and water shortage contingency plan* to the department. The department shall also prepare reports and provide data for

any legislative hearings designed to consider the effectiveness of plans *and water shortage contingency plans* submitted pursuant to this part.

*(B) The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.*

*(C) The department shall submit the report to the Legislature for the 2015 plans by July 1, 2017, and the report to the Legislature for the 2020 plans and water shortage contingency plans by July 1, 2022.*

(2) A report to be submitted pursuant to *subparagraph (A)* of paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

~~(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section 10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.~~

~~(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).~~

~~(3) (d) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.~~

**10645.** (a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

(b) *Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.*

## **PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 – 10657]**

### **CHAPTER 4. Miscellaneous Provisions [10650 – 10657]**

**10650.** Any actions or proceedings, *other than actions by the board*, to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

- (a) An action or proceeding alleging failure to adopt a plan *or a water shortage contingency plan* shall be commenced within 18 months after that adoption is required by this part.
- (b) Any action or proceeding alleging that a plan *or water shortage contingency plan*, or action taken pursuant to ~~the plan~~ *neither*, does not comply with this part shall be commenced within 90 days after filing of the plan *or water shortage contingency plan or an amendment thereto either* pursuant to Section 10644 or the taking of that action.

**10651.** In any action or proceeding to attack, review, set aside, void, or annul a plan *or a water shortage contingency plan*, or an action taken pursuant to ~~the plan~~ *neither* by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

**10652.** The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish

and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

**10653.** The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the ~~State Water Resources Control Board~~*board* and the Public Utilities Commission, for the preparation of water management plans, *water shortage contingency plans*, or conservation plans; provided, that if the *board* or the Public Utilities Commission requires additional information concerning water conservation, *drought response measures*, or *financial conditions* to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan *that complies with analogous* federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

**10654.** An urban water supplier may recover in its rates the costs incurred in preparing its *urban water management plan*, *its drought risk assessment*, *its water supply and demand assessment*, and *its water shortage contingency plan* and implementing the reasonable water conservation measures included in *either of the plan*. ~~Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section~~*plans*.

**10655.** If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

**10656.** An urban water supplier ~~that does~~*is* not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, ~~is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) grant or Division 26 (commencing with Section 79000), loan awarded or receive drought assistance from~~*administered by* the state ~~until~~*unless* the urban water management plan is submitted pursuant to ~~supplier complies with this part~~.

**10657.** *The department may adopt regulations regarding the definitions of water, water use, and reporting periods, and may adopt any other regulations deemed necessary or desirable to implement this ~~article~~-part. In developing regulations pursuant to this section, the department shall solicit broad public participation from stakeholders and other interested persons.*

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# Appendix B. Cooperative Agreement to Establish and Carry Out a Regional Alliance





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**COOPERATIVE AGREEMENT TO ESTABLISH AND CARRY OUT A  
REGIONAL ALLIANCE IN ACCORDANCE WITH PART 2.55 OF THE  
CALIFORNIA WATER CODE**

The Olivenhain Municipal Water District (“OMWD”), the Vallecitos Water District (“VWD”), the Rincon del Diablo Municipal Water District (“RDMWD”), and the San Dieguito Water District (“SDWD”), herein referred to individually or collectively as a “Party” or the “Parties,” enter into this Cooperative Agreement to Establish and Carry Out a Regional Alliance in Accordance with Part 2.55 of the California Water Code (the “Agreement”), effective June 30, 2011 (the “Effective Date”).

RECITALS

A. WHEREAS, Part 2.55 was added to Division 6 of the California Water Code pursuant to SBX7-7, as enacted, under the 2009-2010 Extraordinary Session of the California Legislature (herein referred to as “SBX7-7”); and

B. WHEREAS, SBX7-7 set a goal for, among other things, a 15 percent per capita reduction in urban water use statewide by the year 2015 and a 20 percent per capita reduction in urban water use statewide by the year 2020, and establishes methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the years 2015 and 2020 in accordance with the goal of reducing per capita water use statewide; and

C. WHEREAS, SBX7-7 requires each urban retail water supplier to develop an urban water use target and an interim urban water use target, as defined therein, and authorizes urban retail water suppliers to determine and report progress toward achieving these targets on an individual or regional basis as provided in Water Code section 10608.28(a); and

D. WHEREAS, SBX7-7 recognizes, among other things, that the factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency; and

E. WHEREAS, the California Department of Water Resources Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan (March 2011) (herein, the “DWR Guidebook”) and the California Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use (For the Consistent Implementation of the Water Conservation Act of 2009) (October 1, 2010) (herein, the “DWR Methodologies”) provide guidance to urban retail water suppliers for purposes of forming and carrying out a Regional Alliance in accordance with Water Code section 10608.28(a) and related provisions of SBX7-7; and

F. WHEREAS, the DWR Guidebook and the DWR Methodologies provide that urban retail water suppliers are eligible to form a Regional Alliance in accordance

with Water Code section 10608.28(a) if the suppliers meet at least one of several specified criteria, such as (1) the suppliers are recipients of water from a common wholesale water supplier, or (2) the suppliers are located within the same hydrologic region, which for this purpose refers to the 10 hydrologic regions as shown in the California Water Plan; and

G. WHEREAS, each of the Parties hereto is an urban retail water supplier and required to develop an urban water use target and an interim urban water use target pursuant to SBX7-7; and

H. WHEREAS, all of the Parties are recipients of water from a common wholesale water supplier, which for this purpose is the San Diego County Water Authority, and all of the Parties are located within the same hydrologic region, which for this purpose is the South Coast Hydrologic Region as shown in the California Water Plan, and all of the Parties share other relevant commonalities; and

I. WHEREAS, the Parties are authorized to establish and carry out a Regional Alliance pursuant to Water Code section 10608.28(a), the DWR Guidebook, and the DWR Methodologies; and

J. WHEREAS, the Parties desire and intend in entering this Agreement to cooperatively establish and carry out a Regional Alliance for the purposes of determining and reporting progress toward achieving their water use targets on a regional basis.

NOW, THEREFORE, the Parties mutually agree as follows:

1. Formation of Regional Alliance. The Parties hereby agree to form a Regional Alliance and agree to send a joint letter to the California Department of Water Resources (hereinafter "DWR") no later than July 1, 2011, informing DWR that the Parties have formed a Regional Alliance. Notwithstanding the formation of a Regional Alliance and the undertaking of activities described in this Agreement, the Parties recognize and agree that each Party will prepare, adopt, and submit its own 2010 Urban Water Management Plan and that each Party is individually responsible for compliance with the requirements of the Urban Water Management Planning Act.

2. Development of Individual Water Use Targets. Each Party agrees to develop its own urban water use target ("Individual Urban Water Use Target") and its own interim urban water use target ("Individual Interim Urban Water Use Target") using Method 1 as set forth in Water Code section 10608.20(b)(1) and as further provided in the DWR Guidebook and the DWR Methodologies. Each Party agrees to develop its Individual Urban Water Use Target and its Individual Interim Urban Water Use Target and make that target information available to each of the other Parties no later than June 30, 2011.

3. Development of Regional Alliance Water Use Targets. The Parties agree that, pursuant to a collective and cooperative effort, and using the Individual Urban Water Use Target and Individual Interim Urban Water Use Target information developed pursuant to Paragraph 2, above, the Parties will develop a regional urban water use target

(“Regional Alliance Urban Water Use Target”) and a regional interim urban water use target (“Regional Alliance Interim Urban Water Use Target”) using Method 1 as set forth in Water Code section 10608.20(b)(1) and as further provided in the DWR Guidebook and the DWR Methodologies. The Parties agree to develop the Regional Alliance Urban Water Use Target and the Regional Alliance Interim Urban Water Use Target no later than June 30, 2011.

4. Reporting in Individual Urban Water Management Plans. The Parties agree that, in addition to other information they will otherwise include in their individual 2010 Urban Water Management Plans, each Party will report the following information in its individual 2010 Urban Water Management Plan: (A) a copy of this Agreement; (B) a copy of the letter to DWR as referenced in Paragraph 1, above; (C) an identification of any other regional alliance to which the Party may be a member; (D) its baseline gross water use and service area population; (E) its Individual Urban Water Use Target and its Individual Interim Urban Water Use Target; (F) its compliance year gross water use and service area population, as applicable; and (G) the Regional Alliance Urban Water Use Target and the Regional Alliance Interim Urban Water Use Target.

5. Regional Alliance Reporting. The Parties agree to jointly prepare and submit a Regional Alliance Report in accordance with Water Code sections 10608.40 and 10608.52 and as further provided in the DWR Guidebook and the DWR Methodologies.

6. Assessing Compliance. The Parties mutually recognize and understand the following statement as set forth in the DWR Methodologies: “The following guidelines will be used to assess compliance: If a regional alliance meets its regional target, all suppliers in the alliance will be deemed compliant. . . . If a regional alliance fails to meet its regional target, water suppliers in the alliance that meet their individual targets will be deemed compliant. Water suppliers in alliances that meet neither their individual targets nor their regional targets will be deemed noncompliant. These suppliers can still apply for grant funds if their application is accompanied by a plan that demonstrates how the funds being sought will bring them into compliance with their targets (Section 10608.56).”

7. Withdrawal or Dissolution. Any Party may withdraw without penalty from the Regional Alliance formed under this Agreement upon sixty (60) days advance written notice to the other Parties. Any such withdrawal shall become effective upon the sixtieth (60th) day after the last non-withdrawing Party receives the notice required by this Paragraph. Any Party that withdraws from the Regional Alliance recognizes and agrees that it is thereafter individually responsible for timely compliance with the urban water use target and interim urban water use target requirements of SBX7-7. In the event that any Party to this Agreement withdraws from the Regional Alliance pursuant to this Paragraph, the non-withdrawing Parties agree to jointly notify DWR of such withdrawal within thirty (30) days of the effective date of the withdrawal. Furthermore, in the event of such a withdrawal, the non-withdrawing Parties may choose to either (A) develop a revised Regional Alliance Urban Water Use Target and a revised Regional Alliance Interim Urban Water Use Target or (B) dissolve the Regional Alliance. In the event the non-withdrawing Parties choose to develop a revised Regional Alliance Urban Water Use

Target and a revised Regional Alliance Interim Urban Water Use Target, the non-withdrawing Parties agree to develop said revised targets in accordance with Paragraph 3, above, within sixty (60) days of the effective date of a withdrawal and to submit such revised information to DWR within thirty (30) days of the completion of the revised information. In the event that (A) upon a Party's withdrawal, the non-withdrawing Parties choose to dissolve the Regional Alliance, or (B) absent a Party's withdrawal, the Parties choose to dissolve the Regional Alliance, the Parties agree to memorialize their decision in writing and to jointly notify DWR of such dissolution within thirty (30) days of the dissolution decision. The Parties further recognize and agree that, in the event of a dissolution of the Regional Alliance under this Paragraph, each Party is thereafter individually responsible for timely compliance with the urban water use target and interim urban water use target requirements of SBX7-7. A dissolution of the Regional Alliance in accordance with this Paragraph shall terminate the Agreement.

8. Notice. Any notice required by this Agreement shall be in writing and shall be made by personal delivery, certified mail, or other form of delivery for which a signature acknowledging receipt is required, and shall be provided as follows:

Olivenhain Municipal Water District  
General Manager  
1966 Olivenhain Road  
Encinitas, CA 92024

Vallecitos Water District  
General Manager  
201 Vallecitos de Oro  
San Marcos, CA 92069

Rincon del Diablo Municipal Water District  
General Manager  
1920 North Iris Lane  
Escondido, CA 92026-1318

San Dieguito Water District  
General Manager  
160 Calle Magdalena  
Encinitas, CA 92024

Any Party may change its contact information for purposes of this Paragraph by providing written notice to each of the other Parties within five (5) working days of said change.

9. Costs. The Parties recognize and agree that each Party shall bear all of its own costs, fees and expenses of whatever nature that may arise out of this Agreement, including, but not limited to, staffing, consulting, legal, and any other costs related to the preparation or implementation of this Agreement.

10. Hold Harmless. Each Party agrees to hold harmless each of the other Parties and its respective public officials, employees, officers, agents, successors and assigns from any and all losses, claims, liens, demands, judgments, and causes of action of every kind and character that may arise under this Agreement. Neither this Paragraph nor any other Paragraph or provision of this Agreement is intended to create any claim or cause of action in favor of any Party or any third party against any of the Parties. The obligations of each Party under this Paragraph shall survive any Party's withdrawal from the Regional Alliance, the dissolution of the Regional Alliance, and any other termination of this Agreement.

11. Term. Except as otherwise provided in Paragraph 6, above, or Paragraph 12, below, this Agreement shall remain in effect until December 31, 2020.

12. Amendments. This Agreement shall not be amended except by written agreement of Parties.

13. Authority and Counterparts. Each Party agrees that its respective signatory below is authorized to sign and enter this Agreement on behalf of the Party. This Agreement may be executed in counterparts.



Name: Kimberly A. Thorne  
Olivenhain Municipal Water District

6/16/2011

Date

Name: \_\_\_\_\_  
Vallecitos Water District

Date

Name: \_\_\_\_\_  
Rincon del Diablo Municipal Water District

Date

Name: \_\_\_\_\_  
San Dieguito Water District

Date



10. Hold Harmless. Each Party agrees to hold harmless each of the other Parties and its respective public officials, employees, officers, agents, successors and assigns from any and all losses, claims, liens, demands, judgments, and causes of action of every kind and character that may arise under this Agreement. Neither this Paragraph nor any other Paragraph or provision of this Agreement is intended to create any claim or cause of action in favor of any Party or any third party against any of the Parties. The obligations of each Party under this Paragraph shall survive any Party's withdrawal from the Regional Alliance, the dissolution of the Regional Alliance, and any other termination of this Agreement.

11. Term. Except as otherwise provided in Paragraph 6, above, or Paragraph 12, below, this Agreement shall remain in effect until December 31, 2020.

12. Amendments. This Agreement shall not be amended except by written agreement of Parties.

13. Authority and Counterparts. Each Party agrees that its respective signatory below is authorized to sign and enter this Agreement on behalf of the Party. This Agreement may be executed in counterparts.

Name: \_\_\_\_\_  
Olivenhain Municipal Water District

\_\_\_\_\_ Date



Name: DENNIS O. KAMIS  
Vallecitos Water District

6/16/2011  
Date

Name: \_\_\_\_\_  
Rincon del Diablo Municipal Water District

\_\_\_\_\_ Date

Name: \_\_\_\_\_  
San Dieguito Water District

\_\_\_\_\_ Date

10. Hold Harmless. Each Party agrees to hold harmless each of the other Parties and its respective public officials, employees, officers, agents, successors and assigns from any and all losses, claims, liens, demands, judgments, and causes of action of every kind and character that may arise under this Agreement. Neither this Paragraph nor any other Paragraph or provision of this Agreement is intended to create any claim or cause of action in favor of any Party or any third party against any of the Parties. The obligations of each Party under this Paragraph shall survive any Party's withdrawal from the Regional Alliance, the dissolution of the Regional Alliance, and any other termination of this Agreement.

11. Term. Except as otherwise provided in Paragraph 6, above, or Paragraph 12, below, this Agreement shall remain in effect until December 31, 2020.

12. Amendments. This Agreement shall not be amended except by written agreement of Parties.

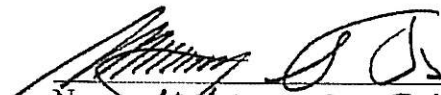
13. Authority and Counterparts. Each Party agrees that its respective signatory below is authorized to sign and enter this Agreement on behalf of the Party. This Agreement may be executed in counterparts.

Name: \_\_\_\_\_  
Olivenhain Municipal Water District

\_\_\_\_\_  
Date

Name: \_\_\_\_\_  
Vallecitos Water District

\_\_\_\_\_  
Date

  
Name: Mitchell S. Diaz  
Rincon del Diablo Municipal Water District

16 Jun 11  
\_\_\_\_\_  
Date

Name: \_\_\_\_\_  
San Dieguito Water District

\_\_\_\_\_  
Date



10. Hold Harmless. Each Party agrees to hold harmless each of the other Parties and its respective public officials, employees, officers, agents, successors and assigns from any and all losses, claims, liens, demands, judgments, and causes of action of every kind and character that may arise under this Agreement. Neither this Paragraph nor any other Paragraph or provision of this Agreement is intended to create any claim or cause of action in favor of any Party or any third party against any of the Parties. The obligations of each Party under this Paragraph shall survive any Party's withdrawal from the Regional Alliance, the dissolution of the Regional Alliance, and any other termination of this Agreement.

11. Term. Except as otherwise provided in Paragraph 6, above, or Paragraph 12, below, this Agreement shall remain in effect until December 31, 2020.

12. Amendments. This Agreement shall not be amended except by written agreement of Parties.

13. Authority and Counterparts. Each Party agrees that its respective signatory below is authorized to sign and enter this Agreement on behalf of the Party. This Agreement may be executed in counterparts.

Name: \_\_\_\_\_  
Olivenhain Municipal Water District


Date \_\_\_\_\_

Name: \_\_\_\_\_  
Vallecitos Water District

Date \_\_\_\_\_

Name: \_\_\_\_\_  
Rincon del Diablo Municipal Water District

Date \_\_\_\_\_

  
Name: Lawrence A. Watt  
San Dieguito Water District

6/17/2011  
Date



# Appendix C. DWR UWMP Checklist and Formatted Tables



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**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 *
<i>Add additional rows as needed</i>			
PWS CA3710002	Vallecitos Water District	22,522	4,835
<b>TOTAL</b>		22,522	4,835

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

NOTES:

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

Select Only One	Type of Plan		Name of RUWMP or Regional Alliance <i>if applicable</i> (select from drop down list)
<input checked="" type="checkbox"/>	<b>Individual UWMP</b>		
	<input type="checkbox"/>	Water Supplier is also a member of a RUWMP	
	<input checked="" type="checkbox"/>	Water Supplier is also a member of a Regional Alliance	Olivenhain Regional Alliance
<input type="checkbox"/>	<b>Regional Urban Water Management Plan (RUWMP)</b>		
NOTES:			

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
<input type="checkbox"/>	Supplier is a wholesaler
<input checked="" type="checkbox"/>	Supplier is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables are in calendar years
<input type="checkbox"/>	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP * (select from drop down)	
Unit	MG
<i>* Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</i>	
NOTES:	

**Submittal Table 2-4 Retail: Water Supplier Information Exchange**

The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.

Wholesale Water Supplier Name

*Add additional rows as needed*

San Diego County Water Authority

NOTES:

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

Population Served	2020	2025	2030	2035	2040	2045( <i>opt</i> )
	105,741	108,371	110,484	111,370	120,813	127,195

NOTES: As estimated by the San Diego Association of Governments (SANDAG) using Series 14 Growth Forecast (version 17) population data



### Submittal Table 4-1 Retail: Demands for Potable and Non-Potable<sup>1</sup> Water - Actual

Use Type	2020 Actual		
<p><b>Drop down list</b>                      May select each use multiple times                      These are the only Use Types that will be recognized by the WUEdata online submittal tool</p>	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume <sup>2</sup>
Add additional rows as needed			
Single Family		Drinking Water	2,136
Multi-Family		Drinking Water	741
Commercial		Drinking Water	342
Industrial		Drinking Water	40
Landscape		Drinking Water	842
Agricultural irrigation		Drinking Water	201
Losses	Losses, Oper/Emerg Use	Drinking Water	400
Other Potable	Fire Lines	Drinking Water	89
Other Potable	Construction Water	Drinking Water	24
Other Potable	Unmetered Unbilled	Drinking Water	22
<b>TOTAL</b>			4,835

<sup>1</sup> Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4. <sup>2</sup>  
 Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES:

**Submittal Table 4-2 Retail: Use for Potable and Non-Potable<sup>1</sup> Water - Projected**

Use Type	Additional Description (as needed)	Projected Water Use <sup>2</sup> <i>Report To the Extent that Records are Available</i>				
		2025	2030	2035	2040	2045 (opt)
<p><b>Drop down list</b> May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool</p>						
Add additional rows as needed						
Single Family		2,803	2,911	3,023	3,235	3,557
Multi-Family		973	1,010	1,049	1,123	1,235
Commercial		448	466	484	517	569
Industrial		53	55	57	61	67
Landscape		1,105	1,147	1,191	1,275	1,402
Agricultural irrigation		263	274	284	304	334
Losses	Real Losses	525	545	566	606	666
Other Potable	Fire Lines	117	122	127	136	149
Other Potable	Construction Water	31	33	34	36	40
Other Potable	Unmetered Unbilled	29	30	31	33	36
<b>TOTAL</b>		6,347	6,592	6,845	7,325	8,055

<sup>1</sup> Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4. <sup>2</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES:

**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 <i>From Tables 4-1R and 4-2 R</i>	4,835	6,347	6,592	6,845	7,325	8,055
Recycled Water Demand <sup>1</sup> <i>From Table 6-4</i>	0	471	471	471	771	771
Optional Deduction of Recycled Water Put Into Long-Term Storage <sup>2</sup>						
<b>TOTAL WATER USE</b>	4,835	6,818	7,063	7,316	8,096	8,826

<sup>1</sup> Recycled water demand fields will be blank until Table 6-4 is complete <sup>2</sup>  
 Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier *may* deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.

NOTES:

**Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting**

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss <sup>1,2</sup>
01/2016	285
01/2017	454
01/2018	221
01/2019	266
01/2020	396

<sup>1</sup> Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. <sup>2</sup>  
**Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.**

NOTES:

**Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections**

<p><b>Are Future Water Savings Included in Projections?</b> (Refer to Appendix K of UWMP Guidebook) <i>Drop down list (y/n)</i></p>	<p>No</p>
<p>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.</p>	
<p><b>Are Lower Income Residential Demands Included In Projections?</b> <i>Drop down list (y/n)</i></p>	<p>Yes</p>
<p>NOTES:</p>	

**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	1999	2008	199	159
5 Year	2004	2008	198	

*\*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:

**Submittal Table 5-2: 2020 Compliance**  
**SB X7-7 2020 Compliance Form**  
*Retail Supplier or Regional Alliance Only*

**From**

2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* <i>(Adjusted if applicable)</i>		
125	0	125	159	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:

**Submittal Table 6-1 Retail: Groundwater Volume Pumped**

<input checked="" type="checkbox"/>	Supplier does not pump groundwater. The supplier will not complete the table below.
-------------------------------------	--

<input type="checkbox"/>	All or part of the groundwater described below is desalinated.
--------------------------	--

Groundwater Type <i>Drop Down List</i> <i>May use each category multiple times</i>	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
--	------------------------	-------	-------	-------	-------	-------

*Add additional rows as needed*


<b>TOTAL</b>	0	0	0	0	0
--------------	---	---	---	---	---

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

NOTES:



**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.
53	Percentage of 2020 service area covered by wastewater collection system <i>(optional)</i>
90	Percentage of 2020 service area population covered by wastewater collection system <i>(optional)</i>

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? <i>Drop Down List</i>	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? <i>Drop Down List</i>	Is WWTP Operation Contracted to a Third Party? <i>(optional)</i> <i>Drop Down List</i>
Vallecitos Water District	Metered	630	Vallecitos Water District	Meadowlark Water Reclamation Facility	Yes	No
Vallecitos Water District	Metered	1,688	Vallecitos Water District	Encina Water Pollution Control Agency	No	No
<b>Total Wastewater Collected from Service Area in 2020:</b>		2,318				

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

NOTES:



**Submittal Table 6-4 Retail: 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: Vallecitos Water District and City of Escondido

Name of Supplier Operating the Recycled Water Distribution System: Vallecitos Water District

Supplemental Water Added in 2020 (volume) *Include units*: None

Source of 2020 Supplemental Water: N/A

Beneficial Use Type <i>additional rows if needed.</i>	<i>Insert</i> Potential Beneficial Uses of Recycled Water (Describe)	Amount of Potential Uses of Recycled Water (Quantity) <i>Include volume units<sup>1</sup></i>	General Description of 2020 Uses	Level of Treatment <i>Drop down list</i>	2020 <sup>1</sup>	2025 <sup>1</sup>	2030 <sup>1</sup>	2035 <sup>1</sup>	2040 <sup>1</sup>	2045 <sup>1</sup> (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)			Currently no recycled water use	Tertiary	0	305	305	305	478	478
Golf course irrigation			Currently no recycled water use	Tertiary	0	166	166	166	293	293
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
<b>Total:</b>					0	471	471	471	771	771

**2020 Internal Reuse**

<sup>1</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTES:

**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 <sup>1</sup>	2020 Actual Use <sup>1</sup>
<i>Insert additional rows as needed.</i>		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	471	0
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
<b>Total</b>	471	0

<sup>1</sup> Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.

NOTE:

**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*

North San Diego Water Reclamation Coalition	Regional Recycled Water Facilities Plan - Short Term Demand Projections	2025	471
---	---	------	-----

North San Diego Water Reclamation Coalition	Regional Recycled Water Facilities Plan - Long Term Demand Projections	2035	300
---	--	------	-----

--	--	--	--

<b>Total</b>			<b>771</b>
--------------	--	--	------------

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

NOTES:

**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 <i>Drop Down List</i>	Expected Increase in Water Supply to Supplier* <i>This may be a range</i>
	<i>Drop Down List (y/n)</i>	<i>If Yes, Supplier Name</i>				

*Add additional rows as needed*

Expansion of the Meadowlark Water Recycling Facility	Yes	North County Recycled Water Coalition	Expansion of the treatment plant's capacity from 5 MGD to 6.5 MGD	2030	All Year Types	550 MG per year
Recycled Water from the Hale Avenue Resource Recovery Facility	Yes	North County Recycled Water Coalition	Purchase of Recycled Water from the City of Escondido	2030	All Year Types	40 MG to 771 MG per year
North County One Water Program	Yes	Encina Wastewater Authority and San Elijo Joint Powers Authority	Advanced water purification at the EWPCF and SEWRF	2030	All Year Types	717 MG to 1,792 MG per year

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

NOTES:



**Submittal Table 6-9 Retail: Water Supplies — Projected**

Water Supply	Additional Detail on Water Supply	Projected Water Supply * Report To the Extent Practicable									
		2025		2030		2035		2040		2045 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Add additional rows as needed											
Purchased or Imported Water	SDCWA	4,559		4,831		5,044		5,470		6,169	
Desalinated Water - Surface Water	As a local water supply owned by VWD through a Water Purchase Agreement with SDCWA	1,140		1,140		1,140		1,140		1,140	
Recycled Water	From the Meadowlark Water Recycling Facility and/or City of Escondido	471		471		471		771		771	
	<b>Total</b>	6,170	0	6,442	0	6,655	0	7,381	0	8,080	0
<i>*Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.</i>											
NOTES											



**Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)**

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	Available Supplies if Year Type Repeats	
		<input type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		<input type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	% of Average Supply
Average Year	1986-2018		100%
Single-Dry Year	2015		100%
Consecutive Dry Years 1st Year	2011		100%
Consecutive Dry Years 2nd Year	2012		100%
Consecutive Dry Years 3rd Year	2013		100%
Consecutive Dry Years 4th Year	2014		100%
Consecutive Dry Years 5th Year	2015		100%

*Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.*

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

NOTES:

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

	2025	2030	2035	2040	2045 (Opt)
Supply totals (autofill from Table 6-9)	6,170	6,442	6,655	7,381	8,080
Demand totals (autofill from Table 4-3)	6,818	7,063	7,316	8,096	8,826
Difference	(648)	(621)	(661)	(715)	(745)

**NOTES:**

SDCWA active and passive conservation savings (653, 625, 663, 723, 754)

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

	2025	2030	2035	2040	2045 (Opt)
Supply totals*	7,296	7,558	7,828	8,663	9,444
Demand totals*	7,296	7,558	7,828	8,663	9,444
Difference	0	0	0	0	0

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

NOTES:

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

		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	7,296	7,558	7,828	8,663	9,444
	Demand totals	7,296	7,558	7,828	8,663	9,444
	Difference	0	0	0	0	0
Second year	Supply totals	7,364	7,628	7,901	8,744	9,532
	Demand totals	7,364	7,628	7,901	8,744	9,532
	Difference	0	0	0	0	0
Third year	Supply totals	7,364	7,628	7,901	8,744	9,532
	Demand totals	7,364	7,628	7,901	8,744	9,532
	Difference	0	0	0	0	0
Fourth year	Supply totals	7,432	7,699	7,975	8,825	9,620
	Demand totals	7,432	7,699	7,975	8,825	9,620
	Difference	0	0	0	0	0
Fifth year	Supply totals	7,432	7,699	7,975	8,825	9,620
	Demand totals	7,432	7,699	7,975	8,825	9,620
	Difference	0	0	0	0	0
Sixth year (optional)	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0

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

**NOTES:**

SDCWA assumes it will be able to meet all of its member agency demands, so no deficit is shown.

Note: Totals can be entered directly or from the Optional

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

2021	Total
Total Water Use	5,222
Total Supplies	5,222
Surplus/Shortfall w/o WSCP Action	0
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	5,416
Total Supplies	5,416
Surplus/Shortfall w/o WSCP Action	0
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	5,609
Total Supplies	5,609
Surplus/Shortfall w/o WSCP Action	0
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	5,803
Total Supplies	5,803
Surplus/Shortfall w/o WSCP Action	0
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	6,044
Total Supplies	6,044
Surplus/Shortfall w/o WSCP Action	0
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

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

Shortage Level	Percent Shortage Range	Shortage Response Actions <i>(Narrative description)</i>
1	Up to 10%	Stage 1: Standard Operating Condition
2	Up to 20%	Stage 2: Drought Watch Condition
3	Up to 30%	Stage 3: Board Declared Emergency Action
4	Up to 40%	Stage 4: Drought Critical Condition
5	Up to 50%	Stage 5: State and Board Declared Extreme Emergency Action
6	>50%	Stage 6: State and Board Declared Extreme Emergency Action

NOTES:

**Submittal Table 8-2: Demand Reduction Actions**

Shortage Level	Demand Reduction Actions <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement? <i>For Retail Suppliers Only</i> <i>Drop Down List</i>
<i>Add additional rows as needed</i>				
2-6	Landscape - Restrict or prohibit runoff from landscape irrigation	20-50%		Yes
2-6	Landscape - Limit landscape irrigation to specific times	20-50%		Yes
2-6	Landscape - Limit landscape irrigation to specific days	20-50%		Yes
2-6	Landscape - Prohibit certain types of landscape irrigation	20-50%		Yes
2-6	Landscape - Prohibit irrigation 48 hours after rain	20-50%		Yes
2-6	Landscape - Other landscape restriction or prohibition	20-50%		Yes
2-6	CII - Lodging establishment must offer opt out of linen service	20-50%		Yes
1-6	CII - Restaurants may only serve water upon request	20-50%		Yes
2-6	Water Features - Restrict water use for decorative water features, such as fountains	20-50%		Yes
2-6	Other water feature or swimming pool restriction	20-50%		Yes
2-6	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	20-50%		Yes
2-6	Other - Require automatic shut of hoses	20-50%		Yes
2-6	Other - Prohibit use of potable water for construction and dust control	20-50%		Yes
2-6	Other - Prohibit use of potable water for washing hard surfaces	20-50%		Yes
2-6	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	20-50%		Yes
NOTES:				

**Submittal Table 8-3: Supply Augmentation and Other Actions**

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier <i>Drop down list</i> <i>These are the only categories that will be accepted by the WUEdata online submittal tool</i>	How much is this going to reduce the shortage gap? <i>Include units used (volume type or percentage)</i>	Additional Explanation or Reference <i>(optional)</i>
<i>Add additional rows as needed</i>			
1			
2			
3	Stored Emergency Supply	4,562 MG <sup>1</sup>	SDCWA Carryover Storage Program
4	Stored Emergency Supply	4,562 MG <sup>1</sup>	SDCWA Carryover Storage Program
5	Other Actions (describe)		Locally appropriate supply augmentation as per SDCWA WSCP
5	Stored Emergency Supply	36 MG <sup>2</sup>	District emergency storage withdrawals
6	Other Actions (describe)		Locally appropriate supply augmentation as per SDCWA WSCP
6	Stored Emergency Supply	36 MG <sup>2</sup>	District emergency storage withdrawals

NOTES:

<sup>1</sup>Water to be partitioned between all SDCWA member agencies (14,000 acre-feet per year)

<sup>2</sup>Per the 2018 Master Plan, the District has an emergency criteria total of 300 percent of the average daily demand for emergency storage.



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

City Name	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
Carlsbad	Yes	Yes
Escondido	Yes	Yes
Vista	Yes	Yes
San Marcos	Yes	Yes
County Name <i>Drop Down List</i>	60 Day Notice	Notice of Public Hearing
<i>Add additional rows as needed</i>		
San Diego County	Yes	Yes
NOTES:		

**Urban Water Supplier:** Vallecitos Water District

**Water Delivery Product** (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

**Table O-1A: Recommended Energy Reporting - Water Supply Process Approach**

Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control							
End Date	12/30/2020	Water Management Process						Non-Consequential Hydropower (if applicable)	
<input type="checkbox"/> Is upstream embedded in the values reported?									
	Water Volume Units Used	Extract and Divert	Place into Storage	Conveyance	Treatment	Distribution	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process	MG	0	0	0	0	4835	4835	0	4835
Energy Consumed (kWh)	N/A	0	0	0	0	2343524	2343524		2343524
Energy Intensity (kWh/vol.)	N/A	0.0	0.0	0.0	0.0	484.7	484.7	0.0	484.7

**Quantity of Self-Generated Renewable Energy**

0 kWh

**Data Quality** (Estimate, Metered Data, Combination of Estimates and Metered Data)

Metered Data

**Data Quality Narrative:**

Energy consumption for system distribution is based on metered values at VWD's pump stations.

**Narrative:**

Distribution values represent power consumption from 10 pump stations in pressure zones throughout VWD service area.

**SB X7-7 Table 0: Units of Measure Used in UWMP\*** *(select one from the drop down list)*

Million Gallons

*\*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
<b>10- to 15-year baseline period</b>	2008 total water deliveries	6,702	Million Gallons
	2008 total volume of delivered recycled water	-	Million Gallons
	2008 recycled water as a percent of total deliveries	0%	<b>See Note 1</b>
	Number of years in baseline period <sup>1, 2</sup>	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range <sup>3</sup>	2008	
<b>5-year baseline period</b>	Number of years in baseline period	5	Years
	Year beginning baseline period range	2004	
	Year ending baseline period range <sup>4</sup>	2008	

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> The ending year for the 10-15 year baseline period must be between December 31, 2004 and December 31, 2010.

<sup>4</sup> 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**  
DWR recommends pre-review

NOTES:

**SB X7-7 Table 3: Service Area Population**

Year	Population	
10 to 15 Year Baseline Population		
Year 1	1999	57,856
Year 2	2000	59,968
Year 3	2001	60,481
Year 4	2002	64,154
Year 5	2003	67,191
Year 6	2004	70,668
Year 7	2005	75,992
Year 8	2006	79,986
Year 9	2007	82,967
Year 10	2008	85,910
<i>Year 11</i>		
<i>Year 12</i>		
<i>Year 13</i>		
<i>Year 14</i>		
<i>Year 15</i>		
5 Year Baseline Population		
Year 1	2004	70,668
Year 2	2005	75,992
Year 3	2006	79,986
Year 4	2007	82,967
Year 5	2008	85,910

NOTES:

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

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Million Gallons	
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>	Annual Gross Water Use	
<b>10 to 15 Year Baseline - Gross Water Use</b>								
Year 1	1999	4,578		6	-	655	-	3,917
Year 2	2000	5,365		15	-	793	-	4,557
Year 3	2001	5,164		(8)	-	764	-	4,408
Year 4	2002	5,723		12	-	847	-	4,864
Year 5	2003	5,688		(7)	-	799	-	4,896
Year 6	2004	6,308		-	-	865	-	5,443
Year 7	2005	5,918		4	-	695	-	5,219
Year 8	2006	6,379		3	-	793	-	5,583
Year 9	2007	7,115		4	-	802	-	6,309
Year 10	2008	6,702		32	-	627	-	6,043
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
<b>10 - 15 year baseline average gross water use</b>							<b>5,124</b>	
<b>5 Year Baseline - Gross Water Use</b>								
Year 1	2004	6,308		-	-	865	-	5,443
Year 2	2005	5,918		4	-	695	-	5,219
Year 3	2006	6,379		3	-	793	-	5,583
Year 4	2007	7,115		4	-	802	-	6,309
Year 5	2008	6,702		32	-	627	-	6,043
<b>5 year baseline average gross water use</b>							<b>5,719</b>	
* <b>Units of measure</b> (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** San Diego County Water Authority

**This water source is:**

- The supplier's own water source
- A purchased or imported source

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
--	--	--	--

**10 to 15 Year Baseline - Water into Distribution System**

Year 1	1999	4,578	4,578
Year 2	2000	5,365	5,365
Year 3	2001	5,164	5,164
Year 4	2002	5,723	5,723
Year 5	2003	5,688	5,688
Year 6	2004	6,308	6,308
Year 7	2005	5,918	5,918
Year 8	2006	6,379	6,379
Year 9	2007	7,115	7,115
Year 10	2008	6,702	6,702
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	6,308	6,308
Year 2	2005	5,918	5,918
Year 3	2006	6,379	6,379
Year 4	2007	7,115	7,115
Year 5	2008	6,702	6,702

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

<sup>2</sup> **Meter Error Adjustment** - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES:



**SB X7-7 Table 5: Baseline Gallons Per Capita Per Day (GPCD)**

<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	1999	57,856	3,917	185
Year 2	2000	59,968	4,557	208
Year 3	2001	60,481	4,408	200
Year 4	2002	64,154	4,864	208
Year 5	2003	67,191	4,896	200
Year 6	2004	70,668	5,443	211
Year 7	2005	75,992	5,219	188
Year 8	2006	79,986	5,583	191
Year 9	2007	82,967	6,309	208
Year 10	2008	85,910	6,043	193
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
<b>10-15 Year Average Baseline GPCD</b>				<b>199</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
Year 1	2004	70,668	5,443	211
Year 2	2005	75,992	5,219	188
Year 3	2006	79,986	5,583	191
Year 4	2007	82,967	6,309	208
Year 5	2008	85,910	6,043	193
<b>5 Year Average Baseline GPCD</b>				<b>198</b>

NOTES:

**SB X7-7 Table 6: Baseline GPCD** *Summary*  
*From Table SB X7-7 Table 5*

10-15 Year Baseline GPCD	199
5 Year Baseline GPCD	198

NOTES:

**SB X7-7 Table 7: 2020 Target Method***Select Only One*

Target Method		Supporting Tables
<input checked="" type="checkbox"/>	Method 1	SB X7-7 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D
<input type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator <i>Located in the WUE Data Portal at <a href="http://wuedata.water.ca.gov">wuedata.water.ca.gov</a> Resources button</i>

NOTES:

**SB X7-7 Table 7-A: Target Method 1**

20% Reduction

10-15 Year Baseline GPCD	2020 Target GPCD
199	159
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 <sup>1</sup>	Calculated 2020 Target <sup>2</sup>			Confirmed 2020 Target <sup>4</sup>
		As calculated by supplier in this SB X7-7 Verification Form	Special Situations <sup>3</sup>		
			Prorated 2020 Target	Population Weighted Average 2020 Target	
198	188	159			159

<sup>1</sup> **Maximum 2020 Target** is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.

<sup>2</sup> **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.

<sup>3</sup> **Prorated targets and population weighted target** are allowed for special situations only. These situations are described in Appendix P, Section P.3

<sup>4</sup> **Confirmed Target** is the lesser of the Calculated 2020 Target (C5, D5, or E5) or the Maximum 2020 Target (Cell B5)

NOTES:

**SB X7-7 Table 0: Units of Measure Used in 2020 UWMP\***

*(select one from the drop down list)*

Million Gallons

*\*The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*

NOTES:

**SB X7-7 Table 2: Method for 2020 Population Estimate**

**Method Used to Determine 2020 Population**  
(may check more than one)

<input type="checkbox"/>	<b>1. Department of Finance (DOF) or American Community Survey (ACS)</b>
<input type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input checked="" type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review

NOTES: As estimated by the San Diego Association of Governments (SANDAG) using Series 14 Growth Forecast (version 17) population data.

**SB X7-7 Table 3: 2020 Service Area Population**

**2020 Compliance Year Population**

<b>2020</b>	105,741
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NOTES:



**SB X7-7 Table 4: 2020 Gross Water Use**

Compliance Year 2020	2020 Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	2020 Deductions					2020 Gross Water Use
		Exported Water *	Change in Dist. System Storage* (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use*	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>	
	4,835	-	-	-	-	-	<b>4,835</b>

\* Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES:

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment**

Complete one table for each source.

<b>Name of Source</b>		San Diego County Water Authority	
<b>This water source is (check one) :</b>			
<input type="checkbox"/>	The supplier's own water source		
<input checked="" type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	3,722	-	3,722
<sup>1</sup> <i>Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.</i> <sup>2</sup> <b>Meter Error Adjustment</b> - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES			

**SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment**

Complete one table for each source.

<b>Name of Source</b>		Desalinated Water - Surface Water	
<b>This water source is (check one) :</b>			
<input checked="" type="checkbox"/>	The supplier's own water source		
<input type="checkbox"/>	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System <sup>1</sup>	Meter Error Adjustment <sup>2</sup> <i>Optional</i> (+/-)	Corrected Volume Entering Distribution System
	1,113		1,113
<sup>1</sup> <i>Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.</i> <sup>2</sup> <b>Meter Error Adjustment</b> - See guidance in Methodology 1, Step 3 of Methodologies Document			
NOTES: As a local water supply owned by VWD through a Water Purchase Agreement with SDCWA.			

**SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)**

<b>2020 Gross Water <i>Fm SB X7-7 Table 4</i></b>	<b>2020 Population <i>Fm</i> <i>SB X7-7 Table 3</i></b>	<b>2020 GPCD</b>
4,835	105,741	125

NOTES:

**SB X7-7 Table 9: 2020 Compliance**

Actual 2020 GPCD <sup>1</sup>	Optional Adjustments to 2020 GPCD					2020 Confirmed Target GPCD <sup>1,2</sup>	Did Supplier Achieve Targeted Reduction for 2020?
	Enter "0" if Adjustment Not Used			TOTAL Adjustments <sup>1</sup>	Adjusted 2020 GPCD <sup>1</sup> <i>(Adjusted if applicable)</i>		
	Extraordinary Events <sup>1</sup>	Weather Normalization <sup>1</sup>	Economic Adjustment <sup>1</sup>				
125	-	-	-	-	125	159	YES

<sup>1</sup> All values are reported in GPCD

<sup>2</sup> **2020 Confirmed Target GPCD** is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.

NOTES:

**SB X7-7 Regional Alliance - 2020 GPCD (Actual)**

Participating Member Agency Name <i>Add rows as needed</i>	2020 Actual GPCD <sup>1</sup>	2020 Population	(2020 GPCD) X (2020 Population)	Regional Alliance 2020 GPCD (Actual)
Olivenhain MWD	206	72,179	14,868,874	
Rincon del Diablo MWD	135	32,019	4,322,565	
San Dieguito WD	129	37,856	4,883,424	
Vallecitos WD	125	105,741	13,217,625	
			-	
<b>Regional Alliance Totals</b>	<b>595</b>	<b>247,795</b>	<b>37,292,488</b>	<b>150</b>

*\* All participating agencies must submit individual SB X7-7 Tables, as applicable, showing the individual agency's calculations. These tables are: SB X7-7 Tables 0 through 6, Table 7, any required supporting tables (as stated in SB X7-7 Table 7), and SB X7-7 Table 9, as applicable. These individual agency tables will be submitted with the individual or Regional Urban Water Management Plan.*

NOTES

## SB X7-7 Regional Alliance - 2020 Compliance

2020 Actual GPCD	Optional Adjustment for Economic Growth <sup>1</sup>	Adjusted <b>2020 Actual</b> GPCD	<b>2020 Target</b> GPCD <sup>2</sup>	<b>Did Alliance Achieve Targeted Reduction for 2020?</b>
150	-	150	204	YES

<sup>1</sup> Adjustments for economic growth can be applied to either the individual supplier's data or to the aggregate regional alliance data (but not both), depending upon availability of suitable data and methods.

<sup>2</sup> 2020 Target GPCD will be taken from the Regional Alliance's SB X7-7 Verification Form, Option 1 Weighted Target Table, Option 2 SB X7-7 Table 7-F.

NOTES

## **2020 Regional Alliance Report**

### **Olivenhain Regional Alliance (Draft April 19, 2020)**

#### **Introduction**

The Water Conservation Bill of 2009 (SB X7-7) requires each urban retail water supplier to develop an urban water use target and an interim urban water use target. The legislation authorizes urban retail water suppliers to determine and report progress toward achieving these targets on an individual agency basis or pursuant to a regional alliance as provided in CWC § 10608.28(a). The DWR Guidebook and the DWR Methodologies provide guidance to urban retail water suppliers for purposes of forming and carrying out a regional alliance in accordance with CWC § 10608.28(a) and related provisions of SBX7-7. The DWR Guidebook and the DWR Methodologies provide that urban retail water suppliers are eligible to form a regional alliance in accordance with CWC § 10608.28(a) if the suppliers meet at least one of several specified criteria, such as (1) the suppliers are recipients of water from a common wholesale water supplier, or (2) the suppliers are located within the same hydrologic region, which for purposes of a regional alliance refers to the 10 hydrologic regions as shown in the California Water Plan.

For the 2010 Urban Water Management Plan, Olivenhain Municipal Water District, along with Vallecitos Water District, San Dieguito Water District, and Rincon del Diablo Municipal Water District formed a regional alliance pursuant to CWC § 10608.28(a), the DWR Guidebook, and the DWR Methodologies to cooperatively determine and report progress toward achieving their water use targets on a regional basis. All of these members are recipients of water from a common wholesale water supplier, in this case San Diego County Water Authority, and all of the members are located within the South Coast Hydrologic Region as shown in the California Water Plan. The alliance members agreed that Olivenhain Municipal Water District would be the lead agency. The agencies are shown in the attached map.

The members have entered a cooperative agreement to establish and carry out a regional alliance and they have jointly notified DWR of the formation of their regional alliance. In accordance with the DWR Guidebook and DWR Methodologies, the members have prepared an urban water use target and an interim urban water use target for the region, which is further set forth herein and within each of the other member's individual UWMPs. Furthermore, each member of the regional alliance has developed its own set of interim and urban water use targets, along with other supporting data and determinations, all of which is included in each member's individual UWMP.

#### **Data Reporting for a Regional Alliance**

The attached tables below provide the data required for the Olivenhain Regional Alliance, as described in Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, Final Draft, February 2016. The Olivenhain Regional Alliance did achieve its targeted reduction for 2020, with a target of 204 GPCD, and 1 2020 actual use of 150 GPCD.

## Tables

Table SB X7-7 RA1 – Weighted Baseline				
Participating Member Agency Name	10-15 year Baseline GPCD*	Average Population During 10-15 Year Baseline Period	(Baseline GPCD) X (Population)	Regional Alliance Weighted Average 10-15 Year Baseline GPCD
Olivenhain MWD	352	54,418	19,155,136	
Rincon del Diablo MWD	284	26,434	7,507,256	
San Dieguito WD	189	35,385	6,687,765	
Vallecitos WD	199	70,517	14,032,883	
<b>Regional Alliance Total</b>	<b>1,024</b>	<b>186,754</b>	<b>47,383,040</b>	<b>254</b>
*All participating agencies must submit individual SB X7-7 Tables, as applicable, showing the individual agency's calculations. These tables are: SB X7-7 Tables 0 through 6, Table 7, any required supporting tables (as stated in SB X7-7 Table 7), and SB X7-7 Table 9, as applicable. These individual agency tables will be submitted with the individual or Regional Urban Water Management Plan.				
NOTES: MWD = Municipal Water District, WD = Water District				

Table SB X7-7 RA1 – Weighted Target				
Participating Member Agency Name	2020 Target GPCD*	2020 Population	(2020 Target) X (Population)	Regional Alliance Weighted Average 2020 Target
Olivenhain MWD	282	70,522	19,887,204	
Rincon del Diablo MWD	227	27,476	6,237,052	
San Dieguito WD	151	37,200	5,617,200	
Vallecitos WD	159	93,897	14,929,623	
<b>Regional Alliance Total</b>	<b>819</b>	<b>229,095</b>	<b>46,671,079</b>	<b>204</b>
*All participating agencies must submit individual SB X7-7 Tables, as applicable, showing the individual agency's calculations. These tables are: SB X7-7 Tables 0 through 6, Table 7, any required supporting tables (as stated in SB X7-7 Table 7), and SB X7-7 Table 9, as applicable. These individual agency tables will be submitted with the individual or Regional Urban Water Management Plan.				
NOTES: MWD = Municipal Water District, WD = Water District				



<b>Table SB X7-7 Regional Alliance – 2020 GPCD (Actual)</b>				
Participating Member Agency Name	2020 Actual GPCD*	2020 Population	(2020 GPCD) X (2020 Population)	Regional Alliance 2020 GPCD (Actual)
Olivenhain MWD	206	72,179	14,868,874	
Rincon del Diablo MWD	135	32,019	4,322,565	
San Dieguito WD	129	37,856	4,883,424	
Vallecitos WD	125	105,741	13,217,625	
<b>Regional Alliance Total</b>	<b>595</b>	<b>247,795</b>	<b>37,292,488</b>	
<p>*All participating agencies must submit individual SB X7-7 Tables, as applicable, showing the individual agency's calculations. These tables are: SB X7-7 Tables 0 through 6, Table 7, any required supporting tables (as stated in SB X7-7 Table 7), and SB X7-7 Table 9, as applicable. These individual agency tables will be submitted with the individual or Regional Urban Water Management Plan.</p> <p>NOTES: MWD = Municipal Water District, WD = Water District</p>				

<b>Table SB X7-7 Regional Alliance – 2020 Compliance</b>				
2020 Actual GPCD	Optional Adjustment for Economic Growth <sup>1</sup>	Adjusted 2020 Actual GPCD	2020 Target GPCD <sup>2</sup>	Did Regional Alliance Achieve Targeted Reduction for 2020?
150	0	150	204	YES
<p>1 Adjustments for economic growth can be applied to either the individual supplier's data or to the aggregate regional alliance data (but not both), depending upon availability of suitable data and methods.</p> <p>2 GPCD will be taken from the Regional Alliance's SB X7-7 Verification Form, Weighted Target Table.</p> <p>NOTES: MWD = Municipal Water District, WD = Water District</p>				

Water Code Section	Summary as Applies to UWMP	Subject	2020 Guidebook Location	2020 UWMP Location (Optional Column for Agency Review Use)
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	Section 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 5.1
10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 5.7	Section 5.5 and 5.3
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	N/A
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	N/A
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 5.2, 5.3 and Appendix B
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.	Demand Management Measures	Sections 9.2 and 9.3	Section 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	N/A
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	
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
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	Section 10.4
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	Section 8.9 and Appendix E
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 about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	Section 10 and Appendix E
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
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
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
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
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	Section 10
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
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 8.9 and Appendix E
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
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 2.2
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 2.2
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	Section 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 3.1
10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.4	Section 3.2
10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	Section 3.2

Water Code Section	Summary as Applies to UWMP	Subject	2020 Guidebook Location	2020 UWMP Location (Optional Column for Agency Review Use)
10631(a)	Describe the land uses within the service area.	System Description	Section 3.5	Section 1
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	Section 3.2
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 6.9
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 7
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
10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Section 6.1	Section 6.8
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
10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.2.2	Section 6.2
10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	Section 6.2
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
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
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
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(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 2.4.5
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	N/A
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 6.5
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.2	Section 6.5
10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.2	Section 6.5
10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.2	Section 6.5
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 6.5
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 6.5
10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	Section 4.1
10631(d)(3)(A)	Report the distribution system water loss for for each of the 5 years preceding the plan update.	System Water Use	Section 4.3	Section 4.2
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 and Appendix E
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 4.3
10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Chapter 8	Section 8 and Appendix G
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 and Appendix G

Water Code Section	Summary as Applies to UWMP	Subject	2020 Guidebook Location	2020 UWMP Location (Optional Column for Agency Review Use)
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 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Section 8.4	Section 8 and Appendix G
10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Section 8.4	Section 8 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Section 8.5, 8.6	Section 8 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
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 and Appendix G
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 7.1
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Chapter 7	Section 6.1
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

Water Code Section	Summary as Applies to UWMP	Subject	2020 Guidebook Location	2020 UWMP Location (Optional Column for Agency Review Use)
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 7.7
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 7.7
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 7.1
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 7.1
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 4.5
10631.2(a)	The UWMP must include energy intensity information as stated in the code.	System Suppliers, Energy Intensity	Section 6.4 and Appendix O	Section 6.10



# Appendix D. City and County Notification Letters and Public Hearing Notice

*Appendix to be included in Final UWMP.*



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# Appendix E. AWWA Water Audit





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# 2019 AWWWA Water Audit Level 1 Certified Validation Report

## Audit Information:

Water Supplier Name: Vallecitos Water District      PWS ID: 3710002  
System Type: Potable      Audit Period: Calendar Year 2019  
Utility Representation: Michael P. Arthur (Principal Financial Analyst), Chris Robbins (Public Information/Conservation Supervisor), Ed Pedraza (Operations & Maintenance Manager), Jeanna Kirby (Meter Service Supervisor)  
Validation Date: 9/22/2020      Call Time: 3:00 p.m.      Sufficient Supporting Documents Provided: **Yes**

## Validation Findings & Confirmation Statement:

### Key Audit Metrics:

Data Validity Score: 70      Data Validity Band (Level): Band III (51-70)  
ILI: 1.03      Real Loss: 29.23 gallons/connection/day      Apparent Loss: 3.11 gallons/connection/day  
Non-revenue water as percent of cost of operating system: 4.5%

### Certification Statement by Validator:

This water loss audit report has been Level 1 validated per the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34.

All recommendations on volume derivation and Data Validity Grades were incorporated into the water audit.

## Validator Information:

Water Audit Validator: Robert Scholl      Qualifications: Water Audit Validator Certificate issued by the CA-NV Section of the AWWWA

Validator Provided

# 2019 AWWA Water Audit Level 1 Certified Validation Report

**Water Supplier Name:** Vallecitos Water District

**Water Supplier ID Number:** CA3710002

**Water Audit Period:** Calendar Year 2019

## Water Audit & Water Loss Improvement Steps:

Utility to provide steps taken in preceding year to increase data validity, reduce real loss and apparent loss as informed by the annual validated water audit:

The Vallecitos Water District refined and continued billing the San Marcos fire department training facilities for their water use. This creates a revenue water source not previously captured.

The Vallecitos Water District's 2019 Water Audit also makes an adjustment in the metered usage data time period to align with the audit period. The 2016 and 2017 versions of the water audit had a one-month lag time between metered usage data and metered import data that could create anomalies between the two. This adjustment should better match supply and demand on a per-month basis.

## Certification Statement by Utility Executive:

This water loss audit report meets the requirements of California Code of Regulations Title 23, Division 2, Chapter 7 and the California Water Code Section 10608.34 and has been prepared in accordance with the method adopted by the American Water Works Association, as contained in their manual, *Water Audit and Loss Control Programs, Manual M36, Fourth Edition* and in the Free Water Audit Software version 5.

Executive Name (Print)

Glenn Pruum

Executive Position

General Manager

Signature



Date

9/28/2020

Utility Provided

**2019 AWWA Water Audit Level 1 Validation Summary Notes**

Pre-Interview Notes	<p>Import and export water volume monthly reports received</p> <p>All import meter signal calibration reports received</p> <p>Primary export meter (&gt;90% volume of total exports) signal calibration report received</p> <p>Authorized consumption per month for each use category spreadsheet received</p> <p>Customer Retail Unit Cost derivation spreadsheet received</p> <p>Variable Production Cost derivation spreadsheet received</p>	
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Audit Input	Confirmation of Input Derivation	Confirmation of DVG Assignment
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Volume from Own Sources (VOS)	<p>Supply meter profile: No supply from own sources</p> <p>Confirmed input value: 0.0 acre-feet/year</p>	<p>Confirmed DVG: N/A</p>
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VOS Master Meter Error Adjustment	<p>Adjustment Basis: No supply from own sources</p> <p>Confirmed input value: None</p>	<p>Confirmed DVG: N/A</p>
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Water Imported (WI)	<p>Import meter profile: 5 import connections to San Diego County Water Authority (includes desalinated water connection) through Venturi meters; 1 import connection to the Olivenhain Municipal Water District through a mag meter.</p> <p>WI Data Source: Totaled from all monthly volume reads</p> <p>Comments: Input derivation from supporting documents confirmed. Exclusion of non-potable volumes confirmed.</p> <p>Confirmed input value: 16,726.1 acre-feet/year</p>	<p>Percent of WI metered: 100%</p> <p>Signal calibration frequency: Semi-annually for San Diego County Water Authority meters; annually for the Olivenhain Municipal Water District meter.</p> <p>Volumetric testing frequency: None</p> <p>Volumetric testing method: N/A</p> <p>Percent of WI tested and/or calibrated: 100%</p> <p>Comments: Signal calibration testing performed annually for over 90% of the source flow by volume, but no volumetric flow testing</p> <p>Confirmed DVG: 7</p>
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WI Master Meter Error Adjustment	<p>Adjustment Basis: No adjustment made in absence of volumetric flow test data.</p>	<p>Import meter read frequency: Continuous</p> <p>Import meter read method: Automatic logging via SCADA telemetry</p>
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**2019 AWWA Water Audit Level 1 Validation Summary Notes**

<b>Audit Input</b>	<b>Confirmation of Input Derivation</b>	<b>Confirmation of DVG Assignment</b>
	<p>Comments: Data made available to protect both the selling and purchasing agencies. Data is adjusted to correct for errors when equipment malfunction is detected.</p> <p>Confirmed input value: No Value</p>	<p>Frequency of data review: Monthly</p> <p>Comments: Metered data is reviewed only monthly by the purchasing agency, and so a Data Value Grade of 6 is not supported.</p> <p>Confirmed DVG: 5</p>
<p>Water Exported (WE)</p>	<p>Export meter profile: Total of 4 metered export interconnections. Main export interconnection is with the Carlsbad Municipal Water District. Smaller volume interconnections also exist with the Olivenhain Municipal Water District, the Vista Irrigation District and the City of Escondido.</p> <p>WE Data Source: Totaled from all monthly volume reads</p> <p>Comments: Input derivation from supporting documents confirmed. Exclusion of non-potable volumes confirmed. Exclusion of Billed Metered Authorized Consumption confirmed.</p> <p>Confirmed input value: 3,035.6 acre-feet/year</p>	<p>Percent of WE metered: 100%</p> <p>Signal calibration frequency: Annually for Carlsbad Municipal Water District meter; no calibration for the Vista Irrigation District or City of Escondido exchange meters.</p> <p>Volumetric testing frequency: None</p> <p>Volumetric testing method: N/A</p> <p>Percent of WE tested and/or calibrated: 96.5%</p> <p>Comments: Signal calibration testing performed annually for over 90% of the source flow by volume, but no volumetric flow testing</p> <p>Confirmed DVG: 7</p>
<p>WE Master Meter Error Adjustment</p>	<p>Adjustment Basis: No adjustment made in absence of volumetric flow test data.</p> <p>Comments: Data made available to protect both the selling and purchasing agencies. Data is adjusted to correct for errors when equipment malfunction is detected.</p> <p>Confirmed input value: No Value</p>	<p>Export meter read frequency: Continuous</p> <p>Export meter read method: Automatic logging via SCADA telemetry</p> <p>Frequency of data review: Monthly</p> <p>Comments: Metered data is reviewed only monthly by the purchasing agency, and so a Data Value Grade of 6 is not supported.</p> <p>Confirmed DVG: 5</p>

**2019 AWWA Water Audit Level 1 Validation Summary Notes**

<b>Audit Input</b>	<b>Confirmation of Input Derivation</b>	<b>Confirmation of DVG Assignment</b>
<p>Billed Metered Authorized Consumption (BMAC)</p>	<p>Customer Meters &amp; Reads Profile:</p> <ul style="list-style-type: none"> <li>- Age profile: 95% of meters are 10 years old or less. Older meters may be up to 30 years old.</li> <li>- Reading system: Predominantly AMR with less than 10 accounts manually read due to radio coverage issues.</li> <li>- Read frequency: Monthly</li> </ul> <p>Billing Data Pro-rated? Yes, based on customer complaints</p> <p>Comments: Input derivation from supporting documents confirmed; metered data time period is adjusted to align with the audit period. Exclusion of non-potable volumes confirmed.</p> <p>Confirmed input value: 12,765.2 acre-feet/year</p>	<p>Percent of customers metered: 100%</p> <p>Small meter testing policy: Reactive and only performed due to customer complaints</p> <p>Number of small meters testing/year: Less than 3 per year</p> <p>Large meter testing policy: Reactive and only performed due to customer complaints</p> <p>Number of large meter tested/year: Less than 3 per year</p> <p>Meter replacement policy: Upon meter failure or when flagged for consumption anomalies</p> <p>Number of replacements/year: Not quantified, but known to be small</p> <p>Billing data auditing practice: Computer records exist with annual auditing conducted by utility personnel.</p> <p>Comments: Volumes are reviewed by utility personnel during each billing cycle. No proactive meter testing program is in place, and so a Data Value Grade of 6 is not supported.</p> <p>Confirmed DVG: 5</p>
<p>Billed Unmetered Authorized Consumption (BUAC)</p>	<p>Billed Unmetered Profile: One-Day permits from the utility authorize the use up to 10,000 gallons of water.</p> <p>Input Derivation: Assumes 10,000 gallons of potable water use for each One-Day permit issued. Exclusion of non-potable volumes confirmed.</p> <p>Comments: Flat-rate charge with the goal of minimizing such unmetered usage.</p> <p>Confirmed input value: 0.2 acre-foot/year</p>	<p>Policy for metering exemptions: Authorized for small-scale, single-family residence projects only. Commercial landscaping and construction water usage are metered.</p> <p>Comments: Site-specific methods not performed to obtain reliable estimates of consumption.</p> <p>Confirmed DVG: 7</p>

**2019 AWWA Water Audit Level 1 Validation Summary Notes**

Audit Input	Confirmation of Input Derivation	Confirmation of DVG Assignment
<p>Unbilled Metered Authorized Consumption (UMAC)</p>	<p>Unbilled Metered Profile: Vallecitos Water District internal consumption such as water pipeline flushing, sewer pipeline maintenance, headquarters building and water recycling plant potable water usage.                      Input Derivation: Totaled from all monthly volume reads                      Comments: Input derivation from supporting documents confirmed. Exclusion of non-potable volumes confirmed.                      Confirmed input value: 100.8 acre-feet/year</p>	<p>Policy for billing exemptions: Written policy exists regarding internal billing exemptions.                      Comments: Internal usage is audited monthly by utility personnel. Meters are not calibrated on an annual basis. Policy does not emphasize keeping such accounts to a minimum.                      Confirmed DVG: 9</p>
<p>Unbilled Unmetered Authorized Consumption (UUAC)</p>	<p>Unbilled Unmetered Profile: Vallecitos Water District potable water tank wash-out water usage.                      Input Derivation if Estimated: Consumption is quantified via formulae. Exclusion of non-potable volumes confirmed.                      Comments: No additional comments.                      Confirmed input value: 7.9 acre-foot/year</p>	<p>Default or Adjusted Default Applied: Value adjusted based on estimated flow methodology.                      Completeness of Documentation: Good records document each occurrence.                      Comments: Written policy exists regarding internal potable water usage with the intent of minimizing this type of consumption.                      Confirmed DVG: 10</p>
<p>Unauthorized Consumption (UC)</p>	<p>Default Applied? Yes                      Input Derivation if Customized: N/A                      Comments: No additional comments.                      Confirmed input value: 34.226 acre-feet/year</p>	<p>Instances and extent of UC documented: None                      Comments: Default grade applied                      Confirmed DVG: 5</p>
<p>Customer Metering Inaccuracies (CMI)</p>	<p>Input Derivation: Default value applied.                      Comments: The meter population includes a mix of new high-performing meters and dated meters with suspect accuracy.</p>	<p>Characterization of meter testing: Reactive and only performed due to customer complaints. Estimated that less than 3 meter tests are performed per year.                      Characterization of meter replacement: Upon meter failure or when flagged for consumption anomalies. Number of meter replacements each year are believed to be small.</p>



**2019 AWWA Water Audit Level 1 Validation Summary Notes**

Audit Input	Confirmation of Input Derivation	Confirmation of DVG Assignment
<p>Systematic Data Handling Errors (SDHE)</p>	<p>Confirmed input value: 32.246 acre-feet/year</p> <p>Input Derivation: Estimate based on an assumed error of 42,000 cubic feet of water per month.</p> <p>Comments: No additional comments.</p> <p>Confirmed input value: 12.0 acre-feet/year</p>	<p>Confirmed DVG: 3</p> <p>Comments: A reliable electronic recordkeeping system for meters exists. However, with no proactive meter testing program in place, a Data Value Grade of 4 is not supported.</p> <p>Confirmed DVG: 3</p> <p>Characterization of read collection &amp; billing process: Policy and procedures for new account activation in place and reviewed periodically. Oversight of billing operations reviewed monthly. Computerized billing system is in use with reports to confirm billing data and system functionality.</p> <p>Characterization of billing process and billing data auditing: Internal checks of billing data error conducted monthly. Volume attributed to errant reads, stuck meters, and other shortcomings of the billing process can only be approximated.</p> <p>Confirmed DVG: 5</p>
<p>Length of Mains</p>	<p>Input Derivation: Totaled from GIS inputs.</p> <p>Hydrant lateral length included: Yes</p> <p>Comments: Hydrant lateral lengths taken from water main to the property line.</p> <p>Confirmed input value: 379.5 miles</p>	<p>Confirmed DVG: 9</p> <p>Mapping format: Digital</p> <p>Asset management database: GIS assumed as asset management.</p> <p>Map updates &amp; field validation: Infrastructure updates added as they are constructed and as-built. However, digital database is not validated through random field verification.</p> <p>Comments: Sound written policy exists for managing water main extensions and replacements</p>
<p>Number of Active and Inactive</p>	<p>Input Derivation: Standard report run from billing system.</p> <p>Basis for database query: By meter identification number.</p>	<p>Confirmed DVG: 9</p> <p>CIS updates &amp; field validation: Meter readers detect and field verify anomalies with billing system. Total meter count between billing and meter departments generally agree.</p> <p>Estimated error of total count within: 1%</p>



**2019 AWWA Water Audit Level 1 Validation Summary Notes**

<b>Audit Input</b>	<b>Confirmation of Input Derivation</b>	<b>Confirmation of DVG Assignment</b>
Service Connections	<p>Comments: Number of connections cross-checked with GIS. A deviation of less than 200 meters currently exists between the two systems.</p> <p>Confirmed input value: 22,535</p>	<p>Comments: Written policy and auditing procedures exist for reliable management of service connection population.</p> <p>Confirmed DVG: 9</p>
Average Length of Customer Service Line	<p>Are customer meters at the curbstop? Yes</p> <p>Where are customer meters installed if not at curbstop? N/A</p> <p>Customer service line derivation: N/A</p> <p>Comments: No additional comments.</p> <p>Confirmed input value: 0.0 feet</p>	<p>Comments: Default grade applied</p> <p>Confirmed DVG: 10</p>
Average Operating Pressure	<p>Number of zones, general setup: 26 pressure zones</p> <p>Typical pressure range: 40 psi to 150 psi per policy, although some high-pressure areas can be up to 175 psi if meter type allows.</p> <p>Input derivation: Output from hydraulic model, averaged over the entire distribution system.</p> <p>Comments: Well managed, discrete pressure zones exist.</p> <p>Confirmed input value: 117.4 psi</p>	<p>Extent of static pressure data collection: From fire hydrants or testing stations taken during construction projects and to address customer complaints.</p> <p>Characterization of real-time pressure data collection: Current, full-scale SCADA system in place to monitor water distribution system and collect data, including real-time pressure readings.</p> <p>Hydraulic model in place? Calibrated?: Yes; last calibrated in 2018 against SCADA system data and manual pressure reads.</p> <p>Comments: Since procedures are not reviewed by a third party knowledgeable in the M36 methodology, a Data Value Grade of 10 is not supported.</p> <p>Confirmed DVG: 9</p>
Total Operating Cost (TOC)	<p>Input Derivation: From official financial statements</p> <p>Comments: Confirmed costs limited to water only, including engineering costs and overhead.</p>	<p>Frequency of internal auditing: Annually</p> <p>Frequency of third-party CPA auditing: Annually</p> <p>Comments: Reliable electronic, industry-standard cost accounting system in place.</p>

**2019 AWWA Water Audit Level 1 Validation Summary Notes**

Audit Input	Confirmation of Input Derivation	Confirmation of DVG Assignment
<p>Customer Retail Unit Cost (CRUC)</p>	<p>Confirmed input value: \$39,618,684 per year</p> <p>Input Derivation: Total consumptive revenue divided by billed metered consumption. Sewer Charges Volumetric? Only commercial accounts. Sewer Charges Included? No</p> <p>Comments: Water rate structure updated annually and applied consistently in billing operations except for construction meters (charged at highest tier for all usage) and agricultural accounts (charged at middle tier for all usage and eligible for discounted agricultural rate).</p>	<p>Confirmed DVG: 10</p> <p>Characterization of calculation: Weighted average composite of all CII and other customer rates.</p> <p>Comments: Since rate structure and calculations of composite rate are not reviewed by a third party knowledgeable in the M36 methodology, a Data Value Grade of 10 is not supported.</p> <p>Confirmed DVG: 9</p>
<p>Variable Production Cost (VPC)</p>	<p>Supply profile: Imported potable water supply only. Direct variable costs included: Commodity portion of purchase costs plus variable distribution costs. Secondary costs included: Secondary costs of importer assumed in purchase costs. Comments: Pertinent marginal (variable) supply costs beyond power and additional treatment are included.</p> <p>Confirmed input value: \$1,920.93</p>	<p>Characterization of calculation: Total commodity portion of imported costs less utility overhead, all divided by total potable water purchases.</p> <p>Comments: Reliable electronic, industry-standard cost accounting system in place. Data is audited by utility personnel annually; but since the data is not audited by a third party knowledgeable in the M36 methodology, a Data Value Grade of 8 is not supported.</p> <p>Confirmed DVG: 7</p>
<p>Pending Items needed to complete the validation</p>	<p align="center">None</p>	

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# Appendix F. Reduced Delta Reliance



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## Background

An urban water supplier that anticipates participating in or receiving water from a proposed project, such as a multiyear water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Sacramento-San Joaquin Delta (Delta), should provide information in their 2015 and 2020 UWMPs that can then be used in the certification of consistency process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Regulations, Title 23, §5003).

Delta Plan Policy WR P1 is one of fourteen regulatory policies in the Delta Plan. The Delta Plan is a comprehensive, long-term, legally enforceable plan guiding how federal, state, and local agencies manage the Delta's water and environmental resources. The Delta Plan was adopted in 2013 by the Delta Stewardship Council (DSC). Delta Plan Policy WR P1 identifies urban water management plans (UWMP) as the tool to demonstrate consistency with the state policy that suppliers that carry out or take part in covered actions must reduce their reliance on the Delta.

Vallecitos Water District's (District) information on its reduced reliance on the Delta is documented below and can be used in future certifications of consistency with WR P1 for potential future water supply covered actions in the Delta.

## 1 Process to Demonstrate Reduced Reliance on Delta

Consistent with Appendix C in the California Department of Water Resource's Draft UWMP Guidebook 2020 (DWR Guidebook), the District's analysis followed Steps 1 through 4 in the DWR Guidebook to document consistency with WR P1 and produce data and information covering the District's 2015 and 2020 UWMPs as noted below.

- 1) Quantify the water use efficiency supply volume
- 2) Quantify total water supplies;
- 3) Quantify water supplies that contribute to regional self-reliance; and
- 4) Demonstrate reduced reliance on water supplies from the Delta watershed.

## 2 Quantifying Total Water Supplies

To demonstrate reduced reliance on the Delta, the District compared its projected Delta water use against a baseline. The baseline, shown in Table C-1, was determined as the 2010 water demand.

### 3 Quantifying Water Supplies that Contribute to Regional Self-Reliance

To demonstrate consistency with the Delta Plan, WR P1 subsection (c)(1)(C) states that water suppliers must report in their UWMP the expected outcome for measurable improvement in regional self-reliance as a reduction in water used from the Delta watershed. To determine whether there is an increase in regional self-reliance, the baseline calculated in Table C-1 is used to compare against the water supplies listed in Table C-3 that contribute to regional self-reliance. The comparison is done over five-year periods, from 2015 through 2045, to calculate how regional self-reliance will change over time.

Table C-3 lists the sources of water supplies and volumes that contribute to regional self-reliance. As shown in the table, the District's reliance on the Delta watershed has decreased compared to the baseline as the percent of local water supplies that contribute to regional self-reliance increases. The volumes of the individual supplies that contribute to regional self-reliance can be found in Section 6 of the District's 2010, 2015, and 2020 UWMPs.

The water supplies included in Table C-3 that contribute to regional self-reliance are represent the District's verifiable supplies from recycled water and desalinated water production within the "Local and Regional Water Supply and Storage Projects" category. Imported water supplies from San Diego County Water Authority (SDCWA), and indirectly the Metropolitan Water District of Southern California (Metropolitan), may include a percentage of water from the Delta watershed, and SDCWA imported supplies are excluded from the list of supplies that contribute to regional self-reliance in the San Diego region.

### 4 Reduced Reliance on Water Supplies from the Delta Watershed

WR P1 subdivision (c)(1)(C) requires water suppliers to report on the expected outcomes for measurable reductions in water supplies from the Delta watershed. The District purchases water from SDCWA, and the only potential source of water from the Delta watershed is water imported from SDCWA and Metropolitan. Because water provided by Metropolitan to SDCWA can include supplies that comingle Delta watershed and Colorado River supplies, SDCWA had incorporated Metropolitan's forecast as a reasonable methodology to forecast the percent of Metropolitan water supply from the Delta watershed and the Colorado River, at least until Metropolitan provides the methodology approved by the Delta Stewardship Council as anticipated. Accordingly, the District presented its report of reduced reliance on the Delta watershed conservatively assuming all of SDCWA's supplies to the District include Delta watershed and Colorado River supplies. Additional information on SDCWA's methodology can be found in Appendix M of SDCWA's Draft 2020 UWMP



## Reduced Reliance Calculation

**Table C-1: Optional Calculation of Water Use Efficiency -To be completed if Water Supplier does not specifically estimate Water Use Efficiency as a supply**

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	16,308	13,348	14,839	19,480	20,232	21,008	22,481	24,722
Non-Potable Water Demands	-	-	-	1,446	1,446	1,446	2,366	2,366
Potable Service Area Demands with Water Use Efficiency Accounted For	16,308	13,348	14,839	18,034	18,786	19,562	20,115	22,355

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Population	87,728	93,897	105,741	108,371	110,484	111,370	120,813	127,195

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Per Capita Water Use (GPCD)	166	127	125	149	152	157	149	157
Change in Per Capita Water Use from Baseline (GPCD)		(39)	(41)	(17)	(14)	(9)	(17)	(9)
Estimated Water Use Efficiency Since Baseline		4,107	4,818	2,112	1,752	1,141	2,344	1,289

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

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	16,308	13,348	14,839	19,480	20,232	21,008	22,481	24,722
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline								
Service Area Water Demands without Water Use Efficiency Accounted For	16,308	13,348	14,839	19,480	20,232	21,008	22,481	24,722

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

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Use Efficiency	-	4,107	4,818	2,112	1,752	1,141	2,344	1,289
Water Recycling		-		3,500	3,500	3,500	3,500	3,500
Stormwater Capture and Use								
Advanced Water Technologies								
Conjunctive Use Projects								
Local and Regional Water Supply and Storage Projects	-				7,700	7,700	7,700	7,700
Other Programs and Projects the Contribute to Regional Self-Reliance								
Water Supplies Contributing to Regional Self-Reliance	-	4,107	4,818	5,612	12,952	12,341	13,544	12,489

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	16,308	13,348	14,839	19,480	20,232	21,008	22,481	24,722

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Supplies Contributing to Regional Self-Reliance	-	4,107	4,818	5,612	12,952	12,341	13,544	12,489
Change in Water Supplies Contributing to Regional Self-Reliance		4,107	4,818	5,612	12,952	12,341	13,544	12,489

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Percent of Water Supplies Contributing to Regional Self-Reliance	0.0%	30.8%	32.5%	28.8%	64.0%	58.7%	60.2%	50.5%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		30.8%	32.5%	28.8%	64.0%	58.7%	60.2%	50.5%



**Table C-4: Calculation of Reliance on Water Supplies from the Delta Watershed**

<b>Water Supplies from the Delta Watershed (Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
CVP/SWP Contract Supplies	16,308	9,240	10,022	13,868	7,279	8,667	8,938	12,232
Delta/Delta Tributary Diversions								
Transfers and Exchanges								
Other Water Supplies from the Delta Watershed								
<b>Total Water Supplies from the Delta Watershed</b>	<b>16,308</b>	<b>9,240</b>	<b>10,022</b>	<b>13,868</b>	<b>7,279</b>	<b>8,667</b>	<b>8,938</b>	<b>12,232</b>

<b>Service Area Water Demands without Water Use Efficiency (Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Service Area Water Demands without Water Use Efficiency Accounted For	16,308	13,348	14,839	19,480	20,232	21,008	22,481	24,722

<b>Change in Supplies from the Delta Watershed (Acre-Feet)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Water Supplies from the Delta Watershed	16,308	9,240	10,022	13,868	7,279	8,667	8,938	12,232
Change in Water Supplies from the Delta Watershed		(7,068)	(6,287)	(2,440)	(9,029)	(7,641)	(7,371)	(4,076)

<b>Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)</b>	<b>Baseline (2010)</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045 (Optional)</b>
Percent of Water Supplies from the Delta Watershed	100.0%	69.2%	67.5%	71.2%	36.0%	41.3%	39.8%	49.5%
Change in Percent of Water Supplies from the Delta Watershed		-30.8%	-32.5%	-28.8%	-64.0%	-58.7%	-60.2%	-50.5%



# Appendix G. VWD Water Shortage Contingency Plan



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# Draft Water Shortage Contingency Plan

Vallecitos Water District

*San Marcos, California*  
April 26, 2021



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# 1 Introduction

This Water Shortage Contingency Plan (WSCP) examines Vallecitos Water District's (VWD) contingency plan in the event of a declared water emergency or enactment of more stringent restrictions on water use.

The California Urban Water Management Planning Act (Act) requires water agencies to incorporate a water shortage contingency plan (WSCP) focusing on the allocation of water supplies and the management of water consumption during periods of shortage due to extended drought or a water emergency. This section describes VWD's policies and ordinances to deal with water shortages. VWD purchases its entire potable water supply from the San Diego County Water Authority (SDCWA). While the majority of the supply is from the SDCWA potable water aqueduct system, additional supply sources include water from the Olivenhain Municipal Water District's David C. McCollom Water Treatment Plant as well as a connection to the Claude "Bud" Lewis Desalination Plant in Carlsbad, California. VWD's WSCP illustrates specific water supply conditions that trigger the activation of voluntary and mandatory rationing efforts and explains the ability to meet projected short-term demands during extended dry periods. The WSCP emphasizes some of the significant proactive measures that enhance VWD's ability to respond to interruptions in water supply should a natural or man-made disaster occur. The contingency plan outlines the planned response to failures in the infrastructure of the water system in the event of an earthquake, extensive power outage, or other catastrophic event. Finally, this section provides details about the prohibitions and penalties against specific water uses during water shortages and evaluates potential impacts to the water funds should water sales decrease because of supply shortages.

In 2018, two long-term conservation bills, Senate Bill (SB) 606 and Assembly Bill (AB) 1668, were signed into law by Governor Jerry Brown. The two bills amend portions of the California Water Code (CWC) including §10632, which is related to water shortage contingency planning. Among other changes, the amended CWC requires agencies to incorporate an annual water supply and demand assessment under its Urban Water Management Plan (UWMP). It also specifies the adoption of six standard water shortage levels. This WSCP discusses VWD's compliance with new regulations, as outlined in §10632 (a)(2) and §10632.1 of the CWC, and steps taken by VWD's regional supply wholesaler, SDCWA, to address an extended drought and water emergency.

# 2 Annual Water Supply and Demand Assessment

The new CWC §10632(a)(2) requires that urban water suppliers conduct an annual water supply and demand assessment (Annual Assessment). This chapter describes the procedures used to 1) conduct the Annual Assessment, and 2) prepare and submit an Annual Assessment Report to the state. In addition, this chapter outlines key inputs to conduct the Annual Assessment, the decision-making process for determining water



supply reliability, and the ability/flexibility for VWD to use shortage response actions not included in the WSCP as applicable.

The VWD Board of Directors, in accordance with the provisions of the CWC, will determine if a supply shortage exists and declare any foreseen water shortage level based on the results of the Annual Assessment, which will then be included in the Annual Assessment Report submitted to the state no later than July 1, beginning in 2022. The evaluation is conducted to determine if a shortage declaration is needed, and at what level. The Annual Assessment Report will document any anticipated shortage, any triggered shortage response actions, associated compliance and enforcement actions, and communication actions. More information on shortage response actions is included in Section 4, Shortage Response Actions. Reasonable alternative actions can be used to address identified water shortages, provided descriptions of alternative actions are submitted with the Annual Assessment Report.

## 2.1 Decision Making Process

Each year VWD will use the following steps to determine, and subsequently report to the state, its water supply reliability.

- SDCWA announces member agency allocation determination for current year and any carryover or emergency storage supplies.
- VWD will determine available local supplies, exclusive of imported water supply, and also total available supplies.
- VWD will review known infrastructure constraints (including water quality conditions limiting local sources).
- VWD reviews and estimates current and projected water demands.
- VWD compares supply and demand and makes a determination of the water supply reliability for the current year and one dry year.
- VWD prepares and submits Annual Assessment Report to the state.

Evaluation criteria for VWD's supplies, demands, and water shortage levels will include SDCWA's determination on regional supplies for its member agencies, local groundwater and surface water availability, storage, infrastructure constraints, and recent water demand trends.

## 2.2 Current and Projected Demands

The Annual Assessment will use VWD's recent demand data and projections (adjusted by previous year active consumption) which considers demand, weather, population growth, and other influencing factors for the current year and following years.

## 2.3 Available and Projected Water Supply

VWD will evaluate the current year available supply and one dry year available supply in its Annual Assessment. The available water supply evaluation will consider hydrological and regulatory conditions. Available supply from each water source will consider

emergency storage allocations and imported and purchased water supplies as determined by SDCWA. SDCWA considers member agencies' local water supplies first before determining allocations of imported water to each member agency.

## 2.4 Infrastructure Constraints

VWD's existing water supply infrastructure includes pipelines, storage tanks, and pump stations. VWD will evaluate existing water supply and capacities and any constraints for the current year and for one dry year. Infrastructure constraints may consider supply capabilities in the current year, such as shut-downs due to maintenance, construction impacts, and water quality impacts. Once constraints have been identified, VWD will determine whether the total quantified water supply should be adjusted to account for these identified constraints.

## 3 Water Shortage Levels

All water agencies are required to administer a strategy – an adopted ordinance or terms of service – to meet water waste prevention. For compliance, VWD had adopted Ordinances No. 162 and No. 195 which established regulations to be implemented during times of declared water shortages or emergencies to conserve water. The VWD WSCP, developed as part of the 2020 UWMP process, redefined and updated the reduction goals to establish six levels of drought response. Table 1 presents the shortage levels and corresponding reductions to be implemented in times of shortage or emergency, with increasing restriction on water use in response to worsening drought or emergency conditions and decreasing available supplies.:

**Table 1. Water Shortage Levels**

Water Shortage Level	Percent Reduction
Stage 1: Standard Operating Condition	10
Stage 2: Drought Watch Condition	20
Stage 3: Board Declared Emergency Action	30
Stage 4: Drought Critical Condition	40
Stage 5: State and Board Declared Extreme Emergency Action	50
Stage 6: State and Board Declared Extreme Emergency Action	> 50

## 4 Shortage Response Actions

Shortage response actions included in this WSCP are a mix of prohibitions on end use, consumption reduction methods, supply augmentation, and operational change measures. Table 2 provides a summary of voluntary and mandatory prohibitions and consumption reduction methods that are implemented within the VWD service area to meet mandated water use restrictions. Customers can select the specific water conservation measures/actions that are most appropriate for their setting; however, customers must

abide by water waste prohibitions, water use reductions are mandatory, and monetary penalties may be levied on customers who do not meet reduction goals.

**Table 2. Restrictions and Prohibitions on End Users**

Stage	Restrictions and Prohibitions on End Users	Penalty, Charge, or Other Enforcement?
2-6	Landscape - Restrict or prohibit runoff from landscape irrigation	Yes
2-6	Landscape - Limit landscape irrigation to specific times	Yes
2-6	Landscape - Limit landscape irrigation to specific days	Yes
2-6	Landscape - Prohibit certain types of landscape irrigation	Yes
2-6	Landscape - Prohibit irrigation 48 hours after rain	Yes
2-6	Landscape - Other landscape restriction or prohibition	Yes
2-6	CII - Lodging establishment must offer opt out of linen service	Yes
1-6	CII - Restaurants may only serve water upon request	Yes
2-6	Water Features - Restrict water use for decorative water features, such as fountains	Yes
2-6	Other water feature or swimming pool restriction	Yes
2-6	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Yes
2-6	Other - Require automatic shut of hoses	Yes
2-6	Other - Prohibit use of potable water for construction and dust control	Yes
2-6	Other - Prohibit use of potable water for washing hard surfaces	Yes
2-6	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Yes

## 4.1 Drought Response Plan

VWD's established drought levels are explained in the following sections. Table 1 provides a summary of VWD's drought response levels, which align with the SDCWA model drought response plan.

- **Level 1 – Drought Watch:** With this alert, VWD will increase public outreach and take action to encourage voluntary conservation practices.
- **Level 2 – Drought Alert:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 20 percent. These practices include limiting landscape irrigation and repairing leaks within 5 days of notification.
- **Level 3 – Drought Alert:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 30 percent. These practices include additional limitations on landscape irrigation and repairing leaks within 4 days of notification.
- **Level 4 – Drought Critical:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 40 percent. Additional conservation practices include the prohibition of filling pools or fountains and washing

vehicles and require repair of leaks within 72 hours of notification. With minor exceptions, no new potable water annexations will be allowed during a Level 4 Drought condition.

- **Level 5 – Drought Critical:** With this alert, VWD will implement mandatory conservation practices to reduce water use by up to 50 percent. Additional conservation practices include prohibition on outdoor landscape irrigation, the prohibition of filling pools or fountains and washing vehicles and require repair of leaks within 48 hours of notification. With minor exceptions, no new potable water services will be allowed during a Level 5 drought condition.
- **Level 6 – Drought Emergency:** With this alert, VWD will implement mandatory conservation practices to reduce water use above 50 percent for VWD to have adequate supplies to meet anticipated demands. Additional conservation practices include prohibited landscape irrigation, excluding commercial growers or nurseries, and the repair of leaks within 24 hours of notification.

## 5 Determining Water Shortage Reductions

Currently, VWD is using the State Water Resources Control Board (SWRCB) emergency regulation method to measure and determine actual water savings made from implementing the WSCP. The SWRCB uses 2013 water production data and requires water agencies to report monthly water production as compared to 2013. VWD has maintained a 25 percent reduction as compared to 2013.

Table 3 and the section below includes consumption reduction methods implemented by VWD.

- **Expand Public Information Campaign** – enlarge media campaign; create bill envelope snipes and inserts with conservation information; articles submitted to local newspapers; conduct water efficiency workshops for different customer sectors.
- **Offer Water Use Surveys** – actively reach out to high water users to offer water use surveys.
- **Provide Rebates or Giveaways of Plumbing Fixtures and Devices** – as offered by the Metropolitan Water District of Southern California, issue free rain barrels.
- **Provide Rebates for Landscape Irrigation Efficiency** – as offered by the Metropolitan Water District of Southern California.
- **Increase Water Waste Patrols** – implement a Water Waste Patrols.
- **Other** – Implement High User Response and Letters (HURL) Program targeting highest water users.

**Table 3. Consumption Reduction Methods**

Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference
1-6	Expand Public Information Campaign	As part of ordinances, but also to meet Governor's mandate.
1-6	Offer Water Use Surveys	Available at all times.
1-6	Provide Rebates on Plumbing Fixtures and Devices	Available at all times.
1-6	Provide Rebates for Landscape Irrigation Efficiency	Available at all times.
2-6	Increase Water Waste Patrols	Implemented after Governor's mandate.
4-6	Moratorium or Net Zero Demand Increase on Annexations or New Connections	Would be invoked at Level 4.
2-6	Implement or Modify Drought Rate Structure or Surcharge	Is available if District fails to meet reduction mandates.
2-6	Other	HURL Program.

## 6 Compliance and Enforcement

The VWD takes progressive action when responding to water waste prohibitions. Violators are typically contacted first by phone and given an opportunity to voluntarily comply. Ongoing water wasters are subsequently sent a Notice of Violation, followed by a fine. Administrative fines can be levied for each violation of a provision of the ordinances as follows:

- First violation: \$100 fine
- Second violation: \$200 fine if it occurred within 1 year of the prior violation.
- Each additional violation: \$500 fine if it occurred within 1 year of the prior violation.
- Enforcement for further violations increases in severity and may include installation of a flow-restricting device in the meter, imprisonment, a fine up to \$1,000, and/or discontinuing service to the property where the violation occurred.

Additionally, VWD will initiate drought patrols, if enacted by the Governor's Executive Order.

## 7 Revenue and Expenditure Impacts

Implementation of the WSCP will reduce revenues from water sales, but not from fixed meter charges. VWD sets fixed meter charges, called Ready-To-Serve charges, to recover approximately 80 percent of VWD's fixed costs (repairs, replacement, maintenance, meter reading, billing, regulatory, safety, general and administrative, etc.). Reduced sales do not impact revenues from Ready-To-Serve charges. Fiscal impact from implementing WSCP is limited to water sales revenue.

## 7.1 Drought Rate Structures and Surcharges

VWD's rate structure includes higher per unit (1 unit = 748 gallons) charges in tiers of higher use to encourage conservation. VWD's may implement a drought rate structure when a Level 2 drought alert is declared. The drought rate structure has the ability to determine whether to impose additional tiers and higher rates in the higher tiers, escalating in correlation with the percentage of cutback from mandated supply reduction (i.e., the higher the supply reduction, the higher the rate.)

## 7.2 Use of Financial Reserves

VWD budgets water sales assuming compliance with any drought or supply restrictions whether encouraged through voluntary conservation or mandate. Funding for replacement reserves is planned for ceiling of those reserves and may be used for revenue short falls from conservation beyond the levels budgeted. Reserves that surpass favorable budget variances are transferred to rate stabilization funds.

## 7.3 Other Measures

During the budget and/or rate setting process, a revenue requirement is determined, assuming conservation targets are achieved, and reserve levels are at their highest. Rates are recommended to achieve that revenue requirement; however, not before cost cutting measures and capital deferrals are considered to reduce the revenue requirement.

# 8 Catastrophic Supply Interruption Planning

A catastrophic water shortage occurs when a disaster, such as earthquake, results in insufficient available water to meet the region's needs or eliminates access to imported water supplies. For increased reliability, VWD subscribes to SDCWA's Integrated Contingency Plan (ICP) and Emergency Storage Program (ESP). Both were developed to protect public health and safety and to potentially limit economic damage that could occur from a severe shortage of water supplies.

## 8.1 Integrated Contingency Plan

SDCWA's ICP provides information necessary to respond to an emergency that causes severe damage to SDCWA's water distribution system or impedes SDCWA's ability to provide reliable service to its member agencies. The ICP describes the situations and incidents that will trigger the activation of SDCWA's ICP and Emergency Operations Center. It also provides direction and strategies for responding to a crisis. SDCWA's ICP includes:

- Authorities, policies, and procedures associated with emergency response activities.
- Emergency Operations Center activities, including activation and deactivation guidelines.
- Multi-agency and multi-jurisdictional coordination, particularly between SDCWA, its member agencies, and Metropolitan Water District in accordance with Standardized

Emergency Management System and National Incident Management System guidelines.

- Incident Command System management and organization and emergency staffing required to assist in mitigating any significant emergency or disaster.
- Mutual Aid Agreement and covenants that outline the terms and conditions under which mutual aid assistance will be provided.
- Hazard-specific action plans and Incident Command System position checklists.

In addition, the plan uses a step-by-step approach to emergency response planning by providing tools such as resource and information lists, personnel rosters, pertinent policies and procedures, and reference materials.

Separate from the ICP, the District has a direct connection to the Claude “Bud” Lewis Desalination Plant in Carlsbad.

## 8.2 SDCWA Water Shortage and Drought Response Plan

SDCWA, in conjunction with its member agencies, developed a Water Shortage and Drought Response Plan (WSDRP) in 2006, which was subsequently updated in 2012, to guide water shortage and drought management activities if the region faces supply shortages due to drought conditions. The goal of the WSDRP is to provide a balanced, flexible, systematic approach to identifying regional actions necessary to reduce the impacts that occur from water shortages. The WSDRP includes three stages: voluntary supply management, supply enhancement, and mandatory cutbacks. During each of the stages, SDCWA may implement voluntary or mandatory drought contingency measures to prepare and respond to drought conditions. The 2012 update to the WSDRP revised the regional supply allocation methodology for guiding decisions when normal demands cannot be met.

The WSDRP also includes provisions whereby SDCWA would implement and utilize supplies governed by the Emergency Storage Project (ESP) during a prolonged drought or other water shortage situation where imported and local supplies do not meet 75 percent of SDCWA’s member agencies urban demands. The ESP is a system of reservoirs, pipelines, and other facilities designed to store and move water around the County of San Diego in the event of a natural disaster. A natural disaster, such as an earthquake, could potentially disrupt water service in San Diego, especially because the pipelines that carry imported water to San Diego County from Metropolitan cross several major fault lines on their way to San Diego County. The ESP was completed in late 2014, providing 90,100 acre feet of stored water for emergency purposes to meet the region’s needs through at least 2045.

## 9 Communication Protocol

VWD, along with SDCWA and other member agencies, regularly engage in communication and outreach with the public on water supplies, water efficiency, and water conservation. Updated communication plans are necessary should supply conditions change as VWD is required to implement stages of the WSCP.



VWD communicates and coordinates with SDCWA during normal water supply scenarios and will continue to coordinate with SDCWA during drought conditions or times of limited water supply allocations to provide consistent communication and messaging to its customers. The communication protocol will align with strategies developed by SDCWA for each water shortage level, as presented in the SDCWA WSCP.

## 9.1 Strategies for Communication

During normal water supply conditions, VWD will continue to promote water conservation tactics and water efficiency programs using standard ongoing communication protocols. When water shortage levels are triggered, VWD will increase communication to reduce water use using methods that include measures within VWD's conservation program and as outlined in Table 4.



**Table 4. Communication Outline**

Water Shortage Level	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
Demand Reduction Target	Up to 10%	Up to 20%	Up to 30%	Up to 40%	Up to 50%	Over 50%
District Communications	Update messaging to reflect conditions, district response, and needed actions from the public; coordinate with other agencies as appropriate	Update campaign and messaging to generate immediate actions/behaviors by public; coordinate with other agencies as appropriate	Update campaign and messages to raise awareness for more severe water-saving actions/behaviors by public; coordinate with other agencies as appropriate	Update campaign and messages to raise awareness for more severe and higher level water-saving actions/behaviors by public; coordinate with other agencies as appropriate	Update campaign and messages to reflect extreme or emergency condition and likely focus water use on health/safety need; coordinate with other agencies as appropriate	Update campaign and messages to reflect extreme or emergency condition and likely focus water use on health/safety need; coordinate with other agencies as appropriate
		Include increased conservation messaging on website and in standard outreach efforts.	Update elected officials, other key civic and business leaders of shortage	Conduct specialized outreach to reduce discretionary outdoor water use while minimizing landscape damage.	Promote available water assistance resources for vulnerable populations; specialized outreach to affected industries	Promote available water assistance resources for vulnerable populations; specialized outreach to affected industries
	Promote available rebates, classes, and workshops	Actively promote available rebates, classes, and workshops	Actively promote available rebates, classes, and workshops	Actively promote available rebates, classes, and workshops	Actively promote available rebates, classes, and workshops	Actively promote available rebates, classes, and workshops
		Targeted outreach to high water users	Outreach to key homeowner association building managers and landscape companies about restrictions and need for increased conservation	Specialized outreach and assistance to homeowners, landscape professionals, large-scale water users and high water users	Consider alternate emergency homepage	Implement emergency homepage
		Targeted outreach to specific customer classes	Targeted outreach to specific customer classes	Targeted outreach to specific customer classes	Targeted outreach to specific customer classes	Targeted outreach to specific customer classes

## 10 Legal Authorities

VWD has the legal authority to implement and enforce its WSCP. California Constitution Article X, Section 2 and Water Code Section 100 provides that water must be put to beneficial use, the waste or unreasonable use or unreasonable method of use of water shall be prevented, and the conservation of water is to be exercised with a view of the reasonable and beneficial use thereof in the interest of the people and the public welfare. Sections of Water Code Chapter 3 commencing with Section 350 of Division 1, provide the authority for the governing body of a water agency to declare a water shortage and to adopt and enforce water conservation restrictions. (Wat. Code §§ 350-359, 375-378.0.) If necessary, VWD shall declare a water shortage emergency in accordance with Water Code Chapter 3 of Division 1. Once having declared a water shortage, VWD is provided with broad powers to implement and enforce regulations and restrictions for managing a water shortage.

## 11 Monitoring and Reporting

VWD monitors how effective the combination of shortage response actions in each water shortage level through metered customer demand data. VWD's water supplies are metered prior to entering the distribution system and at individual customer connections. VWD will compare meter data with water use in prior months and during non-drought years to determine specific percentage goals for water consumption associated with the drought response levels have been achieved. If the goals are not being met, VWD may choose to implement additional shortage response actions. VWD also reports total monthly production and water use to the SWRCB.

## 12 WSCP Refinement Procedures

The WSCP will be re-evaluated at least every five years in coordination with the urban water management plan update, but the frequency of the re-evaluations could increase based on the needs of VWD. Re-evaluations will be based on lessons learned, new statutory requirements, continued local supply development, or other factors.

## 13 Special Water Feature Distinction

This WSCP evaluates decorative and recreational water features separately from pools or spas. However, VWD does not currently serve recycled water for use in recreational or decorative water features.

## 14 Plan Adoption, Submittal, and Availability

A public hearing, conducted by the VWD, was held on **XXX XX, 2021**, as a video conference. Members of the public were able to participate via a webinar link or telephone connection to listen and/or view the meeting proceedings and provide public comments and input on the draft WSCP. Following adoption of the WSCP, VWD will submit the plan to DWR and, no later than 30 days after filing the WSCP, VWD will make the WSCP available to the public.



# Appendix H. Adoption Resolution and Public Comments

*Appendix to be included in Final UWMP.*



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