Kennedy Jenks

300 N. Lake Avenue, Suite 1020
Pasadena, California 91101
626-568-4300

2020 Urban Water Management Plan

7 September 2023

Prepared for

Rosamond Community Services District
3179 35th Street West
Rosamond, California 93560

KJ Project No. 2144513*00

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Section 1: Introduction

1.1 Overview

This report presents the 2020 Urban Water Management Plan (UWMP) for Rosamond Community Services District (RCSD or District). This section describes the purpose of the 2020 UWMP, some background of the District, and its service area characteristics.

1.2 Purpose

An Urban Water Management Plan (UWMP) is a planning tool that generally guides the actions of water management agencies. It provides managers and the public with a broad perspective on a number of water supply issues. It is not a substitute for project-specific planning documents, nor was it intended to be when mandated by the State Legislature.

The intent of this Plan is to provide the Department of Water Resources (DWR) and the public with information on present and future water sources and demands and to provide an assessment of RCSD's water needs. Specifically, the 2020 UWMP must provide water supply planning for a 20-year planning period in 5-year increments, identify and quantify adequate water supplies for existing and future demands during normal, dry and drought years, and assure efficient use of urban water supplies. This 2020 UWMP addresses all Water Code requirements for such a plan as shown in the completed DWR UWMP Checklist provided in Appendix A.

This Plan is a management tool, providing a framework for action, but not functioning as a detailed project development or action. It is important that this Plan be viewed as a long-term, general planning document, rather than as an exact blueprint for supply and demand management. Water management in California is not a matter of certainty, and planning projections may change in response to a number of factors. It is an effort to generally answer a series of planning questions including:

- What are the potential sources of supply and what is the reasonable probable yield from them?
- What is the probable demand, given a reasonable set of assumptions about growth and implementation of good water management practices?
- How well do supply and demand figures match up, assuming that the various probable supplies will be pursued by the implementing agency?

Using these "framework" questions and resulting answers, the implementing agency will pursue feasible and cost-effective options and opportunities to meet demands.

The California Urban Water Management Planning Act (Act) requires preparation of a plan that:

- Accomplishes water supply planning over a 20-year period in five-year increments (the District is going beyond the requirements of the Act by developing a plan which spans 25 years.)
- Identifies and quantifies adequate water supplies, including recycled water, for existing and future demands, in normal, single-dry, and multiple-dry years.
- Implements conservation and efficient use of urban water supplies.

State legislation, Senate Bill 7 of Special Extended Session 7 (SBX7-7) was signed into law in November 2009, which calls for progress towards a 20 percent reduction in per capita water use statewide by 2020. The legislation mandated each urban retail supplier develop and report an interim 2015 water use target, their baseline daily per capita use and 2020 compliance daily per capita use, along with the basis for determining those estimates. This UWMP reports on the District's final progress in meeting the SBX7-7 targets.

In short, the Plan answers the question: Will there be enough water for the area served by the District in future years, and what mix of programs should be explored for making this water available?

1.3 Structure and Organization of the Plan

The following information is included in this report and is discussed in individual sections below:

Section 1 – Introduction: This section provides a brief introduction of the UWMP, describes the planning process for this UWMP, and summarizes the key elements of this UWMP.

Section 2 – Water Demands: This section describes the urban water system demands. It quantifies the current water system demand by category and projects them over the planning horizon of the 2020 UWMP.

Section 3 – SBx7-7 Baseline and Targets: This section describes the baseline water use, urban water use targets and achievement of 2020 target compliance.

Section 4 – Water Resources: This section describes and quantifies the current and projected sources of water available to RCSD.

Section 5 – Recycled Water and Reuse: This section includes description of water reuse planning by RCSD.

Section 6 – Reliability Planning: This section describes the reliability of RCSD's water supply and provides a 20-year reliability projection. This description is provided for normal, single dry years, and multiple dry years.

Section 7 – Demand Management Measures: RCSD's efforts to promote conservation and to reduce demand on water supply is detailed in this section, which also specifically addresses several demand management measures.

Section 8 – Seismic Risk Assessment: RCSD's seismic risk analysis assessing the vulnerability of its water systems and plans to mitigate those vulnerabilities are addressed in this section.

Appendix A contains a checklist documenting how this UWMP meets the requirements of the Urban Water Management Planning Act and SBX7-7. Starting with the 2015 UWMP, urban water suppliers are required to report and submit information in standardized tables developed by the DWR. These standardized tables are provided as Appendix B of this document.

1.4 Plan Preparation

The District provides potable water services to over 5,000 connections per year and supplies over 2,000 acre-feet per year (AFY). Table 1-1, Table 1-2, and Table 1-3 provide background information as required by DWR.

Table 1-1: DWR Retail Only Public Water Systems (DWR Table 2-1)

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
1510018	Rosamond Community Services District	5,191	2,229

Notes:

Units in AF

Table 1-2: DWR Plan Identification (DWR Table 2-2)

Select Only One	Type of Plan	Name of RUWMP or Regional Alliance if applicable
X	Individual UWMP	
	Water Supplier is also a member of a RUWMP	
	Water Supplier is also a member of a Regional Alliance	
	RUWMP	

Table 1-3: DWR Supplier Identification (DWR Table 2-3)

Select One	DWR Supplier
	Supplier is a wholesaler
X	Supplier is a retailer
Fiscal or Calendar Year (select one)	
X	UWMP Tables are in calendar years
	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP	
Unit	AF

1.4.1 Coordination and Outreach

RCSD notified Antelope Valley-East Kern Water Agency (AVEK), the City of Palmdale, City of Lancaster, Los Angeles County, and Kern County in the preparation of this UWMP, as required by DWR. This is shown below in Table 1-4 and Table 1-5.

Table 1-4: DWR Retail Water Supplier Information Exchange (DWR Table 2-4)

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)***
Antelope Valley-East Kern Water Agency (AVEK)

Table 1-5: DWR Retail: Notification to Cities and Counties (DWR Table 10-1)

City Name	60 Day Notice	Notice of Public Hearing
City of Palmdale	X	X
City of Lancaster	X	X
County Name	**60 Day Notice**	**Notice of Public Hearing**
Los Angeles County	X	X
Kern County	X	X

Outreach materials are included in Appendix C.

1.4.2 Plan Availability

In accordance with CWC Section 10621, 10644(a)(1)-(2), and 10635(c), the UWMP was submitted to:

- California DWR (submitted April 2022)
- California State Library (submitted September 2023)
- AVEK, City of Palmdale, and City of Lancaster (submitted April 2022)
- Los Angeles County and Kern County (submitted April 2022)

The UWMP and subsequent amendments will be submitted to DWR electronically.

Additionally, the UWMP was made available on RCSD's website for public review (https://www.rosamondcsd.com/departments/engineering-planning).

1.5 System Description

1.5.1 Service Area Physical Description (10631(a))

The District is located approximately 90-miles north of Los Angeles in Antelope Valley and 17-miles to the west of Edwards Air Force Base as shown below on Figure 1-1. The District was formed in 1966 under the Community Services District Law, Division 3, 61000 of Title 6 of the Government Code of the State of California. RCSD provides water, sewer, lighting service, and public park maintenance services to residential, commercial, industrial, and agricultural customers, and for environmental and fire protection uses. RCSD's service area boundary encompasses approximately 31 square miles of unincorporated residential, industrial, and undeveloped land in Kern County. The majority of the land located within the RCSD's service area is undeveloped. The developed property is centered around central Rosamond, with additional developed areas in the Tropico Hills.

Figure 1-1: Antelope Valley Vicinity Map

The District's water system boundary is shown below on Figure 1-2.

Figure 1-2: RCSD's Water System Boundary

1.5.2 Population, Demographics, and Socioeconomics (10631(a))

1.5.2.1 Population Projections

The sources summarized in Table 1-6 were analyzed to determine an appropriate annual growth rate for the population served by RCSD.

Table 1-6: Population Data Summary

Source/Date	Annual Growth Rate	Area
RCSD Urban Water Management Plan, 2015	0.40%	RCSD Service Area
Rosamond Specific Plan, 2008	5.0%	Rosamond
Dept. of Finance Population Projections, 2020	0.87%	Kern County
Kern County General Plan Housing Element Update, 2016	2.3%	Kern County

Since 2015, population growth within the RCSD service area has been observed to fall between the Department of Finance's projected annual growth rate for Kern County and the annual growth rate reported in the Kern County General Plan Housing Element update. The average of the two growth rates was calculated as 1.6% annually. For future growth projections, the 1.6%

annual growth rate was applied to RCSD's 2020 baseline service area population, which was calculated using the DWR Population Tool. The outputs from the DWR Population Tool are included in Appendix C. Population projections through 2045 are reported in Table 1-7.

Table 1-7: Population – Current and Projected (DWR Table 3-1)

2020	2025	2030	2035	2040	2045
18,372	19,890	21,532	23,311	25,237	27,321

Notes:

2020 population determined using the DWR population tool and projected through 2045 based on a 1.6% annual growth rate.

1.5.2.2 Demographics and Socioeconomics

The following information has been taken from the US Census Bureau's American Community Surveys (ACS) from 2019 and 2010.

Between 2010 and 2019, the total population of Rosamond increased by approximately 22%, most likely influenced by Rosamond's location within the Antelope Valley and the Valley's proximity to Los Angeles. During the same period, Kern County observed approximately 9% growth. From 2010 to 2019, the 25-34 year age group experienced the largest increase in share of Rosamond's population, growing from 11.8% to 18.4%. Conversely, the 45-54 year age group declined as percent of the Rosamond population, from 16.2% to 11%. In the same timeframe, the share of Hispanic population in Rosamond increased from 37.7% to 40.9%, and the share of Non-Hispanic population in Rosamond decreased from 62.3% to 59.1%.

Between 2010 and 2019, the total number of households in Rosamond increased by about 15%, compared to an increase of 0.4% across all of Kern County. The average household size in Rosamond increased by approximately 3%, whereas the average household size in Kern County increased by approximately 7.1%.

The housing stock in Rosamond primarily of single-family detached homes. The full breakdown of housing types in Rosamond is shown in Table 1-8.

Table 1-8: Rosamond Housing Types

	Number of Units	Percent of Housing Stock
1-unit, detached	4,798	63.3%
1-unit, attached	111	1.5%
2 units	127	1.7%
3 or 4 units	262	3.5%
5 to 9 units	277	3.7%
10 to 19 units	21	0.3%
20 or more unites	106	1.4%
Mobile home	1,872	24.7%

The majority of Rosamond's housing stock predates 1999, as shown in Table 1-9.

Table 1-9: Rosamond Housing Stock by Age

Housing Age	Percent of Housing Stock
Built 2014 or later	3.7%
Built 2010 to 2013	0.4%
Built 2000 to 2009	20.6%
Built 1990 to 1999	37.1%
Built 1980 to 1989	18.3%
Built 1970 to 1979	9.4%
Built 1960 to 1969	2.8%
Built 1950 to 1959	3.4%
Built 1940 to 1949	2.7%
Built 1939 or earlier	1.5%

The median household income in Rosamond was estimated by the US Census ACS as $61,807 in 2019. This is higher than the estimated median household income of Kern County ($53,350). Approximately 31% of Rosamond households have an annual income of $100,000 or more. Approximately 17.3% of Rosamond's population is below the poverty line.

A breakdown of the Rosamond workforce by industry sector is shown in Table 1-10.

Table 1-10: Rosamond Workforce by Industry

Industry Sector	Percent of Workforce
Agriculture, forestry, fishing and hunting, and mining	2.7%
Construction	10.4%
Manufacturing	12.6%
Wholesale trade	1.1%
Retail trade	9.6%
Transportation and warehousing, and utilities	4.7%
Information	0.6%
Finance and insurance, and real estate and rental and leasing	2.9%
Professional, scientific, and management, and administrative and waste management services	9.3%
Educational services, and health care and social assistance	17.0%
Arts, entertainment, and recreation, and accommodation and food services	9.0%
Other services, except public administration	5.5%
Public administration	14.6%

1.6 Land Uses in the Service Area (10631(a))

Historically, the County's land use has been focused on agriculture. However, with the population growth, the County has started to focus on residential, commercial, and industrial

land uses. Additionally, it has started to promote higher-density residential development, especially in more urbanized areas of the County, to ensure adequate public services. While RCSD is located in Kern County, the service area is closer to the more urbanized areas of Lancaster and Palmdale in Los Angeles County; Rosamond is likely to continue to face urbanization more like Los Angele County than the agricultural influences of Kern County. Thus, long-term future development in RCSD is expected to be primarily single family residential.

1.7 Climate (10631(a))

Comprising a southwestern portion of the Mojave Desert, Antelope Valley ranges in elevation from approximately 2,300 feet to 3,500 feet above sea level. Vegetation native to the Antelope Valley is typical of the high desert and includes Joshua trees, saltbush, mesquite, sagebrush, and creosote bush. The climate is characterized by hot summer days, cool summer nights, cool winter days and nights. As shown in Table 1-11, mean monthly summer temperatures range from 52°F to 99°F, and mean monthly winter temperatures range from 29°F to 65°F. The growing season is primarily from April to October. Average precipitation over the past five years ranges from approximately 3.5 inches to 7 inches annually.

Table 1-11: Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Average Rainfall (in)	0.94	0.80	1.17	0.03	0.09	0.00	0.01	0.02	0.04	0.01	0.38	0.88	**4.4 in**
Average Minimum Temperature (°F)	31.7	32.0	36.8	43.5	48.9	55.9	62.0	61.6	52.6	42.0	33.7	29.0	**44.2°F**
Average Maximum Temperature (°F)	60.8	64.6	67.1	76.1	81.9	93.1	98.5	98.0	93.0	82.6	70.6	59.6	**78.8°F**
Average ET (in)	2.21	3.17	4.63	6.72	8.18	9.42	10.1	9.21	6.75	4.82	3.07	2.19	**70.5 in**

Notes:

Data from California Irrigation Management Information System (CIMIS), Palmdale Station, from January 1, 2016 through December 31, 2020.
ET - Evapotranspiration

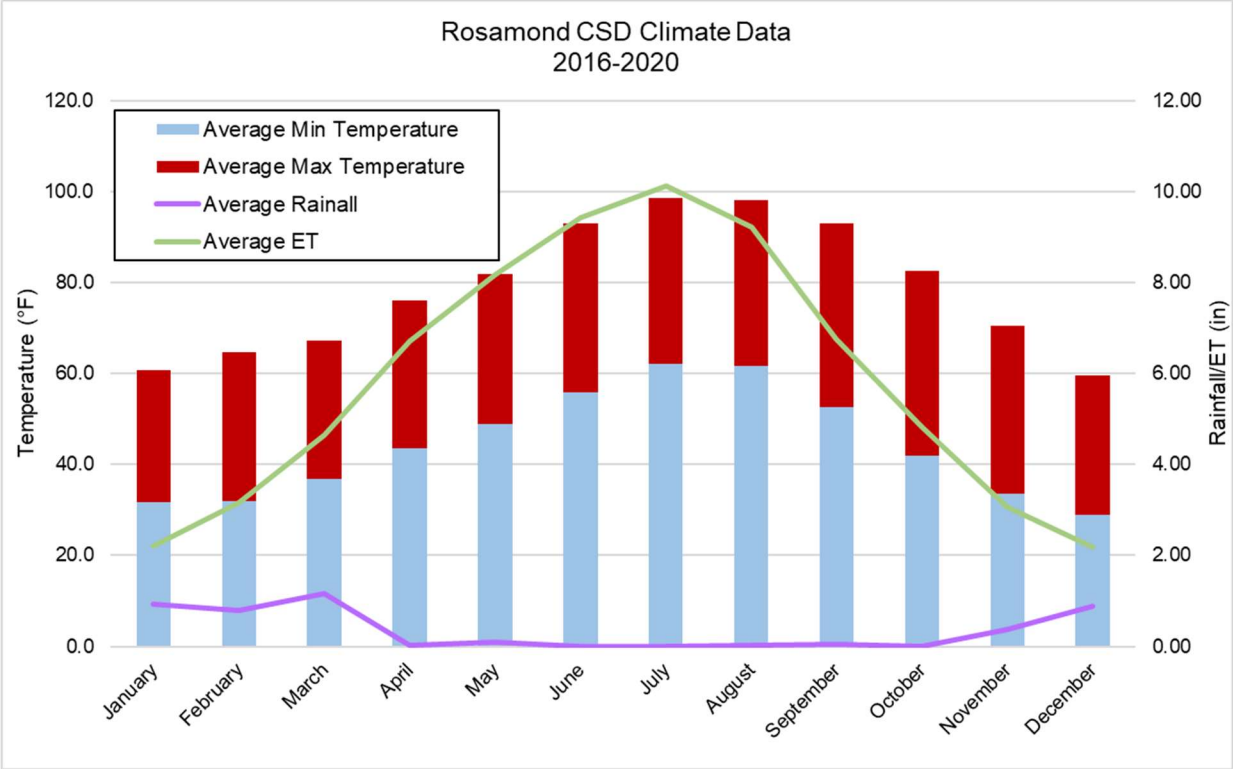

Figure 1-3: Climate Data

1.8 Potential Effects of Climate Change

In the 2013 update of the *DWR California Water Plan*, the implications of future climate conditions are evaluated. These changing hydrological conditions could affect future planning efforts, which are typically based on historic conditions. The *California Water Plan* identifies the following probable impacts due to changes in temperature and precipitation, most of which will apply to RCSD:

- More winter runoff and less spring/summer runoff due to warmer temperatures.
- Greater extremes in flooding and droughts.
- Greater water demand for irrigation and landscape water due to increased temperatures and their impacts on plant water needs.
- Increased sea level rise, increased threat of coastal flooding, and saltwater intrusion into coastal groundwater aquifers.

Other implications of future climate conditions are likely to include changes in temperature, precipitation, evaporative demand, and other variables:

- Increases in both maximum and minimum temperatures and heat extremes.
- More intense precipitation focused during the winter season.
- Increased evapotranspiration.

- Increased drought risk.
- Potential for longer wildfire season with more ignitions as population growth continues.
- Longer duration and more intense atmospheric rivers.

Changes in temperature and precipitation due to climate change could have lasting effects on water demands in RCSD, particularly increased needs for irrigation and landscape water. Historically, dry, warm weather has been accompanied by increases in agricultural and urban water usage. However, RCSD's customers have limited irrigation and in recent years conservation efforts instituted during droughts have become permanent and limited rebound in demand even with higher temperatures has been observed. Therefore, it is expected additional reductions in demand during drought will be limited in the RCSD service area.

Section 2: Water Demands

2.1 Overview

This section contains a series of tables that present recent water use and projections into the future. All water that is produced and distributed within the Rosamond Community Services District service area is included in this analysis. Much of the information in this section will be in tabular form to comply with the requirements of the UWMP Guidebook from DWR.

2.2 Non-Potable Versus Potable Water Use

This section provides information regarding potable and. non-potable demands. RSCD does not provide recycled or raw water service.

2.3 Past, Current, and Projected Water Use by Sector

The sections that follow present breakdowns of the water sectors that apply to RCSD, as well as actual and projected potable water uses for the various customer types. All accounts in the District are metered.

2.3.1 Water Use Sectors Listed in Water Code

RCSD provides water in the following DWR water use sectors: Single Family, Multi-Family, Commercial, Institutional/Governmental, and Landscape.

2.3.2 Water Use Sectors in Addition to Those Listed in Water Code

RCSD also meters construction and bulk meter usage. This is categorized as “Other” in Table 2-3 and Table 2-5.

2.3.3 Past Water Use

The actual water usage reported in 2015 is summarized in Table 2-1 below.

Table 2-1: 2015 Demands for Potable Water – Actual

Use Type	Additional Description	Level of Treatment	Volume (AF)
Single Family		Drinking Water	1,506
Multi-Family		Drinking Water	236
Commercial		Drinking Water	94
Institutional/Governmental		Drinking Water	32
Landscape		Drinking Water	91
Other	Construction and Bulk Meter	Drinking Water	15
Losses		Drinking Water	259
Total			**2,233**

2.3.4 Distribution System Water Losses

Distribution system water losses (also known as "real losses") are the physical water losses from the water distribution system and the supplier's storage facilities, up to the point of customer consumption. System water losses are calculated as the difference between water production and water consumption and represent water that cannot be accounted for. Water loss data from the past five years are reported in Table 2-2 and are based on the DWR/American Water Works Association (AWWA) water loss audits prepared annually by the District. These reports are provided in Appendix D.

At the current time, a water loss standard has not been adopted by the State of California. Future UWMPs prepared by RCSD will report on compliance with any State water loss standards.

Table 2-2: Last Five Years of Water Loss Audit Reporting

Reporting Period Start Date	Volume of Water Loss (AF)
01/2016	187
01/2017	230
01/2018	229
01/2019	268
01/2020	259

Notes:

Volumes are taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.

2.3.5 Current Water Use

Current water use (2020 metered usage) is reported in Table 2-3.

Table 2-3: Demands for Potable Water – Actual (DWR Table 4-1).

Use Type	Additional Description	Level of Treatment	Volume (AF)
Single Family		Drinking Water	1,779
Multi-Family		Drinking Water	204
Commercial		Drinking Water	122
Institutional/Governmental		Drinking Water	50
Landscape		Drinking Water	42
Other	Construction and Bulk Meter	Drinking Water	36
Losses		Drinking Water	259
Total			**2,493**

Since 2015, which was towards the end of the drought period, RCSD has seen substantial increases in usage relative to the observed growth in number of connections which could be the result of demand rebound following the drought.

A comparison of connections from 2015 to 2020 is shown below in Table 2-4, with approximately 9% growth from 2015-2020. In both years, residential connections made up approximately 97% of total connections.

Table 2-4: 2015 vs. 2020 Connections

	2015	2020
Total Connections	4,777	5,191
Residential Connections	4,626	5,029

During this time period, total residential usage increased by approximately 14%. This growth is most strongly attribute to growth in single family usage, as single family usage increased by approximately 18%, while multi-family usage decreased by approximately 14%.

Commercial, Institutional/Governmental, and Construction/Bulk Meter usage also grew from 2015 to 2020 (by approximately 30%, 57%, and 113%, respectively). However, these usage categories make up less than 10% of total RCSD consumption. Landscape usage showed an approximately 54% reduction, but similarly makes up a small fraction (2%) of total usage.

2.3.6 Projected Water Use

Future water demand projections were developed based on the estimated population growth that RCSD expects to see through 2045. The 1.6% annual growth rate used to project population growth was applied to the actual 2020 water usage in order to project future potable water usage through 2045. Potable water use projections are summarized in Table 2-5. RCSD does not expect to participate in sales to other water agencies over the planning horizon.

Due to demand hardening following the 2014-2015 drought and the relatively small amount of landscape irrigation within the RCSD's service area, it is not expected that demand will change drastically during a single dry or multiple dry year event. This is discussed in further detail in Section 6.

Table 2-5: Use for Potable Water – Projected (DWR Table 4-2)

	Volume (AF)				
	2025	2030	2035	2040	2045
Single Family	1,926	2,085	2,257	2,443	2,645
Multi-Family	221	239	259	280	304
Commercial	132	143	155	168	181
Institutional/Governmental	54	59	64	69	75
Landscape	46	50	54	58	63
Other – Construction and Bulk Meter	35	37	40	44	47
Losses	285	309	334	362	392
Total	**2,699**	**2,922**	**3,163**	**3,424**	**3,707**

2.3.6.1 Characteristic Five-Year Water Use

The estimated expected gross potable water use for the next five years without drought conditions is shown in Table 2-6. The estimates in Table 2-6 are based on actual 2020 water usage in RCSD with a 1.6% growth rate applied annually to match expected population growth in the service area.

Table 2-6: Characteristic Five-Year Water Use

	2021	2022	2023	2024	2025
Volume (AF)	2,533	2,573	2,614	2,656	2,699

2.3.6.2 Current and Projected Land Use

According to the 2009 Kern County General Plan, the County's population will continue to grow at a rate of less than 2% over the next 20 years (Kern County Planning Department, 2009). Historically, the County's land use has been focused on agriculture. However, with the population growth, the County has started to focus on residential, commercial, and industrial land uses. Additionally, it has started to promote higher-density residential development, especially in more urbanized areas of the County, to ensure adequate public services. While RCSD is located in Kern County, the service area is closer to the more urbanized areas of Lancaster and Palmdale in Los Angeles County which will likely face conditions similar to Kern County. Thus, long-term future development in RCSD is expected to be primarily single family residential.

2.3.6.3 Effects of Climate Change on Water Use

As discussed in Section 1.8, changes in temperature and precipitation due to climate change could have lasting effects on water demands in RCSD, particularly increased needs for irrigation and landscape water. Historically, dry, warm weather has been accompanied by increases in agricultural and urban water usage. However, RCSD's arid environment and in recent years, conservation efforts, have limited increases in irrigation demand due to higher temperatures and often have resulted in reduced overall demand.

2.3.6.4 Effects of Codes, Standards, and Ordinances

The demand estimates presented in Table 2-5 do not explicitly correct for specific conservation measures, since they are based on the most recent meter readings available. The demand estimates do incorporate passive conservation from the installation of more efficient fixtures that has occurred by implementation of plumbing codes and standards.

2.3.7 Low Income Projected Water Demands (10631.1(a))

Section 10631.1 of the CWC requires UWMPs to include the projected water usage for lower income single-family and multi-family residential households as identified in the housing element of any city, county, or city and county in the service area of the water purveyor. Lower income is established by the state as 80 percent of state median income.

The projections are meant to assist water purveyors in complying with the requirements of the Government Code Section 65589.7, which requires water purveyors to “grant a priority for the provision of water and sewer services to proposed developments that include housing units affordable to lower income households”.

RCSD’s 2020 demand, which serves as the baseline for demand projections through 2045, incorporates usage from Rosamond, a Census-Designated Place with a median household income of $56,286 classified as a Disadvantaged Community. The RCSD service area also includes two Census Block Groups classified as Severely Disadvantaged Communities with median incomes less than $42,737. Thus, it can be assumed that future demand projections take into account residential demands from lower income households.

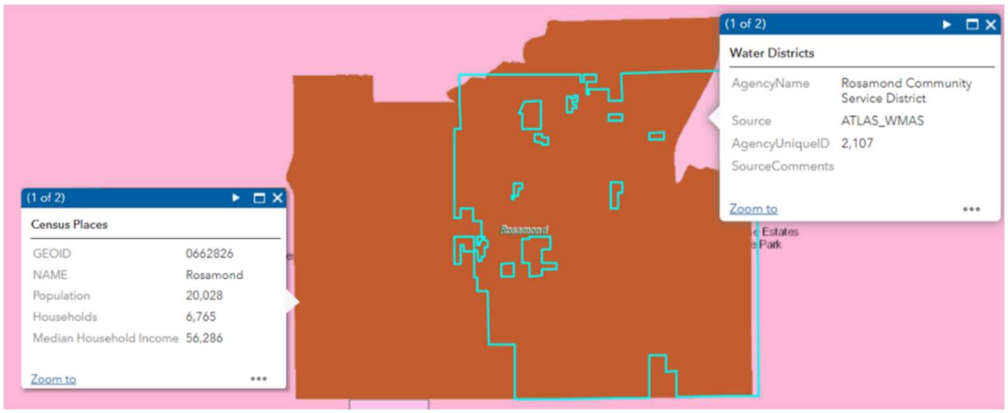

Figure 2-1: Disadvantaged Communities in RCSD Service Area by Census Designated Place

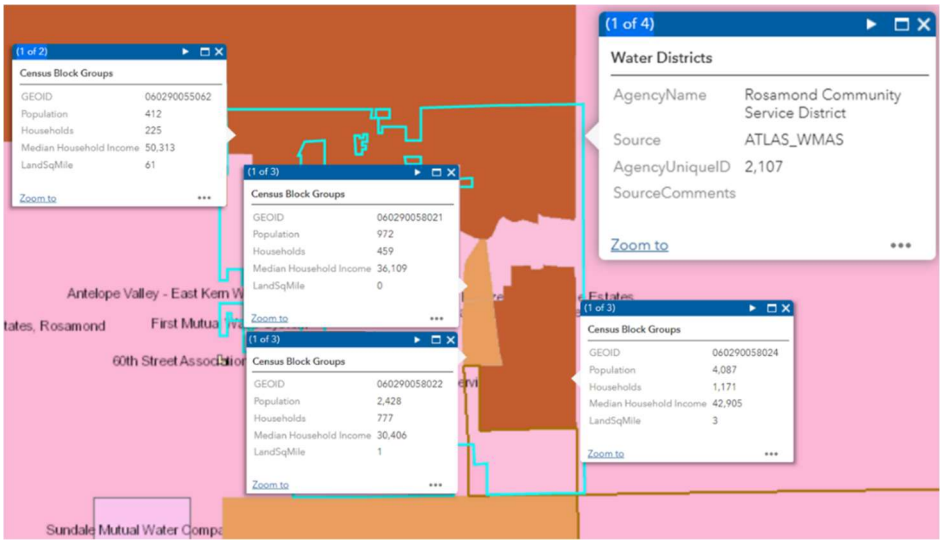

Figure 2-2: Disadvantaged Communities in RCSD Service Area by Census Block Group

Section 3: SB X7-7 Baseline and Targets

This section provides the target setting requirements for the 20 x 2020 water conservation efforts as detailed in the Water Conservation Act of 2009 (also known as SB X7-7) and the Technical Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use prepared by the California Department of Water Resources. This section identifies the water use targets in 2015 and 2020 that demonstrate a 20% reduction in per capita water use by 2020 and describes how the District calculated its baseline and target per capita water demands. The 2010 UWMP and 2015 UWMP used Target Method 1 to calculate its baseline and target per capita water demands, and for consistency, this report also uses Target Method 1. Target Method 1 uses eighty percent of the urban retail water supplier's baseline per capita daily water use. The District has completed the SB X7-7 Compliance and Verification Forms, attached as Appendix E, and summarized in Table 3-1 and Table 3-2 of this section.

3.1.1 2020 Baseline Demand and Target

Two baseline periods were determined during the calculation of the base daily per capita water use. The first is a continuous 10- to 15-year period used to calculate baseline per capita use, and the second is a continuous 5-year period used to determine whether the 2020 per capita water use target meets the legislation's minimum water use reduction requirements of at least a 5% reduction per capita water use.

The legislation allows the first continuous baseline period to increase from a 10-year to a 15-year base period if the amount of recycled water delivered in 2008 was 10% or greater of total water demand. The District's recycled water use in 2008 did not meet 10% or greater total water demand; therefore, under the legislation, the District may not use anything greater than a 10-year base period.

Table 3-1 summarizes the Base Daily Water Use calculation for RCSD. Years 2001 to 2010 have been selected for calculation of the 10-year base period while years 2003 to 2007 have been selected for calculation of the 5-year base period.

Table 3-1: DWR Baselines and Targets Summary Retail Supplier or Regional Alliance Only (DWR Table 5-1)

Baseline Period	Start Year	End Year	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	*2001*	*2010*	*177*	*159*
5 Year	*2003*	*2007*	*177*	

Notes:

*All values are in Gallons per Capita per Day (GPCD)

Based on Target Method 1, the confirmed 2020 Target is 159 GPCD.

3.1.2 Compliance Water Use Targets

The actual usage in 2020 is 121 GPCD demonstrating compliance with SBx7-7. This is well below the 2020 target of 159 GPCD.

Table 3-2: DWR SBx7-7 2020 Compliance Form Retail Supplier or Regional Alliance Only (DWR Table 5-2)

2020 GPCD				
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD*	2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
121	0	121	159	Yes

Notes:

*All values are in Gallons per Capita per Day (GPCD)

As shown in Table 3-2, the District is in compliance with the 2020 Target, with an actual 2020 GPCD of 121.

Section 4: Water Resources

4.1 Overview

This section outlines the water resources for the District. The primary water sources for the District are local groundwater and imported water from Antelope Valley East-Kern Water Agency (AVEK). Recycled water is not currently a source although historically it had been a source.

4.2 Groundwater

The primary water source for the District is local groundwater, as shown in Table 4-1. Groundwater comes from the Antelope Valley Groundwater Basin (DWR Basin Number 6-44) which is an adjudicated basin. The District uses three wells to pump the groundwater into their distribution system.

Table 4-1: Groundwater Volume Pumped (DWR Table 6-1)

Groundwater Type	Location or Basin Name	2016	2017	2018	2019	2020
Alluvial Basin	Antelope Valley Basin	2,319	2,415	2,430	2,430	2,457

4.2.1 Basin Description

The Antelope Valley Groundwater Basin contains two primary aquifers: the upper and lower aquifer. The upper aquifer is an unconfined aquifer. Separated from the principal aquifer by clay layers, the deep aquifer is generally considered to be confined. In general, the principal aquifer is thickest in the southern portion of the Valley near the San Gabriel Mountains, while the deep aquifer is thickest in the vicinity of the dry lakes on Edwards Air Force Base. The Antelope Valley Groundwater Basin is divided into twelve subunits (Finger Buttes, West Antelope, Neenach, Willow Springs, Gloster, Chaffee, Oak Creek, Pearland, Buttes, Lancaster, North Muroc, and Peerless). The groundwater basin is principally recharged by deep percolation of precipitation and runoff from the surrounding mountains and hills.

The Antelope Valley Groundwater Basin is an adjudicated basin. Adjudication was finalized in December 2015, representing more than 15 years of complex proceedings among more than 4,000 parties including public water suppliers, landowners, small pumpers and non-pumping property owners, and the federal and state governments. The adjudication defined the boundaries of the basin, considered hydraulic connection throughout the basin, established the safe yield, and quantified groundwater production. The adjudication judgement identified a state of overdraft, established respective water rights among groundwater producers, and ordered a rampdown of production to the native basin safe yield. The judgement identified a state of overdraft and established respective water rights among groundwater producers.

The 2015 Adjudication Judgement can be found at https://avwatermaster.net/wp-content/uploads/2018/05/Exhibit-1-Proposed-Judgment-and-Physical-Solution.pdf

4.2.2 Banked Groundwater

The District currently has approximately one year of banked groundwater in reserves. This water will be used if AVEK cannot provide the District's requested amount. The District also aims to use maximize use of water of their own sources, such as the treated wastewater which will be used to recharge groundwater described in Section 5, as much as possible in the future. With this in mind, the District has a goal to have at least three years of banked groundwater in reserves.

4.3 Surface Water

The secondary water source for the District is surface water imported from AVEK. This water is provided by the State Water Project (SWP) and has been available for the District's use since 1978. Each year, the District requests a certain amount of water from AVEK through the SWP; however, this amount is not guaranteed. AVEK treats the portion available of their 144,844 acre-feet per year Table A allotment of water at four water treatment plants.

Table 4-2: AVEK Projected Water Supplies

	2025	2030	2035	2040	2045
SWP Table A	81,840	79,660	77,490	75,320	75,320
Groundwater, Production Rights	3,550	3,550	3,550	3,550	3,500
Groundwater, Imported Water Return Flows	800	800	800	800	800
New Supply (LACWD MOU)	4,890	9,780	12,190	14,760	17,340
Total	91,080	93,790	94,030	94,430	97,010

Notes:

Water that AVEK supplies to RCSD comes out of their SWP Table A supplies as shown in the first row of Table 4-2. The amount of SWP Table A contract amounts that is available every year varies and has been as low as 5% in recent years. AVEK's projected water supplies reflects the reductions from the contract SWP Table A quantities

4.4 Planned Water Supply Projects and Programs

The District is not pursuing any future water supply projects to increase its water supply as shown in Table 4-3. Efforts to improve supply and conservation efforts over the last several years have proved to be successful in offsetting the need for expansive water supply projects in the service area.

Table 4-3: Expected Future Water Supply Projects or Programs (DWR Table 6-7)

X	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?**	**If yes Agency Name**	**Description (if needed)**	**Planned Implementation Year**	**Planned for Use in Year Type**	**Expected Increase in Water Supply to Supplier**

4.5 Summary of Existing and Planned Sources of Water

Table 4-4 shows the actual 2020 volumes of the two water supplies used by RCSD. Table 4-5 shows the District's projected water supplies through 2045.

Table 4-4: Water Supplies - Actual (DWR Table 6-8)

Water Supply	Additional Detail	Volume (AF)	Water Quality
Groundwater		2,457	Drinking Water
Surface Water	Purchased from AVEK	36	Drinking Water
Total		2,493	

Notes:

Surface water purchased from AVEK is from the SWP.
RCSD makes an annual request to AVEK for SWP water, there is no guarantee that the request will be fulfilled depending on SWP availability.

Table 4-5: DWR Retail: Water Supplies – Projected (DWR Table 6-9)

		Volume (AF)				
Water Supply	**Additional Detail**	**2025**	**2030**	**2035**	**2040**	**2045**
Groundwater		2,660	2,880	3,118	3,375	3,654
Surface Water	Purchased from AVEK	39	42	45	49	53
Total		2,699	2,922	3,163	3,424	3,707

Notes:

Surface water purchased from AVEK is from the SWP.
RCSD makes an annual request to AVEK for SWP water, there is no guarantee that the request will be fulfilled depending on SWP availability.

4.6 Water Quality

The District's annual Consumer Confidence Report shows the sources of water, lists the results of drinking water quality tests, and contains important information about water and health. The following table was included in the 2020 Consumer Confidence Report:

Table 4-6: RCSD Water Quality

Contaminant	Measurement
Total Coliform Bacteria	0
Total Trihalomethane	1.3 ppb
Total Haloacetic Acids	0.8 ppb
Chlorine	0.97 ppm
Nitrate	1.4 ppm
Arsenic	8.7 ppb
Fluoride	0.48 ppm
Turbidity	0.2 NTU
Alkalinity	113.3 ppm
Calcium	44 ppm
Chloride	32 ppm
Hardness	146.6 ppm
Sodium	47 ppm
Specific Conductance	473 umhos/cm
Total Dissolved Solids	296 ppm
Color	ND
Copper	0.093 ppm
Lead	ND

4.7 Embedded Energy Current Supply Portfolio

Water energy intensity is the amount of energy, calculated on a whole-system basis, required for use of water in a specific location, such as RCSD's service area. DWR provides guidance for calculating the operational energy intensity of wat er, defined as the total amount of energy expended by the urban water supply on a per acre-foot basis to take water from the location where the supplier acquires the water to its point of delivery. DWR requires that urban water suppliers only report the energy intensity associated with water management processes occurring within their operational control and not include energy embedded in water supplies purchased from a wholesale water agency. Table 4-7 provides an estimate, using the total utility approach, of the water energy intensity of RCSD's potable water system. DWR's energy intensity spreadsheet is provided in Appendix F.

Table 4-7: RCSD Energy Intensity, Total Utility Approach

	2021 Quantities
Volume of Water Entering Process, AF (MG)	2,573 (838)
Energy Consumed, kWh	770,821
Energy Intensity, kWh/MG	919.4

Notes:

Energy consumption is metered usage from RCSD's Well 8 and Well 9 for the 2021 calendar year. Volume of water consumed provided by RCSD in the annual water usage report.

Energy data was provided for Well 8 and Well 9. These are RCSD's two groundwater production wells. Total energy consumed is equal to the total kWh metered at each well with 445,714 kWh subtracted to account for solar energy production at Well 9 that is not used in RCSD's potable water production/delivery processes.

Section 5: Recycled Water and Reuse

5.1 Wastewater Collection, Treatment and Disposal

The Rosamond Wastewater Treatment Plant (RWWTP) began operation in 1966. It collects and treats 0.5 MGD of wastewater from the customers in the Rosamond service area. The plant consists of a facultative pond treatment process and 16 lined evaporation ponds as a disposal system. The plant has had two major upgrades in 2009 and one that is currently taking place.

In 2009, construction was complete enabling the plant to produce tertiary treated recycled water for landscape irrigation, parks, schools, and new home developments. The tertiary treatment included grit removal, a Biolac activated sludge aeration basin, secondary clarifier, sand filters, and UV disinfection. The plant upgrades did not start operating until late 2011 and concluded mid-2015. Since the District had no significant recycled water customers, they ceased tertiary treatment operations to reduce costs.

In 2019, construction began to provide RCSD the infrastructure and treatment process to recharge the groundwater basin with the plant's effluent. This includes nitrification and denitrification processes and infrastructure to percolate effluent into the ground. It also increases the plant's capacity from 0.5 MGD to 1.27 MGD of treatment. Recharging the groundwater basin with indirect reuse providing the District with an alternative water supply that beneficially uses the treated wastewater.

Table 5-1: Wastewater Collected Within Service Area in 2020 (DWR Table 6-2)

100%	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
100%	Percentage of 2020 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	**Wastewater Volume Metered or Estimated?**	**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?**	**Is WWTP Operation Contracted to a Third Party? *(optional)***
Rosamond Community Service District (RCSD)	Metered	1,303	RCSD	RWWTP	Yes	No
Total Wastewater Collected from Service Area in 2020:		1,303				

Table 5-2: DWR Retail: Wastewater Treatment and Discharge Within Service Area in 2020 (DWR Table 6-3)

Wastewater Treatment Plant Name	Rosamond Wastewater Treatment Plant (RWWTP)
Discharge Location Name or Identifier	
Discharge Location Description	
Method of Disposal	Percolation
Does this Plant Treat Wastewater Generated Outside the Service Area?	No
Treatment Level	Secondary, Undisinfected
2020 Volumes (AF)	
Wastewater Treated	1,303
Discharged Treated Wastewater	1,303
Recycled Within Service Area	
Recycled Outside of Service Area	
Instream Flow Permit Requirement	

5.2 Recycled Water and Water Reuse Planning

Recycled water is not currently used within the District. With the new RWWTP upgrades, the District will be able to recharge the groundwater basin with 90% of the plant's effluent as a means to beneficially reuse the treated wastewater while improving water quality.

Section 6: Reliability Planning

6.1 Overview

This section provides a discussion of the reliability of the RCSD's water supply. A comparison between the water supply and demand for an average water year, single-dry water year, and multiple dry water years is provided in Table 6-1. As discussed in Section 4, RCSD receives water from District-owned and operated groundwater wells and the State Water Project via AVEK. RCSD also maintains banked water supplies to supplement any shortages between supply and demand during drought. It was assumed that the average year supplies are adequate to meet RCSD's projected demands through 2045. The single and consecutive dry year supplies were calculated as a percentage of the average year supply (3,707 AF).

Table 6-1: Basis of Water Year Data (Reliability Assessment)

	Volume Available (AF)	% of Average Supply, Excluding Banked Water	% of Average Supply, with Banked Water
Average Year	3,701	100%	100%
Single Dry Year	3,368	91%	100%
Multiple Dry Year – 1	3,376	91%	100%
Multiple Dry Year – 2	3,450	93%	100%
Multiple Dry Year – 3	3,380	91%	100%
Multiple Dry Year – 4	3,426	93%	100%
Multiple Dry Year – 5	3,397	92%	100%

Notes:

Supplies include groundwater pumped by RCSD and surface water purchased from AVEK. Although the volume of water received from AVEK varies from year-to-year, RCSD has banked water supplies that can be used to make up deficits between supply and demand. This is reflected in the "% of Average Supply, with Banked Water" column, which shows 100% availability in all scenarios, whereas the "% of Average Supply, Excluding Banked Water" column shows small deficits due to RCSD's use of the SWP which has a reliability as estimated by AVEK as shown in Table 6-2.

Water supplies in an average year are assumed adequate to meet all future demands through 2045.

The percentages reported in Table 6-1 were determined assuming that groundwater supplied by RCSD (90% of total supplies) is not impacted by drought and is always available in full, and surface water supplied by AVEK/SWP (10% of total supplies) is partially available based on the percent availability reported by AVEK in their 2020 UWMP, shown below in Table 6-2.

Table 6-2: AVEK – SWP Availability

	Base Year	AVEK – Percent Available
Average Year		100%
Single Dry Year	2014	10%
Multiple Dry Year – 1	1988	12%
Multiple Dry Year – 2	1989	32%
Multiple Dry Year – 3	1990	13%
Multiple Dry Year – 4	1991	26%
Multiple Dry Year – 5	1992	18%

6.2 Normal Water Year

A comparison of the projected normal water supply to the projected normal water use over the next 25 years in 5-year increments is shown in Table 6-3.

Table 6-3: Normal Year Supply and Demand Comparison (DWR Table 7-2)

	2025	2030	2035	2040	2045
Supply Totals (AF)	2,699	2,922	3,163	3,424	3,707
Demand Totals (AF)	2,699	2,922	3,163	3,424	3,707
Difference (AF)	0	0	0	0	0

6.3 Single Dry Year

A comparison of the projected single dry year water supply to the projected single dry year water use over the next 25 years, in 5-year increments, is shown in Table 6-4. Although it is likely that in a single dry year event that RCSD's combined groundwater, which is assumed to not be impacted by drought, and SWP supplies will be unable to meet total demand, RCSD has supplemental banked groundwater supplies that can be used to make up deficits between supply and demand. Thus, it is estimated that in a single dry year there will be zero deficit between supply and demand.

During the 2015 drought, the state of California imposed mandatory demand reduction measures, and since then, RCSD's usage has yet to return to pre-drought levels (Figure 6-1) even though the number of connections increased from 4,777 in 2015 to 5,191 in 2020, which is an increase of 8.7%. Due to this demand hardening, RCSD does not expect that dry years will have a substantial impact on demands. Additionally, RCSD has a relatively low amount of landscape irrigation within its service area (due in part to reductions stemming from the 2015 drought). Typically, reductions in landscape irrigation usage offer the largest opportunity to reduce service area demands during dry events. Without high usage in this category, RCSD does not expect that demands during single or multiple dry year events will change substantially.

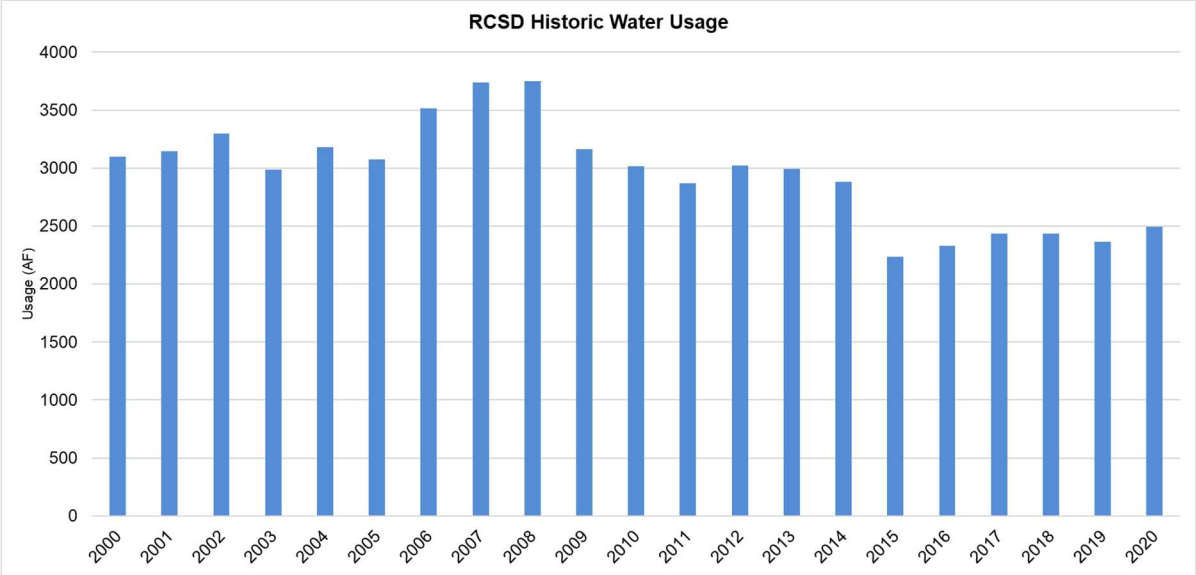

Figure 6-1: RCSD Historic Water Usage

Table 6-4: Single Dry Year Supply and Demand Comparison (DWR Table 7-3)

	2025	2030	2035	2040	2045
Supply Totals (AF)	2,699	2,922	3,163	3,424	3,707
Demand Totals (AF)	2,699	2,922	3,163	3,424	3,707
Difference (AF)	0	0	0	0	0

Notes:

Supplies include groundwater pumped by RCSD and surface water purchased from AVEK. Although the volume of water received from AVEK varies from year-to-year, RCSD has banked water supplies that can be used to make up deficits between supply and demand. Thus, zero deficit is shown between supply and demand.

6.4 Multiple Dry Year (5 years)

A comparison of the projected multiple dry year water supplies to the projected multiple dry year water use over the next 25 years, in 5-year increments is shown in Table 6-5.

As in the single dry year projections, it is likely that RCSD's combined groundwater, which is assumed to not be impacted by drought, and SWP supplies will be unable to meet total demand during a multiple dry year event. However, RCSD has supplemental banked groundwater supplies and/or can purchase additional banked groundwater that can be used to make up deficits between supply and demand. Thus, it is estimated that in multiple dry years there will be zero deficit between supply and demand.

Table 6-5: Multiple Dry Year Supply and Demand Comparison (DWR Table 7-4)

Dry Years	Supply	2025	2030	2035	2040	2045
First Year	Supply totals	2,699	2,922	3,163	3,424	3,707
	Demand totals	2,699	2,922	3,163	3,424	3,707
	Difference	0	0	0	0	0
Second Year	Supply totals	2,742	2,968	3,214	3,479	3,766
	Demand totals	2,742	2,968	3,214	3,479	3,766
	Difference	0	0	0	0	0
Third Year	Supply totals	2,786	3,016	3,265	3,535	3,827
	Demand totals	2,786	3,016	3,265	3,535	3,827
	Difference	0	0	0	0	0
Fourth Year	Supply totals	2,830	3,064	3,317	3,591	3,888
	Demand totals	2,830	3,064	3,317	3,591	3,888
	Difference	2,830	3,064	3,317	3,591	3,888
Fifth Year	Supply totals	2,876	3,113	3,370	3,649	3,950
	Demand totals	2,876	3,113	3,370	3,649	3,950
	Difference	0	0	0	0	0
Sixth Year (optional)	Supply totals	2,922	3,163	3,424	3,707	4,013
	Demand totals	2,922	3,163	3,424	3,707	4,013
	Difference	0	0	0	0	0

Notes:

Supplies include groundwater pumped by RCSD and surface water purchased from AVEK. Although the volume of water received from AVEK varies from year-to-year, RCSD has banked water supplies that can be used to make up deficits between supply and demand. Thus, zero deficit is shown between supply and demand.

6.5 Drought Risk Assessment (10635(b) & (1))

The Water Code requires that every urban water supplier include in its UWMP a drought risk assessment for its water service to its customers. This is to benefit and inform the demand management measures and water supply project and programs to be included in the urban water management plan.

Total water use over the next five years has been interpolated between the actual usage reported in 2020 and the projected usage in 2025. Total supplies were interpolated between the actual supplies available in 2020 and the projected supplies in 2025. For the purposes of a conservative drought risk assessment, a “worst-case scenario” was taken to be multiple dry years starting in 2021 and lasting through 2025. Thus, the total supplies in each year were adjusted based on the percent of available supply as described in Table 6-1. This leaves a projected deficit between supply and demand in the upcoming five years.

RCSD’s banked water supplies are available for use when supplies fail to meet demands. This is documented in the Water Shortage Contingency Plan (found in Appendix G) and is included in Table 6-6 as a planned supply augmentation benefit in the event of a shortfall.

Table 6-6: Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b) (DWR Table 7-5)

2021	
Total Water Use (AF)	2,534[1]
Total Supplies (AF)	2,573[1]
Shortfall without WSCP Action (AF)	
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

2022	
Total Water Use (AF)	2,604
Total Supplies (AF)	2,428[2]
Shortfall without WSCP Action (AF)	(177)
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	177
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

2023	
Total Water Use (AF)	2,636
Total Supplies (AF)	2,407[2]
Shortfall without WSCP Action (AF)	(229)
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	229
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

2024	
Total Water Use (AF)	2,667
Total Supplies (AF)	2,469[2]
Shortfall without WSCP Action (AF)	(198)
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	198
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

	2025
Total Water Use (AF)	2,699
Total Supplies (AF)	2,477
Shortfall without WSCP Action (AF)	(221)
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	221
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

Notes:

[1] Volumes reported for 2021 are actual volumes reported by RCSD.
[2] Projected supplies 2022, 2023 and 2024 are interpolated between 2021 actual supplies and 2025 projected supplies (as reported in Table 2-5) with a corrective factor applied based on the multiple dry year supply availability reported in Table 6-1).

6.5.1 Data and Methodologies Used

6.5.1.1 Water Demands

Water demands for the next 25 years were developed based on estimated population growth in the RCSD service area over the same time period. An average population growth rate of 1.6% was selected based on existing estimates and observed growth between 2015 and 2020. Population and demand projections methodology are discussed in further detail in Sections 1.5.2 and Section 2, respectively.

Drought conditions are not expected to substantially affect water demands in RCSD due to demand hardening from the 2015 drought and the relatively low amount of landscape irrigation in the service area. This is discussed in greater detail in Section 6.3.

6.5.1.2 Water Supplies

The Drought Risk Assessment looks at all water supplies anticipated to be available in 2021 through 2025, assuming a “worst-case scenario” in which 2021 is the start of a series of five dry years. Percent availability during the multiple dry year scenario was determined for both groundwater and surface water as described in the following sections, and then aggregated into a net percent available that was applied to estimated average year supplies.

6.5.1.2.1 Groundwater

Based on historic use patterns and availability, it is assumed that regardless of drought conditions, RCSD-supplied groundwater will always be available in full. Groundwater supplies are expected to be 90% of RCSD’s overall supply portfolio over the next 25 years. This is a conservative estimate, as RCSD anticipates becomes increasingly reliant on groundwater and less reliant on the surface water from SWP, which is ultimately a less reliable water source. RCSD also will start to benefit from recharge of treated wastewater starting in 2022 which increases the groundwater available.

6.5.1.2.2 Surface Water (State Water Project)

Surface water supply projections were calculated using the expected volume available as a percent of AVEK's annual SWP allocation as described in AVEK's 2020 UWMP. The percent availability reported by AVEK was applied to the fraction of RCSD's expected normal year surface water supplies (estimated at 10% of normal year supplies based on the historical breakdown between groundwater and surface water supplies).

Section 7: Demand Management Measures

7.1 Summary of Demand Management Measures

The purpose of the Demand Management Measures (DMM) section of this UWMP is to (a) provide a description of the past water conservation programs that RCSD has implemented to meet its urban water use reduction targets and (b) describe the activities and actions RCSD plans to use in the future to meet its urban water use reduction targets. For the purposes of this UWMP, the DMMs are categorized as "Foundational", "Programmatic", and "Other". Foundational DMMs, listed below, are those DMMs that the UWMP Act and Water Code specifically mention:

a. Water waste prevention ordinances
b. Metering
c. Conservation pricing
d. Public education and outreach
e. Programs to assess and manage distribution system real loss
f. Water conservation program coordination and staffing support

"Programmatic" DMMs refer to incentive and rebate programs run by the District. Activities outside of the Foundational DMMs and Programmatic DMMs that encourage less water use in the RCSD service area fall in the "Other DMM" category.

7.2 Demand Management 2015-2020

7.2.1 Water Waste Prevention Ordinances

RCSD has enacted a Water Conservation (No Waste) Program (Ordinance No. 2018-1) (Water Conservation, 2022). This Ordinance establishes water conservation and drought response measures and five stages to increase the response as drought conditions worsen. Violations of the Ordinance include irrigating too frequently, irrigating during the day, and unreasonable uses of water. Appendix H consists of the Water Conservation Ordinance and information on regulations, restrictions, and enforcement. The District will monitor the violations. This DMM has been implemented as part of normal work practices.

7.2.2 Metering

RCSD has meters on all customer sectors: single-family residential, commercial, institutional, industrial, and government facilities. RCSD has replaced 98% of its system with smart meters that will allow them to collect data on usage and possible leaks. To measure the method's effectiveness, RCSD utilizes a database system. This database system provides analytics to evaluate changes in water use. The meter replacement program was completed in 2017, but RCSD is actively replacing meters that are defective. In 2021, RCSD replaced 1300 meters.

7.2.3 Conservation Pricing

Proposition 218 amended the California Constitution by adding articles XIII C ("Article XIII C") and XIII D ("Article XIII D"), which affect the ability of special districts and other local governments to levy and collect existing and future taxes, assessments, and property-related fees and charges. The Capistrano Taxpayers Assn., Inc. v. City of San Juan Capistrano, 235 Cal. App. 4th 1493, strictly forbids the use of tiered rates for the purposes of changing behavior for conservation.

The District adopted tiered commodity rates in 2016 after their first Water and Sewer Rate Study in 2009 that planned for a five-year adoption plan. The tiers are structured such that as water usage increases above the lowest tiers, the volumetric charge for the water increases to incentivize keeping water use at the lower tiers. The rate studies establish the costs of service and are performed every five years, with the latest Water and Sewer Rate Study for the District conducted in 2021. The studies provide a financial plan for the District and design rates for the community that are sufficient to cover the costs of operation, maintenance, and necessary capital improvements.

7.2.4 Public Education and Outreach

In conjunction with the Water Conservation Ordinance, RCSD promotes water conservation in the community. It provides free resources online on how to garden in a drought, indoor water use reduction, and 100+ ways to conserve water. It also partners with neighboring agencies on public education and outreach. Currently, RCSD is partnering with Palmdale Water District and other local agencies by installing a water conservation billboard.

7.2.5 Programs to Assess and Manage Distribution System Real Loss

RCSD has conducted monthly water audits, leak detection, and repair on their distribution system since 1997. Because RCSD is located in an earthquake zone, it has permanently incorporated the system water audit and leak detection, and meter calibration (production and customer meters) programs into its utility operations, on a three-year rotation schedule. On average, RCSD water department crews spend about 35 days surveying approximately 100 miles of main and laterals per year. Recently, RCSD replaced 2-miles of their ACP waterlines. This project was completed in 2020.

7.2.6 Water Conservation Program Coordination and Staffing Support

In 2010, RCSD retained a designated part-time water conservation coordinator (WCC). Due to budgetary restrictions, this position was discontinued.

7.2.7 Other DMMs

1. Water Survey Programs for Single-Family and Multi-Family Residential Customers

In the past decade, RCSD offered a water survey program free to its customers by providing water use surveys to single-family and multi-family customers. Since the implementation of the smart meters within the RCSD system, this water survey program is no longer necessary.

2. Residential Plumbing Retrofit

Previously, water-conserving devices such as high-quality low-flow showerheads, toilet displacement devices, toilet flappers, and faucet aerators were distributed to customers. This program was implemented by other agencies near RCSD and was implemented in 2000. Due to the mandatory low-flow California plumbing codes, the benefits of this program are diminished, and it is no longer implemented.

7.3 Planned DMMs to Reach Water Use Targets

The District will continue to implement the programs under Section 7.2 and evaluate costs and estimated water savings over the next five years.

Section 8: Seismic Risk Assessment

8.1 RCSD Risk and Resiliency Assessment

8.1.1 Methodology

RCSD completed a risk assessment and resiliency assessment in June 2021 using the U.S. Environmental Protection Agency's (EPA) Vulnerability Self-Assessment Tool (VSAT) Web Version 2.0. VSAT Web 2.0 addresses malevolent acts, natural hazards, and dependency/proximity threats to water sector operations and analyzes the cost-effectiveness of countermeasures to reduce risk. VSAT Web 2.0 defines Risk (R) as the product of Threat (T), Vulnerability (V), and Consequences, which are defined as follows:

- Threat – Likelihood that the treat will be perpetrated or occur against the asset
- Vulnerability – Likelihood that the threat will damage the asset, considering the effectiveness of countermeasures
- Consequences – Economic (cost to the utility and region0 and public health (injuries and deaths) impacts resulting from damage to the asset.

8.1.2 Risk Assessment

RCSD's risk assessment found that an earthquake is a primarily a threat to the District's security fences, water distribution mains, and the public works maintenance building.

RCSD is evaluating the magnitude of seismic risk to their infrastructure and is developing a mitigation plan on an as-needed basis.

8.2 Kern County Multi-Jurisdictional Hazard Mitigation Plan

Seismic risk was also evaluated in the Kern County Multi-Jurisdictional Hazard Mitigation Plan. In the Jurisdictional Annex prepared for RCSD, a risk matrix was developed to assess overall risk based on the probability of occurrence and impact of various hazards. From this assessment, earthquakes were estimated to have a "possible" probability of occurrence and a "limited" impact.

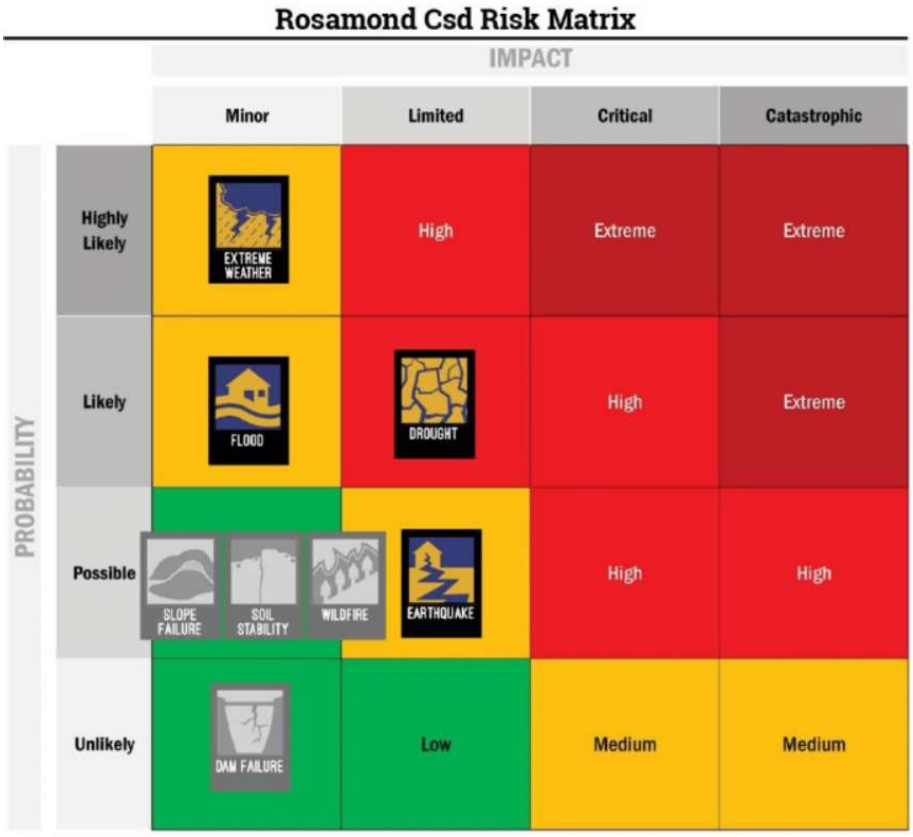

Figure 8-1: Rosamond CSD Hazard Risk Matrix

RCSD Seismic Hazard was evaluated in greater detail as part of the Kern County Multi-Jurisdictional Hazard Mitigation Plan, included as Appendix I.

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Appendix A: DWR UWMP Checklist

DWR CHECKLIST FOR 2020 UWMP, ROSAMOND COMMUNITY SERVICES DISTRICT

Water Code Section	Subject	Summary as Applies to UWMP	2020 Guidebook Location	2020 UWMP Location (e.g. Section(s), page number(s), table/figure number(s) or briefly describe why CWC section does not apply)
10615	Introduction and Overview	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Chapter 1	Section 1.3: Structure and Organization of the Plan
10630.5	Summary	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Chapter 1	Section 1.1: Overview Section 1.2: Purpose
10620(b)	Plan Preparation	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.	Section 2.2	Appendix J: RCSD UWMP Adoption Resolution
10620(d)(2)	Plan Preparation	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.	Section 2.6	Section 1.4.1: Coordination and Outreach Table 1-5: Notification to Cities and Counties Appendix C: Outreach Materials
10642	Plan Preparation	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.	Section 2.6.2	Section 7.2.4: Public Education and Outreach
10631(h)	System Supplies	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	Section 2.6, Section 6.1	Table 1-4: DWR Retail Water Supply Information Exchange
10631(a)	System Description	Describe the water supplier service area.	Section 3.1	Section 1.5: System Description
10631(a)	System Description	Describe the climate of the service area of the supplier.	Section 3.3	Section 1.7: Climate Table 1-11: Climate Data Figure 1-3: Climate Data
10631(a)	System Description	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	Section 3.4	Section 1.5.2.1: Population Projections Tabe 1-7: Population - Current and Projected
10631(a)	System Description	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	Section 3.4.2	Section 1.5.2.2: Demographics and Socioeconomics
10631(a)	System Description and Baselines and Targets	Indicate the current population of the service area.	Sections 3.4 and 5.4	Section 1.5.2.1: Population Projections Tabe 1-7: Population - Current and Projected
10631(a)	System Description	Describe the land uses within the service area.	Section 3.5	Section 1.6: Land Uses in the Service Area
10631(d)(1)	System Water Use	Quantify past, current, and projected water use, identifying the uses among water use sectors.	Section 4.2	Section 2.3.3: Past Water Use Section 2.3.5: Current Water Use Section 2.3.6: Projected Water Use
10631(d)(3)(C)	System Water Use	Retail suppliers shall provide data to show the distribution loss standards were met.	Section 4.2.4	Section 2.3.4: Distribution System Water Losses
10631(d)(4)(A)	System Water Use	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	Section 4.2.6	Section 2.3.6.4: Effects of Codes, Standards, and Ordinances
10631(d)(4)(B)	System Water Use	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	Section 4.2.6	Section 2.3.6.4: Effects of Codes, Standards, and Ordinances
10631(d)(3)(A)	System Water Use	Report the distribution system water loss for each of the 5 years preceding the plan update.	Section 4.3.2.4	Table 2-2: Last Five Years of Water Loss Audit Reporting Appendix D: Water Loss Audits
10631.1(a)	System Water Use	Include projected water use needed for lower income housing projected in the service area of the supplier.	Section 4.4	Section 2.3.7: Low Income Projected Water Demands
10635(b)	System Water Use	Demands under climate change considerations must be included as part of the drought risk assessment.	Section 4.5	Section 1.8: Potential Effects of Climate Change Section 2.3.6.3: Effects of Climate Change on Water Use
10608.20(e)	Baselines and Targets	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.	Chapter 5	Section 3: SB X7-7 Baseline and Targets Appendix E: SBx7-7 Compliance Form
10608.24(a)	Baselines and Targets	Retail suppliers shall meet their water use target by December 31, 2020.	Chapter 5	Section 3.1.2: Compliance Water Use Targets
10608.24(d)(2)	Baselines and Targets	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.	Section 5.2	RCSD did not adjust its compilance.
10608.22	Baselines and Targets	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.	Section 5.5	Section 3.1.1: 2020 Baseline Demand and Target Table 3-1: DWR Baselines and Targets Summary Retail Supplier or Regional Alliance Only
10608.4	Baselines and Targets	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Section 5.5 and Appendix E	Appendix E: SBx7-7 Compliance Form
10631(b)(1)	System Supplies	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.	Sections 6.1 and 6.2	Section 6: Reliability Planning

Water Code Section	Subject	Summary as Applies to UWMP	2020 Guidebook Location	2020 UWMP Location (e.g. Section(s), page number(s), table/figure number(s) or briefly describe why CWC section does not apply)
10631(b)(1)	System Supplies	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, *including changes in supply due to climate change.*	Sections 6.1	Section 6.5: Drought Risk Assessment
10631(b)(2)	System Supplies	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	Section 6.1	Section 4: Water Resources Section 6.5.1: Data and Methodologies Used
10631(b)(3)	System Supplies	Describe measures taken to acquire and develop planned sources of water.	Section 6.1.1	Section 4: Water Resources Section 6.5.1: Data and Methodologies Used
10631(b)	System Supplies	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	Section 6.2.8	Section 4.5: Summary of Existing and Planned Sources of Water
10631(b)	System Supplies	Indicate whether groundwater is an existing or planned source of water available to the supplier.	Section 6.2	Section 4.2: Groundwater Section 6.5.1.2.1: Groundwater
10631(b)(4)(A)	System Supplies	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.	Section 6.2.2	
10631(b)(4)(B)	System Supplies	Describe the groundwater basin.	Section 6.2.2	Section 4.2: Groundwater
10631(b)(4)(B)	System Supplies	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.	Section 6.2.2	Section 4.2.1 Basin Description
10631(b)(4)(B)	System Supplies	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.	Section 6.2.2.1	N/A, basin is adjudicated
10631(b)(4)(C)	System Supplies	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	Section 6.2.2.4	Section 4.2: Groundwater Section 4.2.1: Banked Groundwater Table 4-1: Groundwater Volume Pumped]
10631(b)(4)(D)	System Supplies	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	Section 6.2.2	Table 4-5: Water Supplies - Projected
10631(c)	System Supplies	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	Section 6.2.7	N/A, no anticipated exchanges or transfers
10633(b)	System Supplies (Recycled Water)	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.	Section 6.2.5	Section 5.1: Wastewater Collection, Treatment, and Disposal Table 5-1: Wastewater Collected Within Service Area in 2020 Table 5-2: Wastewater Treatment and Discharge Within Service Area in 2020
10633(c)	System Supplies (Recycled Water)	Describe the recycled water currently being used in the supplier's service area.	Section 6.2.5	Section 5.2: Recycled Water and Water Reuse Planning
10633(d)	System Supplies (Recycled Water)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	Section 6.2.5	Section 5.1: Wastewater Collection, Treatment, and Disposal
10633(e)	System Supplies (Recycled Water)	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 touses previously projected.	Section 6.2.5	Recycled water is not used in RCSD.
10633(f)	System Supplies (Recycled Water)	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.	Section 6.2.5	Recycled water is not used in RCSD.
10633(g)	System Supplies (Recycled Water)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	Section 6.2.5	Recycled water is not used in RCSD.
10631(g)	System Supplies	Describe desalinated water project opportunities for long-term supply.	Section 6.2.6	Desalination is not an option at RCSD.
10633(a)	System Supplies (Recycled Water)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	Section 6.2.5	Section 5.1: Wastewater Collection, Treatment, and Disposal
10631(f)	System Supplies	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.	Section 6.2.8, Section 6.3.7	Table 4-3: Expected Future Water Supply Projects or Programs
10631.2(a)	System Suppliers, Energy Intensity	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	Section 6.4 and Appendix O	Section 4.7: Embedded Energy Current Supply Portfolio Appendix G: DWR Energy intensity Tables
10634	Water Supply Reliability Assessment	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	Section 7.2	Section 4.6: Water Quality Table 4-6: RCSD Water Quality
10620(f)	Water Supply Reliability Assessment	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Section 7.2.4	Section 6: Reliability Planning
10635(a)	Water Supply Reliability Assessment	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Section 7.3	Section 6.2: Normal Water Year Section 6.3: Single Dry Year Section 6.5 Drought Risk Assessment

Water Code Section	Subject	Summary as Applies to UWMP	2020 Guidebook Location	2020 UWMP Location (e.g. Section(s), page number(s), table/figure number(s) or briefly describe why CWC section does not apply)
10635(b)	Water Supply Reliability Assessment	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Section 7.3	Section 6.5: Drought Risk Assessment
10635(b)(1)	Water Supply Reliability Assessment	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.	Section 7.3	Section 6.5.1: Data and Methodologies Used
10635(b)(2)	Water Supply Reliability Assessment	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Section 7.3	Section 6: Reliability Planning
10635(b)(3)	Water Supply Reliability Assessment	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Section 7.3	Section 6.5: Drought Risk Assessment
10635(b)(4)	Water Supply Reliability Assessment	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Section 7.3	Section 6: Reliability Planning
10632(a)	Water Shortage Contingency Planning	Provide a water shortage contingency plan (WSCP) with specified elements below.	Chapter 8	Appendix H: Water Shortage Contingency Plan
10632(a)(1)	Water Shortage Contingency Planning	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Chapter 8	WSCP Section 2: Water Supply Reliability Analysis
10632(a)(10)	Water Shortage Contingency Planning	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.	Section 8.10	WSCP Section 3: Annual Water Supply and Demand Assessment Procedures
10632(a)(2)(A)	Water Shortage Contingency Planning	Provide the written decision- making process and other methods that the supplier will use each year to determine its water reliability.	Section 8.2	WSCP Section 3: Annual Water Supply and Demand Assessment Procedures
10632(a)(2)(B)	Water Shortage Contingency Planning	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.	Section 8.2	WSCP Section 3.5: Current Predicted Shortages Based on Annual Water Supply and Demand Assessment
10632(a)(3)(A)	Water Shortage Contingency Planning	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.	Section 8.3	WSCP Figure 4.1: Shortage Stages Crosswalk WSCP Table 4-1: Water Shortage Contingency Plan Levels
10632(a)(3)(B)	Water Shortage Contingency Planning	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Section 8.3	WSCP Figure 4.1: Shortage Stages Crosswalk
10632(a)(4)(A)	Water Shortage Contingency Planning	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Section 8.4	WSCP Section 5.1: Supply Augmentation Actions WSCP Table 5-1: Supply Augmentation and Other Actions
10632(a)(4)(B)	Water Shortage Contingency Planning	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Section 8.4	WSCP Section 5.2: Demand Reduction Actions WSCP Table 5-2: Demand Reduction Actions
10632(a)(4)(C)	Water Shortage Contingency Planning	Specify locally appropriate operational changes.	Section 8.4	N/A - no local operational changes
10632(a)(4)(D)	Water Shortage Contingency Planning	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Section 8.4	N/A - no additional mandatory prohibitions
10632(a)(4)(E)	Water Shortage Contingency Planning	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Section 8.4	WSCP Table 5-2: Demand Reduction Actions
10632.5	Water Shortage Contingency Plan	The plan shall include a seismic risk assessment and mitigation plan.	Section 8.4.6	WSCP Section 4.6: Seismic Risk Analysis
10632(a)(5)(A)	Water Shortage Contingency Planning	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Section 8.5	WSCP Section 6: Communication Protocols
10632(a)(5)(B) 10632(a)(5)(C)	Water Shortage Contingency Planning	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.	Section 8.5 and 8.6	WSCP Section 6: Communication Protocols
10632(a)(6)	Water Shortage Contingency Planning	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Section 8.6	WSCP Section 7: Penalties, Charges, and Other Enforcement of Prohibitions
10632(a)(7)(A)	Water Shortage Contingency Planning	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Section 8.7	WSCP Section 8: Legal Authorities
10632(a)(7)(B)	Water Shortage Contingency Planning	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Section 8.7	WSCP Section 8: Legal Authorities
10632(a)(7)(C)	Water Shortage Contingency Planning	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.	Section 8.7	WSCP Section 3.6: Coordination with Cities and Counties

Water Code Section	Subject	Summary as Applies to UWMP	2020 Guidebook Location	2020 UWMP Location (e.g. Section(s), page number(s), table/figure number(s) or briefly describe why CWC section does not apply)
10632(a)(8)(A)	Water Shortage Contingency Planning	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Section 8.8	WSCP Section 9: Financial Consequences of Actions During Shortages
10632(a)(8)(B)	Water Shortage Contingency Planning	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Section 8.8	WSCP Section 9: Financial Consequences of Actions During Shortages
10632(a)(8)(C)	Water Shortage Contingency Planning	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Section 8.8	WSCP Section 9: Financial Consequences of Actions During Shortages
10632(a)(9)	Water Shortage Contingency Planning	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.	Section 8.9	WSCP Section 10: Monitoring and Reportin
10632(b)	Water Shortage Contingency Planning	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Section 8.11	WSCP Section 12: Special Water Feature Distinction
10635(c)	Plan Adoption, Submittal, and Implementation	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 30 days after the submission of the plan to DWR.	Sections 8.12 and 10.4	Appendix C: Outreach Materials
10632(c)	Water Shortage Contingency Planning	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Section 8.14	Appendix C: Outreach Materials
10631(e)(1)	Demand Management Measures	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Sections 9.2 and 9.3	Section 7: Demand Management Measures
10608.26(a)	Plan Adoption, Submittal, and Implementation	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Chapter 10	Appendix C: Outreach Materials
10621(b)	Plan Adoption, Submittal, and Implementation	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. Reported in Table 10-1.	Section 10.2.1	Table 1-5: Notification to Cities and Counties Appendix C: Outreach Materials
10621(f)	Plan Adoption, Submittal, and Implementation	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Section 10.4	Appendix K: RCSD UWMP Adoption Resolution
10642	Plan Adoption, Submittal, and Implementation	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.	Sections 10.2.2, 10.3, and 10.5	Appendix C: Outreach Materials
10642	Plan Adoption, Submittal, and Implementation	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Section 10.2.2	Appendix C: Outreach Materials
10642	Plan Adoption, Submittal, and Implementation	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Section 10.3.2	Appendix K: RCSD UWMP Adoption Resolution
10644(a)	Plan Adoption, Submittal, and Implementation	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Section 10.4	Section 1.4.2: Plan Availability
10644(a)(1)	Plan Adoption, Submittal, and Implementation	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.	Section 10.4	Section 1.4.2: Plan Availability
10644(a)(2)	Plan Adoption, Submittal, and Implementation	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Sections 10.4.1 and 10.4.2	Section 1.4.2: Plan Availability
10645(a)	Plan Adoption, Submittal, and Implementation	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.	Section 10.5	Section 1.4.2: Plan Availability
10645(b)	Plan Adoption, Submittal, and Implementation	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.	Section 10.5	Section 1.4.2: Plan Availability
10621(c)	Plan Adoption, Submittal, and Implementation	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Section 10.6	
10644(b)	Plan Adoption, Submittal, and Implementation	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Section 10.7.2	

Appendix B: DWR Standardized Tables

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 *
Add additional rows as needed			
1510018	Rosamond Community Services District	5,191	2,229
	TOTAL	5,191	2,229

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

NOTES: In 2020, RCSD's total supplies (groundwater wells and AVEK purchases) totaled 2,492 AF. Metered consumption totals 2,229 AF (reported in Table 2-1). The discrepancy between the two numbers is accounted for by the losses reported in the Water Loss Audit (259 AF). Table 4-1 reports total metered consumption as well as losses recorded in the Water Loss Audit.

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from drop down list)
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		
NOTES:			

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

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	18,372	19,890	21,532	23,311	25,237	27,321
NOTES:						

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 Actual		
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume[2]
Add additional rows as needed			
Single Family		Drinking Water	1,779
Multi-Family		Drinking Water	204
Commercial		Drinking Water	122
Institutional/Governmental		Drinking Water	50
Landscape		Drinking Water	42
Other	Construction & Bulk Meter	Drinking Water	36
Losses		Drinking Water	259
		TOTAL	2,493

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.*
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3. [2]

NOTES: In 2020, RCSD's total supplies (groundwater wells and AVEK purchases) totaled 2,492 AF. Metered consumption totals 2,229 AF (reported in Table 2-1). The discrepancy between the two numbers is accounted for by the losses reported in the Water Loss Audit (259 AF). Table 4-1 reports total metered consumption as well as losses recorded in the Water Loss Audit.

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use[2] *Report To the Extent that Records are Available*				
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		1,926	2,085	2,257	2,443	2,645
Multi-Family		221	239	259	280	304
Commercial		132	143	155	168	181
Institutional/Governmental		54	59	64	69	75
Landscape		46	50	54	58	63
Other	Construction & Bulk Meter	35	37	40	44	47
Losses		285	309	334	362	392
	TOTAL	2,699	2,922	3,163	3,424	3,707
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 *From Tables 4-1R and 4-2 R*	2,493	2,699	2,922	3,163	3,424	3,707
Recycled Water Demand[1] *From Table 6-4*	0	0	0	0	0	0
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]						
TOTAL WATER USE	2,493	2,699	2,922	3,163	3,424	3,707

[1] Recycled water demand fields will be blank until Table 6-4 is complete *[2] 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 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found.	Section 2.3.6.3
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
01/2016	187
01/2017	230
01/2018	229
01/2019	268
01/2020	259
[1] *Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.* [2] ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

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	*2001*	*2010*	*177*	*159*
5 Year	*2003*	*2007*	*177*	

**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 **From** **SB X7-7 2020 Compliance Form** *Retail Supplier or Regional Alliance Only*				
2020 GPCD				
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*	2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
121	*0*	*121*	*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						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*	2017*	2018*	2019*	2020*
Add additional rows as needed						
Alluvial Basin	Antelope Valley Basin	2319	2415	2430	2430	2457
	TOTAL	2,319	2,415	2,430	2,430	2,457
**** 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.
	Percentage of 2020 service area covered by wastewater collection system *(optional)*
	Percentage of 2020 service area population covered by wastewater collection system *(optional)*

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2020 *	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
RCSD	Metered	1,303	RCSD	RWWTP	Yes	No
Total Wastewater Collected from Service Area in 2020:		1,303				

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

NOTES:

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

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

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)* [2]	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 volumes [1]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
RWWTP				Percolation ponds	No	Secondary, Undisinfected	1,303	1,303			
Total							1,303	1,303	0	0	0

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

NOTES:

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:	
Name of Supplier Operating the Recycled Water Distribution System:	
Supplemental Water Added in 2020 (volume) *Include units*	
Source of 2020 Supplemental Water	

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units* [1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020 [1]	2025 [1]	2030 [1]	2035 [1]	2040 [1]	2045 [1] (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)										
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)										
				Total:	0	0	0	0	0	0
				2020 Internal Reuse						

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

NOTES:

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.		
Page 5-1	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			
		Total	0
***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 *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
***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 [1]**	**2020 Actual Use[1]**
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)		
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)		
Total	0	0
[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.		
NOTE:		

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
Drop down list May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool		Actual Volume*	Water Quality Drop Down List	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Groundwater (not desalinated)		2,457	Drinking Water	
Surface water (not desalinated)	Purchased from AVEK	36	Drinking Water	
	Total	2,493		0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES: Surface water purchased from AVEK is from the SWP.				

Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply		Projected Water Supply * Report To the Extent Practicable									
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	**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											
Groundwater (not desalinated)		2,660		2,880		3,118		3,375		3,654	
Surface water (not desalinated)		39		42		45		49		53	
Total		2,699	0	2,922	0	3,163	0	3,424	0	3,707	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*											
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**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		☐	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	**% of Average Supply**
Average Year		3707	100%
Single-Dry Year	2014	3374	91%
Consecutive Dry Years 1st Year	1988	3382	91%
Consecutive Dry Years 2nd Year	1989	3456	93%
Consecutive Dry Years 3rd Year	1990	3386	91%
Consecutive Dry Years 4th Year	1991	3431	93%
Consecutive Dry Years 5th Year	1992	3403	92%

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:
Supplies include groundwater pumped by RCSD and surface water purchased from AVEK. Although the volume of water recieved from AVEK varies from year-to-year, RCSD has banked water supplies that can be used to make up deficits between supply and demand.
Water supplies in an average year are assumed to meet all future demands through 2045.

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals (*autofill from Table 6-9)*	2,699	2,922	3,163	3,424	3,707
Demand totals *(autofill from Table 4-3)*	2,699	2,922	3,163	3,424	3,707
Difference	0	0	0	0	0
NOTES:					

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals*	2,699	2,922	3,163	3,424	3,707
Demand totals*	2,699	2,922	3,163	3,424	3,707
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: Supplies include groundwater pumped by RCSD and surface water purchased from AVEK. Although the volume of water recieved from AVEK varies from year-to-year, RCSD has banked water supplies that can be used to make up deficits between supply and demand. Thus, zero deficit is shown between supply and demand in a single dry years.					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	2,699	2,922	3,163	3,424	3,707
	Demand totals	2,699	2,922	3,163	3,424	3,707
	Difference	0	0	0	0	0
Second year	Supply totals	2,742	2,968	3,214	3,479	3,766
	Demand totals	2,742	2,968	3,214	3,479	3,766
	Difference	0	0	0	0	0
Third year	Supply totals	2,786	3,016	3,265	3,535	3,827
	Demand totals	2,786	3,016	3,265	3,535	3,827
	Difference	0	0	0	0	0
Fourth year	Supply totals	2,830	3,064	3,317	3,591	3,888
	Demand totals	2,830	3,064	3,317	3,591	3,888
	Difference	0	0	0	0	0
Fifth year	Supply totals	2,876	3,113	3,370	3,649	3,950
	Demand totals	2,876	3,113	3,370	3,649	3,950
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals	2,922	3,163	3,424	3,707	4,013
	Demand totals	2,922	3,163	3,424	3,707	4,013
	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: Supplies include groundwater pumped by RCSD and surface water purchased by AVEK. Although the volume of water recieved from AVEK varies from year-to-year, RCSD has banked water supplies that can be used to make up deficits between supply and demand.						

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

2021	Total
Total Water Use	2,573
Total Supplies	2,573
Surplus/Shortfall w/o WSCP Action	(0)
Planned WSCP Actions (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	2,604
Total Supplies	2,428
Surplus/Shortfall w/o WSCP Action	(177)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	177
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	2,636
Total Supplies	2,407
Surplus/Shortfall w/o WSCP Action	(229)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	229
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	2,667
Total Supplies	2,469
Surplus/Shortfall w/o WSCP Action	(198)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	198
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	2,699
Total Supplies	2,477
Surplus/Shortfall w/o WSCP Action	(221)
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	221
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 (*Narrative description*)
1	Up to 10%	90-100% of normal supply. Demand reduction is voluntary.
2	Up to 20%	80-90% of normal supply. Insufficient supply to provide 80% for the next two years, or loss of 10% from contamination. Mandatory demand reduction measures, including prohibition on landscape irrigation, decorative water features, and wash water.
3	Up to 30%	70-80% of normal supply. Insufficient supply to provide 75% for the next two years, first year excess groundwater pumped, or loss of 20% from contamination. Mandatory demand reduction measures, including prohibitions on landscape irrigation, decorative water features, wash water, and reduction in usage for
4	Up to 40%	60-70% of normal supply. Insufficient supply to provide 65% for the next two years, second year excess groundwater pumped, or loss of 30% from contamination. Mandatory demand reduction measures, including prohibitions on landscape irrigation, decorative water features, wash water, and commercial/manufacturing/processing usage (on an as-needed basis determined by the Board of Directors)
5	Up to 50%	50-60% of normal supply. Insufficient supply to provide 50% for the next two years. No excess groundwater available or disaster loss. Mandatory demand reduction measures, including prohibitions on landscape irrigation, decorative water features, wash water, commercial/manufacturing/processing usage (on an as-needed basis determined by the Board of Directors), and new connections.
6	>50%	Less than 50% of normal supply. Insufficient supply to provide 50% for the next two years. No excess groundwater available, or disaster loss. Mandatory demand reduction measures, including prohibitions on landscape irrigation, decorative water features, wash water, commercial/manufacturing/processing usage (on an as-needed basis determined by the Board of Directors), and new connections.

NOTES:
Stage 1 corresponds with RCSD's existing Stage 1 and Stage 2.
Stage 2 corresponds with RCSD's existing Stage 2 and Stage 3.
Stages 3 and 4 correspond with RCSD's existing Stage 4.
Stages 5 and 6 correspond with RCSD's existing Stage 5.

Submittal Table 8-2: Demand Reduction Actions

Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
Shortage Level 1	Expand Public Information Campaign	2%		No
Shortage Level 1	CII - Other CII restriction or prohibition	2%	CII customers cannot irrigate non-functional turf (ornamental landscape)	No
Shortage Level 1	Landscape - Restrict or prohibit runoff from landscape irrigation	2%	Irrigation using potable water resulting in runoff for more than 5 minutes is prohibited.	No
Shortage Level 1	Landscape - Other landscape restriction or prohibition	2%	Residential developments are prohibited from installing new turf in common areas of residential neighborhoods (excluding parks) and in residential front yards (exemption may be granted). Turf installation in single-family residential lots shall not exceed 20% of total yard. Installation of new turf in non-residential developments is prohibited unless specifically approved by the District.	No
Shortage Level 1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	1%	Allowing potable water to escape from breaks within a customer's plumbing system for more than 24 hours after notice is prohibited	No
Shortage Level 1	Other - Prohibit use of potable water for washing hard surfaces	1%	Use of potable water to wash paved areas except to alleviate safety or sanitation hazards is prohibited	No
Shortage Level 1	Other - Require automatic shut of hoses	1%	Washing automobiles and other types of mobile equipment without a shut off nozzle and bucket is prohibited	No
Shortage Level 1	Water Features - Restrict water use for decorative water features, such as fountains	1%	Use of potable water to clean, fill, or maintain decorative water features is prohibited	No
Shortage Level 1	CII - Restaurants may only serve water upon request	1%		No
Shortage Level 1	Moratorium or Net Zero Demand Increase on New Connections	1%	New construction meters shall not exceed the exiting number of currently authorized meters. A new meter shall only be issued when an old meter is returned	No
Shortage Level 2	Landscape - Limit landscape irrigation to specific days	3%	All irrigation shall be conducted every other day. During a 15-20% shortage, this is further restricted to Sundays, Mondays, and Wednesdays for odd number street addresses, and Sundays, Tuesdays, and Thursdays for even number street addresses.	Yes
Shortage Level 2	Landscape - Limit landscape irrigation to specific times	3%	All irrigation shall be conducted between 6 pm and 10 am during the winter, and between 8 pm and 7 am during the summer, for a maximum of 11 minutes in the morning and 11 minutes in the evening (22 minutes per day). During a 15-20% shortage, this is reduced to 8 minutes in the morning and 8 minutes in the evening (16 minutes per day).	Yes
Shortage Level 2	Water Features - Restrict water use for decorative water features, such as fountains	1%	All swimming pools, spas, ponds, and fountains shall be equipped with recirculating pumps	Yes
Shortage Level 2	Other water feature or swimming pool restriction	1%	During a 15-20% shortage, overfilling of swimming pools and spas is prohibited. Filling/refilling of ponds, streams, and artificial lakes is prohibited. The operation of any ornamental fountain or similar structure is prohibited except for short periods of time to prevent damage.	Yes
Shortage Level 2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	1%	All plumbing leaks, improperly adjusted sprinklers, or other water conduits/fixtures that require repair or adjustment shall be corrected to the satisfaction of the District	Yes
Shortage Level 2	Other	1%	Wash water from fire hydrants is strictly limited to fire fighting or other health, safety, and public welfare related activities	Yes
Shortage Level 2	Other - Require automatic shut of hoses	1%	Washing of automobiles and other types of mobile equipment is permitted with a hand-held bucket or a hand-held hose equipped with an automatic, positive shut-off nozzle for quick rinses. During a 15-20% shortage, washing is further restricted to between the hours of 5 pm and 8 am. Washing is permitted at any time at commercial car washes but is subject to mandatory reductions in volume as determined by the Board of Directors.	Yes

Shortage Level 3	Landscape - Prohibit certain types of landscape irrigation	1%	Irrigation of landscaping shall be limited to supporting minimal survival of trees and shrubs	Yes
Shortage Level 3	Landscape - Limit landscape irrigation to specific days	2%	Irrigation is restricted to Saturdays and Wednesdays for odd number street addresses, and Sundays and Thursdays for even number street addresses.	Yes
Shortage Level 3	Landscape - Limit landscape irrigation to specific times	2%	All irrigation shall be conducted between 6 pm and 10 am during the winter, and between 8 pm and 7 am during the summer, for a maximum of 6 minutes in the morning and 6 minutes in the evening (12 minutes per day)	Yes
Shortage Level 3	Other - Require automatic shut of hoses	1%	Washing of automobiles and other types of mobile equipment is prohibited.	Yes
Shortage Level 3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	1%	Washing is permitted at any time at commercial car washes as long as the car wash only uses partially reclaimed or recycled water. Water usage at commercial car washes is subject to mandatory reductions in volume as determined by the Board of Directors.	Yes
Shortage Level 3	Other water feature or swimming pool restriction	1%	Filling, refilling, or adding water to swimming pools, spas, ponds, streams, and artificial lakes is prohibited.	Yes
Shortage Level 3	Other water feature or swimming pool restriction	1%	The use of water for cooling mists is prohibited	Yes
Shortage Level 3	CII - Other CII restriction or prohibition	1%	The use of water for commercial, manufacturing, or processing purposes shall be reduced in volume by an amount determined by the Board of Directors	Yes
Shortage Level 3	Moratorium or Net Zero Demand Increase on New Connections	1%	No new meters will be installed, unless the project is necessary to protect public health, safety, or welfare, the project uses reclaimed water, the project can demonstrate no net increase in water usage, or a conservation offset can be provided.	Yes
Shortage Level 4	Landscape - Prohibit certain types of landscape irrigation	1%	Irrigation of landscaping shall be limited to supporting minimal survival of trees and shrubs	Yes
Shortage Level 4	Landscape - Limit landscape irrigation to specific days	2%	Irrigation is restricted to Saturdays and Wednesdays for odd number street addresses, and Sundays and Thursdays for even number street addresses.	Yes
Shortage Level 4	Landscape - Limit landscape irrigation to specific times	2%	All irrigation shall be conducted between 6 pm and 10 am during the winter, and between 8 pm and 7 am during the summer, for a maximum of 6 minutes in the morning and 6 minutes in the evening (12 minutes per day)	Yes
Shortage Level 4	Other - Require automatic shut of hoses	1%	Washing of automobiles and other types of mobile equipment is prohibited.	Yes
Shortage Level 4	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	1%	Washing is permitted at any time at commercial car washes as long as the car wash only uses partially reclaimed or recycled water. Water usage at commercial car washes is subject to mandatory reductions in volume as determined by the Board of Directors.	Yes
Shortage Level 4	Other water feature or swimming pool restriction	1%	Filling, refilling, or adding water to swimming pools, spas, ponds, streams, and artificial lakes is prohibited.	Yes
Shortage Level 4	Other water feature or swimming pool restriction	1%	The use of water for cooling mists is prohibited	Yes
Shortage Level 4	CII - Other CII restriction or prohibition	1%	The use of water for commercial, manufacturing, or processing purposes shall be reduced in volume by an amount determined by the Board of Directors	Yes
Shortage Level 4	Moratorium or Net Zero Demand Increase on New Connections	1%	No new meters will be installed, unless the project is necessary to protect public health, safety, or welfare, the project uses reclaimed water, the project can demonstrate no net increase in water usage, or a conservation offset can be provided.	Yes
Shortage Level 5	Landscape - Prohibit all landscape irrigation	5%	All outdoor watering and irrigation is prohibited, except for the use of graywater in accordance with Kern County Health Department Regulations	Yes
Shortage Level 5	Moratorium or Net Zero Demand Increase on New Connections	5%	No new connections are allowed	Yes
Shortage Level 6	Landscape - Prohibit all landscape irrigation	5%	All outdoor watering and irrigation is prohibited, except for the use of graywater in accordance with Kern County Health Department Regulations	Yes
Shortage Level 6	Moratorium or Net Zero Demand Increase on New Connections	5%	No new connections are allowed	Yes

NOTES:
Each shortage stage also includes any demand reduction action taken at previous stages. At Stage 1, demand reduction actions are voluntary and enforced through public education and awareness. At Stages 2 and above, all actions are mandatory, including actions carried over from Stage 1, and violations are subject to criminal, civil, and administrative penalties, and remedies. The first two Stage 1 actions listed (expanding public information campaign and prohibition of CII irrigation of non-functional turf) are not included in the RCSD water conservation ordinance, rather, they are mandated by California's recently adopted Emergency Water Conservation Regulation (2022). Due to demand hardening following the 2015 drought, RCSD does not expect that demand reduction actions will be able to reduce a shortage gap by more than 10%, and instead expects that at least 90% of any shortage gap will be closed using supply augmentation actions. The estimated percent reduction of shortage gap presented in this table reflects the overall low impact that RCSD expects to see from demand reduction actions.

Submittal Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
As needed	Stored Emergency Supply	100%	RCSD's banked groundwater fully makes up supply deficits that the District faces
NOTES: Stored emergency supply includes banked groundwater and carryover from previous years that is intended to fully make up any supply deficit. RCSD's long-term goals include 3-4 years of supplies maintained as banked groundwater.			

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
City of Palmdale	Yes	Yes
City of Lancaster	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
Los Angeles County	Yes	Yes
Kern County	Yes	Yes
NOTES:		

Appendix C: Outreach Materials

April 8, 2022

[Name of Contact, Title]
[Name of Water Agency]
[Address Line 1]
[City, State, Zip Code]

Subject: Public Notification for 2020 Urban Water Management Plan for Rosamond CSD

To Whom it May Concern:

Rosamond Community Services District (RCSD) is undertaking the review, update, and revision of its Urban Water Management Plan (UWMP). RCSD is located in Kern County and provides drinking water service to the unincorporated town of Rosamond. The 2020 UWMP is a planning document in which water suppliers evaluate and compare their water supply and reliability to their existing and projected demands. RCSD has also revised its Water Shortage Contingency Plan (WSCP) which is now a separate document from the UWMP.

The 2020 UWMP and the 2020 WSCP will be available for public review starting on June 8, 2022 with comments closing on June 22, 2022 at [URL]
We would like to solicit your input during this timeframe.

RCSD will hold a public hearing on June 22, 2022 at 6:00 pm prior to adoption of the 2020 UWMP and 2020 WSCP. The hearing will be held at the location listed in the meeting agenda. The agenda including the materials for the public hearing can be found at https://www.rosamondcsd.com/about-us/board-of-directors/board-meetings-schedule

If you have questions or comments about the 2020 UWMP or WSCP, please contact Karina Yap by phone (916-858-2710) or email (KarinaYap@kennedyjenks.com) no later than June 17, 2022.

Please let us know if you have any questions.

Yours truly,

John Houghton
Public Works Manager

Appendix D: DWR Population Tool Output

Persons Per Connection

Year	Census Population	Number of Connections	Persons Per Connection
1990	7,566		3.65
1991			3.65
1992			3.65
1993			3.65
1994			3.65
1995			3.65
1996			3.65
1997			3.65
1998			3.65
1999			3.65
2000	12,959		3.65
2001			3.65
2002			3.65
2003			3.65
2004			3.65
2005			3.65
2006			3.65
2007			3.65
2008			3.65
2009			3.65
2010	16,355	4477	3.65
2011			3.65
2012			3.65
2013			3.65
2014			3.65
2015			3.65
2020			3.65

10 to 15 Year Baseline Population Calculations

	Year	Number of Connections	Persons Per Connection	Total Population
Year 1	2001		3.65	
Year 2	2002		3.65	
Year 3	2003		3.65	
Year 4	2004		3.65	
Year 5	2005		3.65	
Year 6	2006		3.65	
Year 7	2007		3.65	
Year 8	2008		3.65	
Year 9	2009		3.65	
Year 10	2010	4477	3.65	16,355

5 Year Baseline Population Calculations

	Year	Number of Connections	Persons Per Connection	Total Population
Year 1	2003		3.65	
Year 2	2004		3.65	
Year 3	2005		3.65	
Year 4	2006		3.65	
Year 5	2007		3.65	

2020 Compliance Year Population Calculations

Year	Number of Connections	Persons Per Connection	Total Population
2020	5029	3.65	18,372

Appendix E: Water Loss Audits

AWWA Free Water Audit Software:
Reporting Worksheet

? Click to access definition
+ Click to add a comment

Water Audit Report for: Rosamond Community Services District (1510018)
Reporting Year: 2016 1/2016 - 12/2016

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

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

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

Master Meter and Supply Error Adjustments

WATER SUPPLIED

					Pcnt:	Value:	
Volume from own sources:	5	756.190	MG/Yr	3			MG/Yr
Water imported:	5	2.930	MG/Yr	3			MG/Yr
Water exported:	n/a	0.000	MG/Yr				MG/Yr

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

WATER SUPPLIED: 759.120 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	9	696.150	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	1.898	MG/Yr		1.898	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 698.048 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 61.072 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		1.898	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	14.207	MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		1.740	MG/Yr	0.25%		MG/Yr

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

Apparent Losses: 17.845 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 43.227 MG/Yr

WATER LOSSES: 61.072 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 62.970 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	97.3	miles
Number of active AND inactive service connections:	10	5,030	
Service connection density:		52	conn./mile main

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

Average length of customer service line:

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

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

Average operating pressure:	5	80.0	psi

COST DATA

Total annual cost of operating water system:	10	$4,014,166	$/Year	
Customer retail unit cost (applied to Apparent Losses):	4	$2.24	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$2,994.00	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 59 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

1: Volume from own sources
2: Customer metering inaccuracies
3: Customer retail unit cost (applied to Apparent Losses)

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Rosamond Community Services District (1510018)
Reporting Year: 2017 1/2017 - 12/2017

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

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

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

Master Meter and Supply Error Adjustments

WATER SUPPLIED

					Pcnt:	Value:	
Volume from own sources:	5	787.490	MG/Yr	3			MG/Yr
Water imported:	5	6.520	MG/Yr	3			MG/Yr
Water exported:	n/a	0.000	MG/Yr				MG/Yr

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

WATER SUPPLIED: 794.010 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	9	717.100	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	1.985	MG/Yr		1.985	MG/Yr

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

AUTHORIZED CONSUMPTION: 719.085 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

74.925 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:	1.985	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	14.635	MG/Yr	2.00%	MG/Yr
Systematic data handling errors:		1.793	MG/Yr	0.25%	MG/Yr

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

Apparent Losses: 18.412 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 56.513 MG/Yr

WATER LOSSES: 74.925 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 76.910 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	97.3	miles
Number of active AND inactive service connections:	10	5,030	
Service connection density:		52	conn./mile main

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

Average length of customer service line:

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

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

Average operating pressure:	5	80.0	psi

COST DATA

Total annual cost of operating water system:	10	$3,389,393	$/Year	
Customer retail unit cost (applied to Apparent Losses):	4	$2.16	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$2,887.00	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 59 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

1: Volume from own sources
2: Customer metering inaccuracies
3: Customer retail unit cost (applied to Apparent Losses)

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
\+ Click to add a comment

Water Audit Report for: Rosamond Community Services District (1510018)
Reporting Year: 2018 1/2018 - 12/2018

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

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

					Master Meter and Supply Error Adjustments		
					Pcnt:	Value:	
Volume from own sources:	6	791.800	MG/Yr	3			MG/Yr
Water imported:	4	1.955	MG/Yr	3			MG/Yr
Water exported:	n/a	0.000	MG/Yr				MG/Yr

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

WATER SUPPLIED: 793.755 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	4	717.219	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	1.984	MG/Yr		1.984	MG/Yr

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

AUTHORIZED CONSUMPTION: 719.203 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

74.552 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		1.984	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	14.637	MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		1.793	MG/Yr	0.25%		MG/Yr

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

Apparent Losses: 18.415 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 56.137 MG/Yr

WATER LOSSES: 74.552 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 76.536 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	98.0	miles
Number of active AND inactive service connections:	10	5,088	
Service connection density:		52	conn./mile main

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

Average length of customer service line:

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

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

Average operating pressure: 5 80.0 psi

COST DATA

Total annual cost of operating water system:	10	$4,014,166	$/Year	
Customer retail unit cost (applied to Apparent Losses):	6	$2.24	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$283.35	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 58 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

1: Volume from own sources
2: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
\+ Click to add a comment

Water Audit Report for: Rosamond Community Services District (1510018)
Reporting Year: 2019 1/2019 - 12/2019

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

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

					Master Meter and Supply Error Adjustments		
					Pcnt:	Value:	
Volume from own sources:	5	742.017	MG/Yr	3			MG/Yr
Water imported:	5	28.349	MG/Yr	3			MG/Yr
Water exported:	n/a	0.000	MG/Yr				MG/Yr

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

WATER SUPPLIED: 770.366 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	4	680.985	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	1.926	MG/Yr		1.926	MG/Yr

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

AUTHORIZED CONSUMPTION: 682.911 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

87.455 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		1.926	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	13.898	MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		1.702	MG/Yr	0.25%		MG/Yr

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

Apparent Losses: 17.526 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 69.929 MG/Yr

WATER LOSSES: 87.455 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 89.381 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	100.7	miles
Number of active AND inactive service connections:	10	5,116	
Service connection density:		51	conn./mile main

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

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

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

Average operating pressure:	5	80.0	psi

COST DATA

Total annual cost of operating water system:	10	$4,207,561	$/Year	
Customer retail unit cost (applied to Apparent Losses):	4	$2.91	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$359.96	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 53 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

1: Volume from own sources
2: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Rosamond Community Services District (1510018)
Reporting Year: 2020 1/2020 - 12/2020

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

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

					Master Meter and Supply Error Adjustments			
					Pcnt:		Value:	
Volume from own sources:	6	801.223	MG/Yr	3				MG/Yr
Water imported:	5	11.730	MG/Yr	3				MG/Yr
Water exported:	n/a	0.000	MG/Yr					MG/Yr
					Enter negative % or value for under-registration			
WATER SUPPLIED:		**812.953**	MG/Yr		Enter positive % or value for over-registration			

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:		Value:
Billed metered:	5	726.400	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	2.032	MG/Yr			2.032 MG/Yr
AUTHORIZED CONSUMPTION:		**728.432**	MG/Yr			

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

WATER LOSSES (Water Supplied - Authorized Consumption) **84.521** MG/Yr

Apparent Losses

				Pcnt:		Value:
Unauthorized consumption:		2.032	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	14.824	MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		1.816	MG/Yr	0.25%		MG/Yr

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

Apparent Losses: **18.673** MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **65.848** MG/Yr

WATER LOSSES: **84.521** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **86.553** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	101.1	miles
Number of active AND inactive service connections:	10	5,191	
Service connection density:		51	conn./mile main
Are customer meters typically located at the curbstop or property line?		Yes	
Average length of customer service line:			(length of service line, beyond the property boundary, that is the responsibility of the utility)

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

Average operating pressure:	5	80.0	psi

COST DATA

Total annual cost of operating water system:	10	$4,593,723	$/Year	
Customer retail unit cost (applied to Apparent Losses):	4	$2.91	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$318.56	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 57 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

1: Volume from own sources
2: Customer metering inaccuracies
3: Billed metered

Appendix F: SBx7-7 Compliance Form

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**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)	
☐	**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: 2020 Service Area Population	
2020 Compliance Year Population	
2020	18,372
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use							
Compliance Year 2020	**2020 Volume Into Distribution System** *This column will remain blank until SB X7-7 Table 4-A is completed.*	**2020 Deductions**					**2020 Gross Water Use**
		Exported Water *	**Change in Dist. System Storage*** (+/-)	**Indirect Recycled Water** *This column will remain blank until SB X7-7 Table 4-B is completed.*	**Water Delivered for Agricultural Use***	**Process Water** *This column will remain blank until SB X7-7 Table 4-D is completed.*	
	2,493			-		-	**2,493**
*** 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 5: 2020 Gallons Per Capita Per Day (GPCD)		
2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
2,493	18,372	**121**
NOTES:		

SB X7-7 Table 9: 2020 Compliance

Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD (Enter "0" if Adjustment Not Used)			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
121	-	-	-	-	121	159	**YES**

[1] *All values are reported in GPCD*

[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*

NOTES:

Appendix G: DWR Energy Intensity Tables

Urban Water Supplier: *Rosamond CSD*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/1/2021	**Urban Water Supplier Operational Control**		
End Date	12/31/2021			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*2,573*		*2,573*
Energy Consumed (kWh)		*770,821*		*770,821*
Energy Intensity (kWh/vol. converted to MG)		*919.4*	*0.0*	*919.4*

Quantity of Self-Generated Renewable Energy

kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Energy consumption is metered usage from RCSD's Well 8 and Well 9 for the 2021 calendar year. Volume of water consumed provided by RCSD in the annual water usage report.

Narrative:

Energy data was provided for Well 8 and Well 9. These are RCSD's two groundwater production wells. Total energy consumed is equal to the total kWh metered at each well with 445,714 kWh subtracted to account for solar energy production at Well 9 that is not used in RCSD's potable water production/delivery processes.

Appendix H: Water Shortage Contingency Plan

31 May 2022

2144513*00

Rosamond Community Services District 2020 Water Shortage Contingency Plan

Final

Kennedy Jenks

Kennedy Jenks

300 N. Lake Avenue, Suite 1020
Pasadena, California 91101
626-568-4300

2020 Water Shortage Contingency Plan

1 June 2022

Prepared for

Rosamond Community Services District
3179 35th Street West
Rosamond, California 93560

KJ Project No. 2144513*00

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Section 1: Introduction

This plan documents Rosamond Community Services District's (RCSD or District) Water Shortage Contingency Plan (WSCP) per requirements of the Urban Water Management Act, Section 10632 of the California Water Code. RCSD purchases a small amount of State Water Project (SWP) water from Antelope Valley-East Kern Water Agency (AVEK), in addition to water sourced from District-owned and operated groundwater wells which comprises the majority of RCSD's supply.

The purpose of the WSCP is to provide guidance if triggering events occur – whether from reduced supply, increased demand, or an emergency declaration – and identify corresponding actions to be taken during the various stages of a water shortage. The plan includes a description of stages which are intended to be equitable to all water customers and users while having the least impact on business, employment, and quality of life for residents.

Section 2: Water Supply Reliability Analysis

Water Code Section 10632(a) requires that every urban water supplier prepare and adopt a WSCP as part of its Urban Water Management Plan (UWMP). While the WSCP is a stand-alone document, it is updated and adopted in concert with the UWMP. Content of the WSCP is informed by the analysis of the water supply reliability assessment conducted pursuant to Water Code Section 10635 (contained in the UWMP). RCSD has two water supply sources – the SWP and local groundwater.

2.1 System Supplies

RCSD's two primary water sources include the SWP (purchased from AVEK) and groundwater from District-owned wells. Additionally, RCSD has banked groundwater supplies that can be used to supplement supply deficits.

2.2 Water Supply Reliability

2.2.1 Constraints on Water Sources

2.2.1.1 Groundwater

RCSD holds permanent water rights to 404.42 acre-feet (AF) of groundwater per year as part of the 2015 Antelope Valley groundwater adjudication. This is assumed to be 100% reliable and not impacted by drought. As part of the District's efforts to become increasingly reliant on local water sources rather than purchased water, the District requires that new developers provide their own water right (150 AF per year minimum). The District also recharges treated wastewater to continue to increase groundwater supply, with the goal being 3-4 years of banked groundwater available for use as needed to meet future deficits. In typical years, RCSD projects that groundwater will make up approximately 90% of their overall supply portfolio. Thus, 90% of the District's supplies in a given year can be estimated to be 100% reliable.

2.2.1.2 Surface Water

RCSD receives water from the SWP, through AVEK and is thus subject to SWP reliability, which is highly variable. However, RCSD's long term goals include decreasing reliance on the SWP by increasing the use of groundwater and banked supplies. In typical years, RCSD projects that surface water from the SWP will make up approximately 10% of their overall supply portfolio. The reliability of SWP supplies has been estimated using the percent reliability of the SWP as reported by AVEK.

Table 2-1: AVEK SWP Reliability

	Baseline Year	AVEK – Percent Available
Average Year		100%
Single Dry Year	2014	10%
Multiple Dry Year – 1	1988	12%
Multiple Dry Year – 2	19889	32%
Multiple Dry Year – 3	1990	13%
Multiple Dry Year – 4	1991	26%
Multiple Dry Year – 5	1992	18%

2.2.1.3 Overall Supply Reliability

The overall reliability of RCSD's supply portfolio is assumed to be a weighted average of groundwater reliability and SWP reliability. That is, since RCSD's supplies are assumed to be approximately 90% groundwater and 10% surface water from the SWP, the reliability of RCSD's supplies can be approximated as 90% groundwater availability (100% available in all scenarios) and 10% SWP availability (between 12% to 100% available, as estimated by AVEK). These assumptions are discussed in further detail in the 2020 UWMP. The results of the reliability assessment are shown below in Table 2-2.

Table 2-2: Basis of Water Year Data (Reliability Assessment)

	Volume Available (AF)	% of Average Supply, Excluding Banked Water	% of Average Supply, with Banked Water
Average Year	3,701	100%	100%
Single Dry Year	3,368	91%	100%
Multiple Dry Year – 1	3,376	91%	100%
Multiple Dry Year – 2	3,450	93%	100%
Multiple Dry Year – 3	3,380	91%	100%
Multiple Dry Year – 4	3,426	93%	100%
Multiple Dry Year – 5	3,397	92%	100%

Notes:

Supplies include groundwater pumped by RCSD and surface water purchased from AVEK. Although the volume of water received from AVEK varies from year-to-year, RCSD has banked water supplies that can be used to make up deficits between supply and demand. This is reflected in the "% of Average Supply, with Banked Water" column, which shows 100% availability in all scenarios, whereas the "% of Average Supply, Excluding Banked Water" column shows small deficits due to RCSD's use of the SWP.

Water supplies in an average year are assumed adequate to meet all future demands through 2045.

2.2.1.4 Water Supplies for New Developments

On December 23, 2015, the Rosamond Community Services District ("District") became part of a stipulated Physical Solution in the Antelope Groundwater Cases; Santa Clara Case No.: 1-05-CV-049053, which set severe limitations on the amount of groundwater the District could produce per year. Though State Water Project ("SWP") water can be purchased and delivered,

it cannot be used as a reliable source for the purposes of providing "Will-Serve" letters for new development.

In order to have the ability to provide Will-Serve letters to developers of proposed new developments, water rights—either ground water or Table A through the SWP—must be acquired. The District requires the developer pay a pass-through fee to purchase those rights, or the developer must acquire water rights and transfer those rights to the District.

2.3 Relationship to the Urban Water Management Plan

The reliability analysis of the UWMP considers normal, single dry year, and multiple dry year conditions. Water Code Section 10632(b) requires that the UWMP estimate the minimum water supply available during each of the next five water years based on the driest five-year historic sequence for the agency's water supply. Table 2-3 (Table 6-6 in the UWMP) documents the City's near-term water supply reliability assuming 5-year drought conditions.

Table 2-3: DWR Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b)

2021	
Total Water Use (AF)	2,534[1]
Total Supplies (AF)	2,573[1]
Shortfall without WSCP Action (AF)	
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

2022	
Total Water Use (AF)	2,604
Total Supplies (AF)	2,428[2]
Shortfall without WSCP Action (AF)	(177)
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	177
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

2023	
Total Water Use (AF)	2,636
Total Supplies (AF)	2,407[2]
Shortfall without WSCP Action (AF)	(229)
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	229

2023	
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

2024	
Total Water Use (AF)	2,667
Total Supplies (AF)	2,469[2]
Shortfall without WSCP Action (AF)	(198)
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	198
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

2025	
Total Water Use (AF)	2,699
Total Supplies (AF)	2,477
Shortfall without WSCP Action (AF)	(221)
Planned WSCP Actions	
WSCP – Supply Augmentation Benefit (AF)	221
WSCP – Use Reduction Savings Benefit (AF)	
Revised Shortfall (AF)	0
Resulting % Use Reduction from WSCP Action	0%

Notes:

[1] Volumes reported for 2021 are actual volumes reported by RCSD
[2] Projected supplies 2022, 2023 and 2024 are interpolated between 2021 actual supplies and 2025 projected supplies (as reported in UWMP Table 2 5) with a corrective factor applied based on the multiple dry year supply availability reported in UWMP Table 6 1).

Section 3: Annual Water Supply and Demand Assessment Procedures

From Guidebook p. 206:

Water Code Section 10632(a)(2)

The procedures used in conducting and 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:

a. 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.

b. Current year available supply, considering hydrological and regulatory condition 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.

c. Existing infrastructure capabilities and plausible constraints

d. A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment

e. A description and quantification of each source of water supply

Water Code Section 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 repot 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.

Droughts occur with unpredictable frequency, intensity, and duration. Developing and maintaining a healthy water supply portfolio to serve its customers has always been an ongoing RCSD priority, and RCSD wants to be prepared for drought and water shortages by regularly monitoring its water supplies and demands. Water supply projection and hydrologic conditions

are significant components in deciding when a drought response is needed. The amount of the water supply shortage contributes to the severity of drought declared and the necessary level of response from RCSD and its customers.

3.1 Timeline and Methodology for Conducting the Annual Assessment

Table 3-1: Calendar and Methodology for Performing Annual Assessment

Target Date	Action
All Times	• Monitor condition of groundwater infrastructure (including wells and disinfection facilities) • Evaluate if infrastructure condition will limit ability to supply and distribute water and take the needed corrective actions
October-January	• Monitor State Water Project and groundwater supplies • Monitor demand trends • Monitor condition of groundwater infrastructure
February	• Evaluate anticipated weather (e.g. National Weather Service Climate Prediction Center, El Nino/La Nina, US Drought Seasonal Outlook) • Receive initial allocation of SWP from AVEK • Make initial assessment of unconstrained demand (e.g. current and new large demands online) • Make initial estimate of shortage and/or need to draw on banked groundwater, if any • If shortage is anticipated, notify District General Manager • If shortage is anticipated, prepare informational item to District Board
March	• Prepare draft annual assessment for District General Manager Review
April	• Confirm current SWP allocations • If shortage is anticipated, start public outreach • Identify potential customer efficiency actions and assistance to be provided • Complete Draft Annual Assessment and present to District General Manager • If shortage is anticipated, prepare informational item to District Board
May-June	• Continue public outreach • Update annual water assessment and present to District Board • Finalize annual water assessment and submit to DWR by July 1 • If necessary, prepare notices of public hearing on water shortage
July-September	• Continue public outreach • If necessary, declare water shortage and implement supply mitigations and demand reduction actions • Monitor customer response to water shortage messaging and other actions

3.2 Factors Affecting Demand and Supply

3.2.1 Weather Outlook

Weather affects RCSD supplies in many ways. For the SWP, the effects of weather are seen in short-term water availability. Each year, depending on precipitation and snowpack, DWR announces the percent of SWP allocation that each contractor can expect for that year. This allocation is often adjusted several times before a final allocation is made in April of each year.

With this information, RCSD directly considers the impacts of climate on available SWP supply. This affects how RCSD considers demand expectations in the current year and the next year as a potential drought year.

During the 2015 drought, the state of California imposed mandatory demand reduction measures, and since then, RCSD's usage has yet to return to pre-drought levels (Figure 3-1) even though the number of connections increased from 4,777 in 2015 to 5,191 in 2020, which is an increase of 8.7%. Due to this demand hardening, RCSD does not expect that dry years will have a substantial impact on demands. Additionally, RCSD has a relatively low amount of landscape irrigation within its service area (due in part to reductions stemming from the 2015 drought). Typically, reductions in landscape irrigation usage offer the largest opportunity to reduce service area demands during dry events. Without high usage in this category, RCSD does not expect that demands will fluctuate as a function of weather.

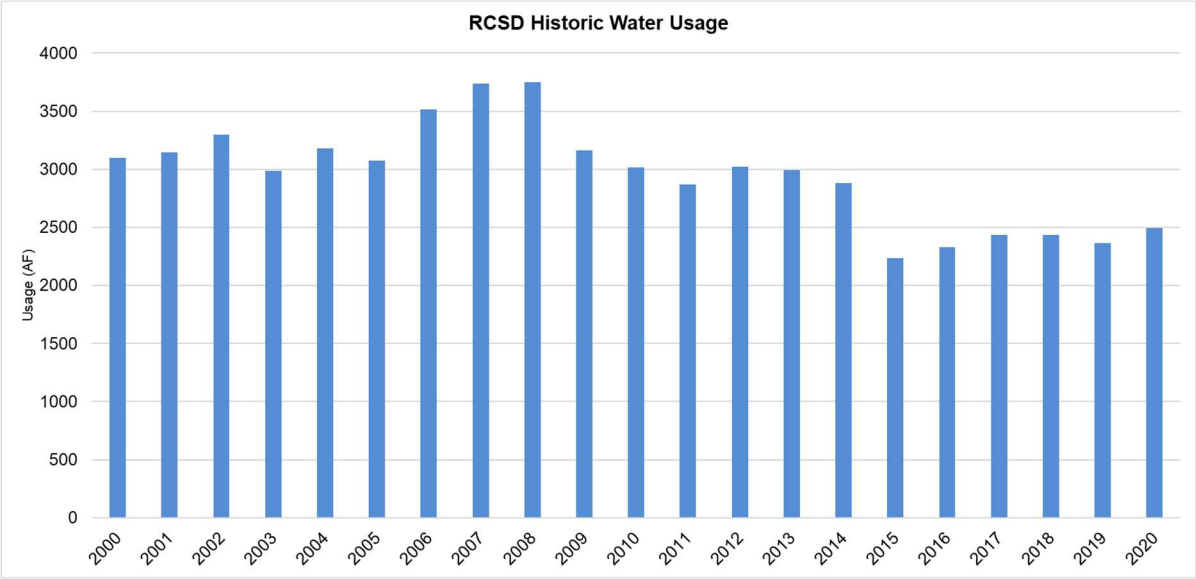

Figure 3-1: RCSD Historic Water Usage

3.3 Water Supply Assessment

The SWP considers water in storage (i.e. banked groundwater) as well as annual weather in the supply availability/allocation for a given year.

3.4 Water Demand Assessment

DWR guidance for the annual assessment is to consider the expected water use in the upcoming year, based on recent water use, and before any projected response actions a Supplier may trigger under its WSCP. RCSD will review the most recent 12 month period of metered consumption and total monthly and annual production from the groundwater basin as well as any new demands such as large developments, increased or new industrial uses that may be expected for the upcoming year to report the unconstrained current demand and projected demand for the subsequent year.

3.5 Current Predicted Shortages Based on Annual Water Supply and Demand Assessment

From DWR Guidebook p. 210 of PDF

> *While the first Annual Assessment is not required to be submitted to DWR until July 1, 2022, Suppliers are encouraged to use the procedures documented in its WSCP to prepare and include the outcome of an Annual Assessment for 2021, and to present the results in their UWMP as an example.*
>
> *Further, although the Annual Assessment must be submitted to DWR on or before July 1 of every year, an early Annual Assessment allows Suppliers and customers to identify uncertainties and prepare financially and logistically for any anticipated water supply constraints in the coming months. Therefore, Suppliers are encouraged to develop procedures, including decision-making processes, that facilitate early analysis and adoption.*

RCSD Staff will compare the SWP allocations and local groundwater supplies and the anticipated demand based on water production and determine if a supply shortage is anticipated, the level of shortage, and determine whether the shortage condition requires implementation of its WSCP. RCSD could choose to preserve banked groundwater by initiating voluntary and/or mandatory water conservation measures on their customers.

3.6 Coordination with Cities and Counties

Should a water shortage be declared, RCSD will coordinate with AVEK, which provides water supplies, for the possible proclamation of a local emergency as defined in Section 8558 of the Government Code. RCSD will also notify neighboring agencies, cities, and counties, including the City of Palmdale, City of Lancaster, Los Angeles County, and Kern County, in the event of a declared shortage.

Section 4: Water Shortage Stages

From Guidebook:

Water Code Section 10632(a)(3)

(A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40 and 50% shortages and greater than 50% shortages. 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.

4.1 Water Shortage Event

A water shortage event can be anything from a single occurrence as short as twenty-four hours to a multi-year weather condition. If shortage triggers (summarized Table 4-1) are met, the District will consider enacting voluntary and/or mandatory restrictions as documented in RCSD's Water Conservation (No Waste) Ordinance (Ordinance No. 2018-1). This ordinance is included as Appendix A.

Other events, besides drought, that could trigger a water shortage event include an earthquake, water system failures, fire, contamination, regional power outage, state restrictions, or other causes.

4.2 Definition of Drought

The following definition was written by the California Department of Water Resources:

Defining when drought occurs is a function of drought impacts to water users. Drought can best be thought of as a condition of water shortage for a particular user in a particular location. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users in a different part of California or for users with a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.

Drought is a gradual phenomenon. Although persistent drought may be characterized as an emergency, it differs from typical emergency events. Most natural disasters, such as floods

or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a period of time. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall – ranchers engaged in dryland grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable water source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.

Source: http://www.water.ca.gov/waterconditions/background.cfm

4.3 Natural Disaster or Failure of Water System Facilities

In the event of a natural disaster such as an earthquake, fire, toxic spill, or flood, or should a catastrophic failure occur at any of the District's facilities, the District can enact restrictions as described in Table 5-2 of this WSCP. Such restrictions would be based on the varying circumstances as determined necessary and appropriate by the District to respond to the emergency conditions.

4.4 Existing Water Shortage Levels

RCSD's current Water Conservation Ordinance includes five water conservation stages:

RCSD Stage 1 – Normal Water Supply

The District is able to meet all water demands of its customers. Stage 1 is in effect at all times unless RCSD's Board of Directors declares otherwise.

This stage does not correspond to a DWR Shortage Stage.

RCSD Stage 2 – Minimum Water Shortage

There is a "reasonable probability" that the District will not be able to meet all of the water demands of its customers. Stage 2 may be caused by, but not limited to, any or all of the following circumstances or events:

- Regional water supply shortage and a regional public outreach campaign to ask or require users to reduce consumption
- Local groundwater wells are inoperable or unusable
- Alternative water supplies are limited or unavailable
- Groundwater levels or quality are approaching levels which may require augmentation of groundwater basin or other similar actions (prescribed by a regulatory body)

During a Stage 2 shortage, RCSD aims to reduce consumption by 10-15%.

This stage corresponds to DWR Stages 1 and 2.

RCSD Stage 3 – Moderate Water Shortage

The District is unable to meet all of the water demands of its customers. Stage 3 may be caused by, but not limited to, any or all of the following circumstances or events:

- Regional **or statewide** water supply shortage and a regional public outreach campaign asking or requiring users to reduce consumption
- Groundwater wells are inoperable or unusable
- Alternative water supplies are limited or unavailable
- Groundwater levels or quality are approaching levels which may require augmentation of groundwater basin or other similar actions (prescribed by a regulatory body)

During a Stage 3 shortage, RCSD aims to reduce consumption by 15-20%.

This stage corresponds to DWR Shortage Stage 2

RCSD Stage 4 – Severe Water Shortage

The District is unable to meet all of the water demands of its customers. Stage 4 may be caused by, but not limited to, any or all of the following circumstances or events:

- Regional or statewide water supply shortage and a regional public outreach campaign asking or requiring users to reduce consumption
- Groundwater wells are inoperable or unusable
- Alternative water supplies are limited or unavailable
- Groundwater levels or quality are approaching levels which may require augmentation of groundwater basin or other similar actions (prescribed by a regulatory body)
- **A major failure of any supply or distribution facilities (temporary or permanent) occurs in the water distribution of the State, AVEK, or District water facilities.**

During a Stage 4 shortage, RCSD aims to reduce consumption by 20-40%

This stage corresponds to DWR Shortage Stages 3 and 4.

RCSD Stage 5 – Critical Water Shortage

The District is unable to meet all of the water demands of its customers. Stage 5 may be caused by, but not limited to, any or all of the following circumstances or events:

- Regional or statewide water supply shortage and a regional public outreach campaign asking or requiring users to reduce consumption
- Groundwater wells are inoperable or unusable
- Alternative water supplies are limited or unavailable
- Groundwater levels or quality are approaching levels which may require augmentation of groundwater basin or other similar actions (prescribed by a regulatory body)
- A major failure of any supply or distribution facilities (temporary or permanent) occurs in the water distribution of the State, AVEK, or District water facilities **and the District cannot meet all the water demands of its customers.**

During a Stage 5 shortage, RCSD aims to reduce consumption by at least 40%.

This stage corresponds to DWR Shortage Stages 5 and 6.

The mapping of RCSD's existing shortage stages to DWR shortage stages is shown in Figure 4-1**,** and each stage is summarized in Table 4-1.

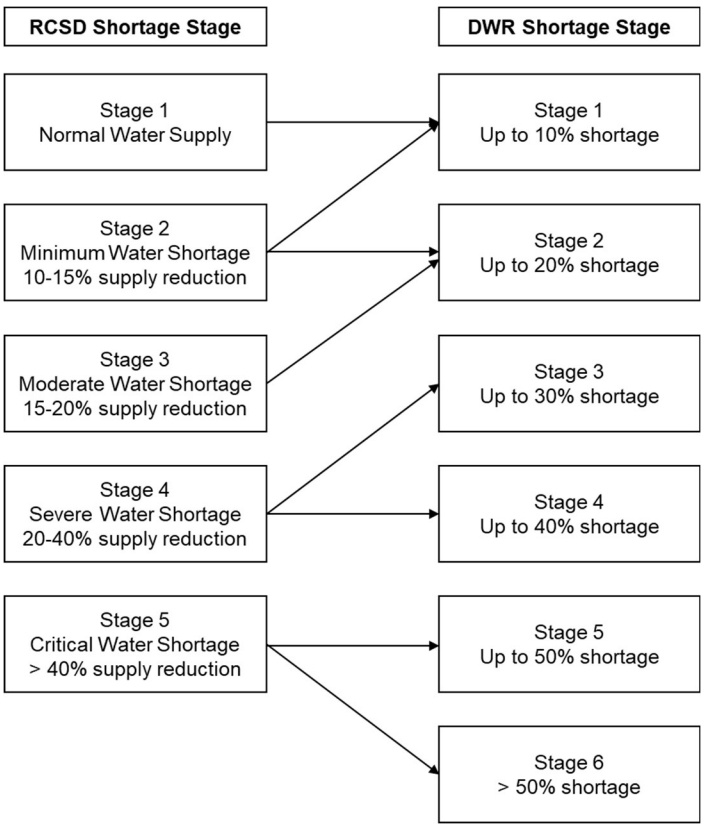

Figure 4-1: Shortage Stages Crosswalk

Table 4-1: Water Shortage Contingency Plan Levels (DWR Table 8-1)

DWR Shortage Level	Percent Shortage Range	Shortage Response Actions (*Narrative description)*
1	Up to 10%	90-100% of normal supply. Demand reduction is voluntary.
2	Up to 20%	80-90% of normal supply. Insufficient supply to provide 80% for the next two years, or loss of 10% from contamination. Mandatory demand reduction measures, including prohibition on landscape irrigation, decorative water features, and wash water.
3	Up to 30%	70-80% of normal supply. Insufficient supply to provide 75% for the next two years, first year excess groundwater pumped, or loss of 20% from contamination. Mandatory demand reduction measures, including prohibitions on landscape irrigation, decorative water features, wash water, and reduction in usage for
4	Up to 40%	60-70% of normal supply. Insufficient supply to provide 65% for the next two years, second year excess groundwater pumped, or loss of 30% from contamination. Mandatory demand reduction measures, including prohibitions on landscape irrigation, decorative water features, wash water, and commercial/manufacturing/processing usage (on an as-needed basis determined by the Board of Directors)
5	Up to 50%	50-60% of normal supply. Insufficient supply to provide 50% for the next two years. No excess groundwater available or disaster loss. Mandatory demand reduction measures, including prohibitions on landscape irrigation, decorative water features, wash water, commercial/manufacturing/processing usage (on an as-needed basis determined by the Board of Directors), and new connections.
6	>50%	Less than 50% of normal supply. Insufficient supply to provide 50% for the next two years. No excess groundwater available, or disaster loss. Mandatory demand reduction measures, including prohibitions on landscape irrigation, decorative water features, wash water, commercial/manufacturing/processing usage (on an as-needed basis determined by the Board of Directors), and new connections.

Notes:

DWR Stage 1 corresponds with RCSD's existing Stage 1 and Stage 2.
DWR Stage 2 corresponds with RCSD's existing Stage 2 and Stage 3.
DWR Stages 3 and 4 correspond with RCSD's existing Stage 4.
DWR Stages 5 and 6 correspond with RCSD's existing Stage 5.

4.5 Emergency Response Plan

Any or all of the components in each stage may be enacted by the District General Manger in response to the findings of the Annual Shortage Assessment in order to meet the demand reduction goal for that response stage.

4.6 Seismic Risk Analysis

The Antelope Valley Groundwater Basin Judgement allows for over-pumping of the basin in the event of emergencies. The requirement is that following the emergency, the producer must purchase replenishment water supplies. RCSD's seismic risk has been evaluated in the District's Risk and Resiliency Assessment as well as in the County-Wide Hazard Mitigation Plan.

4.6.1 RCSD Risk and Resiliency Assessment

RCSD completed a risk assessment and resiliency assessment in June 2021 using the U.S. Environmental Protection Agency's (EPA) Vulnerability Self-Assessment Tool (VSAT) Web Version 2.0. VSAT Web 2.0 addresses malevolent acts, natural hazards, and dependency/proximity threats to water sector operations and analyzes the cost-effectiveness of countermeasures to reduce risk. VSAT Web 2.0 defines Risk (R) as the product of Threat (T), Vulnerability (V), and Consequences, which are defined as follows:

- Threat – Likelihood that the treat will be perpetrated or occur against the asset
- Vulnerability – Likelihood that the threat will damage the asset, considering the effectiveness of countermeasures
- Consequences – Economic (cost to the utility and region) and public health (injuries and deaths) impacts resulting from damage to the asset.
- RCSD's risk assessment found that an earthquake is a primarily a threat to the District's security fences, water distribution mains, and the public works maintenance building.

4.6.2 Kern County Multi-Jurisdictional Hazard Mitigation Plan

In the Kern County Multi-Jurisdictional Hazard Mitigation Plan Jurisdictional Annex for RCSD, a risk matrix (Figure 4-2) was developed to assess overall risk based on the probability of occurrence and impact of various hazards. From this assessment, earthquakes were estimated to have a "possible" probability of occurrence and a "limited" impact.

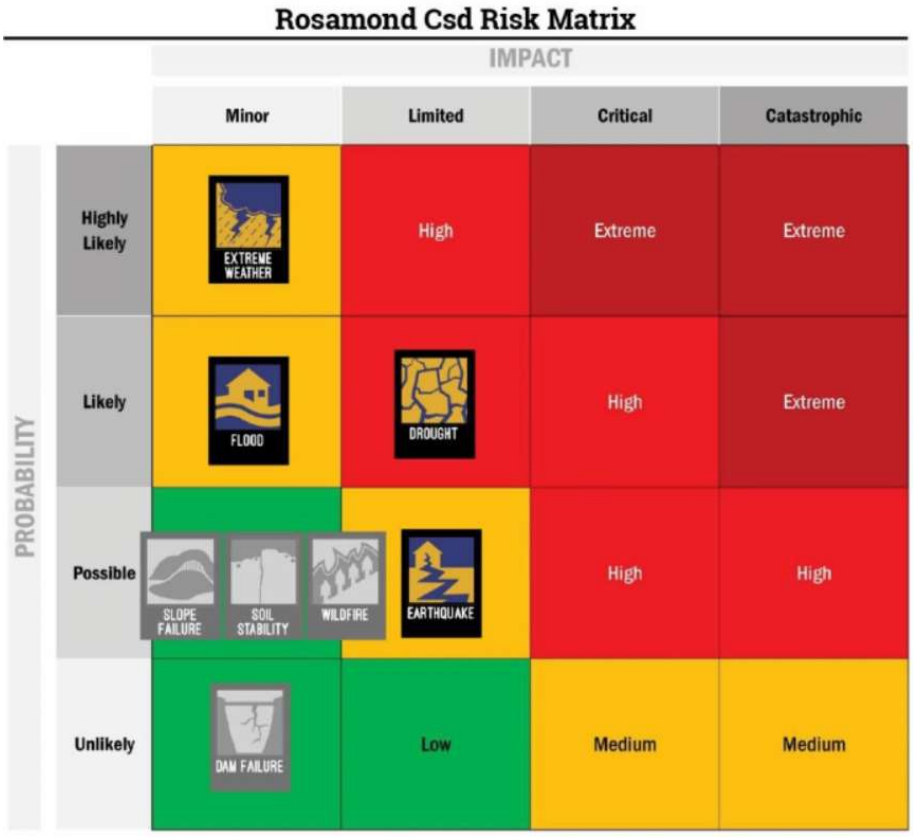

Figure 4-2: Rosamond CSD Hazard Risk Matrix

RCSD Seismic Hazard was evaluated in greater detail as part of the Kern County Multi-Jurisdictional Hazard Mitigation Plan, included as UWMP Appendix B.

Section 5: Water Shortage Response Actions (by Shortage Stage)

5.1 Supply Augmentation Actions

RCSD has access to banked groundwater that fully makes up supply deficits in emergency scenarios. In the event that RCSD uses all of their banked water supplies and still cannot meet demands, RCSD may purchase banked groundwater and/or carryover water from other sources.

Table 5-1: Supply Augmentation and Other Actions (DWR Table 8-3)

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?	Additional Explanation or Reference
As needed	Stored Emergency Supply	100%	RCSD's banked groundwater fully makes up supply deficits that the District faces

Notes:

Stored emergency supply includes banked groundwater and carryover from previous years that is intended to fully make up any supply deficit. RCSD's long-term goals include 3-4 years of supplies maintained as banked groundwater.

5.2 Demand Reduction Actions

The Water Conservation Ordinance adopted by RCSD outlines prohibition on water wasting and describes excessive-use penalties enforced by the District. A copy of the ordinance is provided in Appendix A**.** The demand reduction actions outlined in RCSD's conservation ordinance are summarized in Table 5-2.

Table 5-2: Demand Reduction Actions (DWR Table 8-2)

DWR Shortage Level	Demand Reduction Actions	Potential Shortage Gap Reduction	Additional Explanation or Reference	Enforcement?
1	Expand Public Information Campaign	2%		
1	CII - Other CII restriction or prohibition	2%	CII customers cannot irrigate non-functional turf (ornamental landscape)	No
1	Landscape - Restrict or prohibit runoff from landscape irrigation	2%	Irrigation using potable water resulting in runoff for more than 5 minutes is prohibited.	No
1	Landscape - Other landscape restriction or prohibition	2%	Residential developments are prohibited from installing new turf in common areas of residential neighborhoods (excluding parks) and in residential front yards (exemption may be granted). Turf installation in single-family residential lots shall not exceed 20% of total yard. Installation of new turf in non-residential developments is prohibited unless specifically approved by the District.	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	1%	Allowing potable water to escape from breaks within a customer's plumbing system for more than 24 hours after notice is prohibited	No
1	Other - Prohibit use of potable water for washing hard surfaces	1%	Use of potable water to wash paved areas except to alleviate safety or sanitation hazards is prohibited	No
1	Other - Require automatic shut of hoses	1%	Washing automobiles and other types of mobile equipment without a shut off nozzle and bucket is prohibited	No
1	Water Features - Restrict water use for decorative water features, such as fountains	1%	Use of potable water to clean, fill, or maintain decorative water features is prohibited	No
1	CII - Restaurants may only serve water upon request	1%		No

DWR Shortage Level	Demand Reduction Actions	Potential Shortage Gap Reduction	Additional Explanation or Reference	Enforcement?
1	Moratorium or Net Zero Demand Increase on New Connections	1%	New construction meters shall not exceed the exiting number of currently authorized meters. A new meter shall only be issued when an old meter is returned	No
2	Landscape - Limit landscape irrigation to specific days	2.5%	All irrigation shall be conducted every other day. During a 15-20% shortage, this is further restricted to Sundays, Mondays, and Wednesdays for odd number street addresses, and Sundays, Tuesdays, and Thursdays for even number street addresses.	Yes
2	Landscape - Limit landscape irrigation to specific times	2.5%	All irrigation shall be conducted between 6 pm and 10 am during the winter, and between 8 pm and 7 am during the summer, for a maximum of 11 minutes in the morning and 11 minutes in the evening (22 minutes per day). During a 15-20% shortage, this is reduced to 8 minutes in the morning and 8 minutes in the evening (16 minutes per day).	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	1%	All swimming pools, spas, ponds, and fountains shall be equipped with recirculating pumps	Yes
2	Other water feature or swimming pool restriction	1%	During a 15-20% shortage, overfilling of swimming pools and spas is prohibited. Filling/refilling of ponds, streams, and artificial lakes is prohibited. The operation of any ornamental fountain or similar structure is prohibited except for short periods of time to prevent damage.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	1%	All plumbing leaks, improperly adjusted sprinklers, or other water conduits/fixtures that require repair or adjustment shall be corrected to the satisfaction of the District	Yes
2	Other	1%	Wash water from fire hydrants is strictly limited to fire fighting or other health, safety, and public welfare related activities	Yes

DWR Shortage Level	Demand Reduction Actions	Potential Shortage Gap Reduction	Additional Explanation or Reference	Enforcement?
2	Other - Require automatic shut of hoses	1%	Washing of automobiles and other types of mobile equipment is permitted with a hand-held bucket or a hand-held hose equipped with an automatic, positive shut-off nozzle for quick rinses. During a 15-20% shortage, washing is further restricted to between the hours of 5 pm and 8 am. Washing is permitted at any time at commercial car washes but is subject to mandatory reductions in volume as determined by the Board of Directors.	Yes
3 and 4	Landscape - Prohibit certain types of landscape irrigation	1%	Irrigation of landscaping shall be limited to supporting minimal survival of trees and shrubs	Yes
3 and 4	Landscape - Limit landscape irrigation to specific days	2%	Irrigation is restricted to Saturdays and Wednesdays for odd number street addresses, and Sundays and Thursdays for even number street addresses.	Yes
3 and 4	Landscape - Limit landscape irrigation to specific times	2%	All irrigation shall be conducted between 6 pm and 10 am during the winter, and between 8 pm and 7 am during the summer, for a maximum of 6 minutes in the morning and 6 minutes in the evening (12 minutes per day)	Yes
3 and 4	Other - Require automatic shut of hoses	1%	Washing of automobiles and other types of mobile equipment is prohibited.	Yes
3 and 4	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	1%	Washing is permitted at any time at commercial car washes as long as the car wash only uses partially reclaimed or recycled water. Water usage at commercial car washes is subject to mandatory reductions in volume as determined by the Board of Directors.	Yes
3 and 4	Other water feature or swimming pool restriction	1%	Filling, refilling, or adding water to swimming pools, spas, ponds, streams, and artificial lakes is prohibited.	Yes
3 and 4	Other water feature or swimming pool restriction	0.5%	The use of water for cooling mists is prohibited	Yes

DWR Shortage Level	Demand Reduction Actions	Potential Shortage Gap Reduction	Additional Explanation or Reference	Enforcement?
3 and 4	CII - Other CII restriction or prohibition	0.5%	The use of water for commercial, manufacturing, or processing purposes shall be reduced in volume by an amount determined by the Board of Directors	Yes
3 and 4	Moratorium or Net Zero Demand Increase on New Connections	1%	No new meters will be installed, unless the project is necessary to protect public health, safety, or welfare, the project uses reclaimed water, the project can demonstrate no net increase in water usage, or a conservation offset can be provided.	Yes
5 and 6	Landscape - Prohibit all landscape irrigation	5%	All outdoor watering and irrigation is prohibited, except for the use of graywater in accordance with Kern County Health Department Regulations	Yes
5 and 6	Moratorium or Net Zero Demand Increase on New Connections	5%	No new connections are allowed	Yes

Notes:

Each shortage stage also includes any demand reduction action taken at previous stages. At DWR Stage 1, demand reduction actions are voluntary and enforced through public education and awareness. At DWR Stages 2 and above, all actions are mandatory, including actions carried over from DWR Stage 1, and violations are subject to criminal, civil, and administrative penalties, and remedies.

The first two Stage 1 actions listed (expanding public information campaign and prohibition of CII irrigation of non-functional turf) are not included in the RCSD water conservation ordinance, rather, they are mandated by California's recently adopted Emergency Water Conservation Regulation (2022).

Due to demand hardening following the 2015 drought, RCSD does not expect that demand reduction actions will be able to reduce a shortage gap by more than 10%, and instead expects that at least 90% of any shortage gap will be closed using supply augmentation actions. The estimated percent reduction of shortage gap presented in this table reflects the overall low impact that RCSD expects to see from demand reduction actions.

5.2.1 Landscape Irrigation

The following categories of prohibition on landscape irrigation are listed in Table 5-2. The section below includes examples of restrictions or prohibition that may fall within these categories:

- Restrict or prohibit runoff from landscape irrigation – The watering of lawns, grass, ground cover, shrubbery, or trees in a manner that causes water to runoff onto adjacent property, non-irrigated areas, or hard surfaces, such as driveways, sidewalks, and streets, is not permitted.

- Limit landscape irrigation to specific days – Irrigation is limited to Sundays, Mondays, and Wednesday for odd number street addresses, and Sundays, Tuesdays, and Thursdays for even number street addresses.

- Limit landscape irrigation to specific times – Irrigation is limited to the hours of 6 pm to 10 am, and 8 pm to 7 am, for a maximum of 11 minutes in the morning and 11 minutes in the evening (22 minutes per day).

- Prohibit certain types of landscape irrigation – Irrigation is limited to supporting minimal survival of trees and shrubs.

- Prohibit all landscape irrigation – All outdoor watering and irrigation is prohibited, except for the use of graywater in accordance with Health Department Regulations

- Other landscape restrictions or prohibitions – Residential developments are prohibited from installing new turf in common areas of residential neighborhoods and in residential front yards.

5.2.2 Commercial, Industrial, and Institutional (CII)

The following categories of prohibition on CII usage are listed in Table 5-2. The section below includes examples of restrictions or prohibition that may fall within these categories:

- Water service in restaurants – Restaurants may only serve water upon request.

- Other CII restriction or prohibition – The use of water for commercial, manufacturing, or processing shall be reduced in volume by an amount determined by the Board of Directors.

5.2.3 Water Features and Swimming Pools

The following categories of prohibition on water features and swimming pools are listed in Table 5-2. The section below includes examples of restrictions or prohibition that may fall within these categories:

- Restrict water use of decorative water features such as fountains – Use of potable water to clean, fill, or maintain decorative water features is prohibited.

- Other water feature or swimming pool restriction – Filling, refilling, or adding water to swimming pools, spas, ponds, streams, and artificial lakes is prohibited.,

5.2.4 Other

The section below includes examples of demand reduction actions classified as “Other” in Table 5-2 (DWR Table 8-2):

- Customers must repair leaks, breaks, and malfunction in a timely manner – Allowing potable water to escape from breaks within a customer's plumbing system for more than 24 hours after notice is prohibited.

- Prohibit use of potable water for washing hard services – Use of potable water to wash paved areas except to alleviate safety or sanitation hazards is prohibited.

- Require automatic shut off hoses – Washing automobiles and other types of mobile equipment without a shut off nozzle and bucket is prohibited.

- Prohibit vehicle washing except at facilities using recycled or recirculating water – Washing is permitted at any time at commercial car washes as long as the car wash only uses partially reclaimed or recycled water.

- Fire hydrant water – Wash water from fire hydrants is strictly limited to fire fighting or other health, safety, and public welfare related activities.

5.3 New Connections

The following categories of prohibition on new connections are listed in Table 5-2. The section below includes examples of restrictions or prohibition that may fall within these categories:

- Moratorium or net zero demand increase on new connections – No new meters will be installed, unless the project is necessary to protect public health, safety, or welfare, the project uses reclaimed water, the project can demonstrate no net increase in water use, or a conservation offset can be provided.

5.4 Additional Mandatory Prohibitions

RCSD does not propose additional mandatory prohibitions. The existing prohibitions address the six DWR shortage stages outlined in Table 5-2.

5.5 Effectiveness of Shortage Response Actions (by Water Shortage Stage)

The effectiveness of shortage response actions are estimated in Table 5-2 and will be evaluated annually during water shortage conditions. Demand projection and supply deliveries are analyzed monthly in order to determine if supplies are adequate and/or shortage response actions are adequate.

Section 6: Communication Protocols

6.1 Current or Predicted Shortages

As discussed in Section 3, as the annual assessment is performed, if a shortage is anticipated, the RCSD Board of Directors will be notified, and an informational item will be presented. Public outreach will be initiated depending on the severity and anticipated duration of the shortage.

6.2 Shortage Response Actions

The stages of drought response and required shortage response actions can be authorized by the District Manager in consultation with the District Board and are not required to be approved by the District Board. The necessary shortage responses can be implemented immediately upon the declaration of shortage.

6.3 Other Communications

The main means of communication between RCSD and its customers is through the District website. In the event of a shortage, any restrictions to water usage are clearly defined on the website. In the past, the District has also coordinated with other public works departments to distribute written notification to its customers, and sent press releases to local newspapers. The District is expanding its online presence by coordinating with a public relations team to provide updates via social media. Customers can monitor their own water use and the District also has the ability to communicate directly with customers through the billing portal and/or email. Approximately 60% of the District's customers are signed up to receive email alerts.

Section 7: Penalties, Charges, and Other Enforcement of Prohibitions

7.1 Compliance and Penalties

The District General Manager may serve a notice of violation onto the property owner or occupant if a property is in violation of the District's Water Conservation Ordinance. If action is not taken to meet compliance, a flow-restricting device may be installed on the service line, or service may be discontinued.

In addition to the above actions, the following monetary penalties may be applied:

- A fine of up to $100 for each day a person fails or refuses to comply with a notice of violation.
- A fine of up to $1,000 per day for which a person violate any provision of the RCSD Water Conservation Ordinance.

7.2 Civil Actions

RCSD may seek any or all of the following remedies in addition to the actions listed in Section 7.1:

- A temporary and/or permanent injunction
- Assessment of the violator for the costs of any investigation which led to the establishment of the violation and for the reasonable costs of preparing and bringing legal action under the Water Conservation Ordinance
- Any other costs incurred in enforcing the provisions of the Water Conservation Ordinance

Section 8: Legal Authorities

From Guidebook:

Water Code Section 10632(a)(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, resolution, 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. [see below]

(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

Water Code Section Division 1, Section 350

Declaration of water shortage emergency condition. The governing body of a distributer of a public water supply, whether public or privately owned and including a mutual water company, shall declare a water shortage emergency condition to prevail within the area served by such distributer whenever it finds and determines that the ordinary demands the requirements of water consumers cannot be satisfied without depleting the water supply of the distributer to the extent that there would be insufficient water for human consumption, sanitation, and fire production.

8.1 Legal Authorities to Implement and Enforce Shortage Response Actions

The RCSD Board of Directors will declare a water shortage emergency and the appropriate stage based on the findings of the annual assessment, and implement the associated restrictions after conducting a properly noticed public hearing. The District General Manager has the discretion to determine whether to implement certain restrictions at an earlier stage and may recommend additional restrictions to the Board of Directors.

RCSD will coordinate with Kern County, Los Angeles County, AVEK, and other local water agencies and governing bodies for the possible proclamation of a local emergency if necessary and appropriate.

Section 9: Financial Consequences of Actions During Shortages

9.1 Revenue and Expenditure Impacts

RCSD does not have a drought surcharge as part of the current rate structure. Historically, RCSD has not observed any substantial drops in revenue during drought events. Additionally, the RCSD annual budget includes reserves for operations and maintenance, repair and replacement projects, rate stabilizations, and emergency spending. Reserves may also be transferred out in order to fund CIP projects.

If a shortage is declared, District staff will monitor revenue and expenditure plans each month to project whether revenue measures will be required to assure financial stability of the water utility.

9.2 Cost of Compliance with Water Code Ch. 3.3 (Excessive Residential Water Use During Drought)

Based on historic observations, RCSD does not anticipate any measurable financial consequences as a result of actions taken during shortages, other than slightly increased production costs to pump and treat additional groundwater if needed. Demand reduction efforts and public outreach will likely not require additional staff time or cost.

Section 10: Monitoring and Reporting

From Guidebook:

Water Code Section 10632(a)(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 customers compliance and to meet state reporting requirements.

10.1 Determining Water Shortage Reductions

RCSD fully meters production and consumption. If a shortage is declared, consumption meters will be read and analyzed once per month and state-mandated requirements will be monitored as they are released. Consumption and state mandates will be compared to each other and to different stages of the WSCP to determine water shortages and conservation savings targets.

Section 11: Refinement Procedures

From Guidebook:

> *Water Code Section 10632(a)(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 Water Shortage Contingency Plan will be updated in parallel with the UWMP every five years, with the next update being in 2025. During this review, the District's shortage stages will be reevaluated and adjusted as appropriate, and the required shortage response actions will be adjusted accordingly. The District will take into consideration the availability of water supplies and any projected increases in demand, and the effectiveness of shortage response actions.

Section 12: Special Water Feature Distinction

From Guidebook:

> *Water Code Section 10632(a)(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.*

12.1 Defining Water Features

RCSD has defined decorative water features as those that serve no recreational or other use than aesthetics.

Recreational water features include pools and spas that could be at individual homes or provide Community benefit at homeowners' associations or public parks or other facilities.

12.2 Restrictions on Usage

As described in Section 5, during a water shortage event, the following restrictions are placed on special water features:

- Decorative Water Features –
  - DWR Stage 1 – Use of potable water is prohibited
  - DWR Stage 2 – Recirculating pumps must be installed
  - DWR Stage 2 – Operation is prohibited except to prevent damage
- Recreational Water Features
  - DWR Stage 2 – Recirculating pumps must be installed
  - DWR Stage 2 – Filling, overfilling, and refilling are prohibited
  - DWR Stage 3 – Cooling mists are prohibited

Section 13: Plan Adoption Resolution or Ordinance

From Guidebook:

Water Code Section 10632(a)(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.

The resolution adopting the Urban Water Management Plant and approving the Water Shortage Contingency Plan is attached as Appendix C. The adopted UWMP and WSCP will be posted on RCSD's website for public record.

References

2021-2022 Final Operating and Capital Budget. Rosamond Community Services District. 2021.

Antelope Valley-East Kern water Agency 2020 UWMP. Water Systems Consulting, Inc. 2021

County of Kern Multi-Jurisdiction Hazard Mitigation Plan. Kern County Fire Department Office of Emergency Services. 2021.

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Draft Water Master Plan. Kennedy Jenks Consultants, Inc. 2019.

Rosamond Community Services District 2015 Urban Water Management Plan. GEI Consultants. 2017

RCSD Ordinance No. 2018-1 – Update to the Water Conservation (No Waste) Program. Rosamond Community Services District. 2018.

Urban Water Management Plan Guidebook 2020. California Department of Water Resources. 2021.