RAINBOW
MUNICIPAL WATER DISTRICT

COMMITTEE AGENDA

Engineering and Operations Committee Meeting

Board Room
3707 Old Highway 395
Fallbrook, CA 92028

Tuesday, May 5, 2026
1:00 PM

1. **CALL TO ORDER – Directors Irvine and Hoffman**
   (Hamilton - Alternate)

2. **PUBLIC COMMENT**

3. **DISCUSSION ITEMS**

   A. Review Draft Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP)
   B. Review the Opterra Energy Services Proposed Projects
   C. Notice of Completion and Acceptance of the Manual Transfer Switches at Morro Hills, Vallecitos, and Rainbow Hills Pump Stations Project (Divisions 2 & 5)
   D. Eagles Perch Project Update

4. **ADJOURN**

ATTEST TO POSTING:

/s/Terese Quintanar	4/30/2026 12:32 PM
Terese Quintanar	Date and Time of Posting
Secretary of the Board	Outside Display Cases

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RAINBOW
MUNICIPAL WATER DISTRICT

COMMITTEE DISCUSSION

Item No. 3.A

ENGINEERING AND OPERATIONS COMMITTEE

May 7, 2026

SUBJECT

REVIEW OF THE DRAFT URBAN WATER MANAGEMENT PLAN (UWMP) AND WATER SHORTAGE CONTINGENCY PLAN (WSCP)

BACKGROUND

On August 19, 2025, Engineering Resources of Southern California (ERSC) was awarded a contract to produce updated Water and Wastewater Master Plans. On September 23, 2025, the Board approved an amendment to the contract with ERSC to add work associated with the update of the Urban Water Management Plan (UWMP) and the Water Shortage Contingency Plan (WSCP).

DESCRIPTION

Preparation of an Urban Water Management Plan (UMWP) is required to be submitted by Urban suppliers of water by the State of California Department of Water Resources (DWR) every five years. Districts must demonstrate to the state regulatory compliance with aspects of the Water Code related to supply sustainability and water use efficiency. The next UMWP is due to the DWR by July 1, 2026.

A Water Shortage Contingency Plan (WSCP) should be prepared alongside an Urban Water Management Plan (UWMP) because they serve complementary purposes. The UWMP plan looks at long-term water supply and demand, helping ensure there is enough water to meet future needs under normal conditions. The WSCP focuses on what actions to take during shortages, such as droughts or emergencies. By developing both plans together, the District can ensure that long-term planning aligns with short-term response actions. This coordination improves preparedness, allows for quicker and more effective responses during water shortages, and helps protect the community's water reliability under changing conditions.

ERSC Consultants will be presenting the attached draft UWMP and WSCP update.

POLICY/STRATEGIC PLAN KEY FOCUS AREA

Strategic Focus Area One: Water Resources: The UWMP and WSCP are required by the state to demonstrate ample water supplies to meet projected demands and actions the District would take in a drought or other supply emergency to reduce water demands.

ENVIRONMENTAL

In accordance with California Environmental Quality Act (CEQA) guidelines Section 15378, the action before the Board does not constitute a “project” as defined by CEQA and further environmental review is not required at this time.

STAFF RECOMMENDATION

Staff requests review and discussion of the drafts presented.

Jake Wiley
General Manager

May 7, 2026

Attachment(s):
1. *Draft UWMP*
2. *Draft WSCP*

Rainbow Municipal Water District

2025 Urban Water Management Plan Public Draft

RAINBOW
MUNICIPAL WATER DISTRICT

Rainbow Municipal Water District

2025 Urban Water Management Plan Public Draft

Prepared by

Engineering Resources of Southern California

Anthony Herda, P.E.

May 2026

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Executive Summary

Background

This Urban Water Management Plan (UWMP) was prepared in accordance with the Urban Water Management Planning Act (Act) defined by the California Water Code (CWC), Division 6, Part 2.6, and Sections 10610 through 10657. The purpose of the UWMP is to maintain the efficient use of urban water supplies, confirm that sufficient water supplies are available for future beneficial use, and provide a mechanism for response to a water shortage during drought conditions or other emergencies.

The Rainbow Municipal Water District (District) recognizes the importance of maintaining high-quality, reliable water supply. Although water is a renewable resource, its availability is limited. The District, in coordination with Eastern Municipal Water District (EMWD) and Metropolitan Water District of Southern California (MWD), is committed to safeguarding the quality, reliability, and sustainability of water services for the benefit of the ratepayers and residents served.

The UWMP integrates demographic and meteorological data and projects water demand and supply to help inform various regional and state planning efforts. The public will have access to the UWMP and its appendices to inform water supply and demand assessments as needed for CEQA and development planning.

Analysis

In 2025, the District served an estimated population of 23,299 via 9,180 municipal connections with a potable water supply of 12,355 acre-feet (AF). The District delivers water within a service area of over 52,000 acres via 344 miles of water mains, eight pump stations, three reservoirs, and 13 storage tanks. The service area includes the unincorporated San Diego County communities of Rainbow and Bonsall, as well as portions of Vista, Oceanside, and Fallbrook.

The District is wholly reliant on imported water sources that are delivered through MWD facilities and purchased through EMWD. The District has coordinated the preparation of its UWMP with EMWD including provision of projected population and water demands in five-year increments through 2050 to assure mutually accurate reporting.

The District is anticipated to experience modest population growth resulting in an increase in residential demand; however, agricultural demand is expected to decrease due to water use efficiency achieved through continued application of the CropSWAP program and economic pressure on local growers.

The supply from EMWD is very consistent in quantity and quality. Through inter-agency coordination efforts, EMWD asserts having sufficient capacity to meet peak demands presented in this UWMP without any delivery constraints.

Conclusions

This UWMP has been prepared in accordance with guidelines provided by the Department of Water Resources and in coordination with EMWD. It demonstrates compliance with the Act and includes required data tables to be uploaded to DWR's Water Use Efficiency electronic data portal for use by the state in evaluating and reporting on water sustainability.

Recommendations

Implementation of the UWMP is recommended. In addition, the District should consider the following:

Ordinance No. 16-10

The UWMP references Ordinance No. 16-10 (An Ordinance of Rainbow Municipal Water District Adopting a Drought Response Conservation Program) concerning authority to implement and enforce water demand reduction actions in the event of a declared water shortage. Since adoption of the ordinance, several relevant changes have occurred:

- The District has changed wholesale water suppliers from the San Diego County Water Authority to EMWD. This means new wholesaler programs and policies are in place.
- Retailer impact of a wholesale supply shortage is now tied to MWD's Water Supply Allocation Plan (WSAP). The WSAP outlines operational changes in management of wholesale deliveries to reduce the impact on retailers. Specifically, WMD will make up for supply shortages on the State Water Project and Colorado River Aqueduct by drawing down surface storage.
- The District has experienced a nearly 50 percent reduction in average annual demand, primarily in the agricultural sector. This means that a supply shortage will have a smaller impact and variation in demand is less volatile reducing the likelihood of a shortage.

The District may consider reviewing the impacts of these changes on the Ordinance and making appropriate amendments.

Water Leak Detection and Repair Pilot Program

Reduction of real water loss due to leaks was observed as a potential water conservation program. The District may consider implementing a pilot program for leak detection and repair.

Adoption

Following public review of the Draft UWMP and following consideration and incorporation of any public comments received during the public hearing, adoption by resolution is recommended.

Chapter 1 – Introduction and Overview

This chapter provides an overview of the Urban Water Management Planning Act (Act), relations to other planning efforts, plan organization, and other general information to help orient and guide the reader.

1.1 – Purpose of the 2025 UWMP

The purpose of the Urban Water Management Plan (UWMP) is to maintain the efficient use of urban water supplies, confirm that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during drought conditions. The Rainbow Municipal Water District (District) will utilize the UWMP to support long-term water resource planning and ensure adequate water supplies are available to meet existing and future water demands.

The District recognizes the importance of maintaining high-quality, reliable water supply. Although water is a renewable resource, its availability is limited. The District, in coordination with Eastern Municipal Water District (EMWD) and Metropolitan Water District of Southern California (MWD), is committed to safeguarding the quality, reliability, and sustainability of water services for the benefit of the ratepayers and residents served.

The UWMP integrates data and projects water demand and supply to help inform other regional and state planning efforts. The public will have access to the UWMP and its appendices to inform water supply and demand assessments that are needed for development plans.

1.2 – Urban Water Management Planning and the California Water Code

The UWMP was prepared in accordance with the Urban Water Management Planning Act (Act) defined by the California Water Code (CWC), Division 6, Part 2.6, and Sections 10610 through 10657 (see Appendix A). The Act became part of the CWC with the passage of Assembly Bill 797 during the 1983-1984 regular session of the California legislature. The Act requires every urban water supplier providing water for municipal purposes to more than 3,000 connections or supplying more than 3,000 acre-feet (AF) of water annually to adopt and submit a UWMP every five years to the California Department of Water Resources (DWR). The Act regulates the contents of the UWMP as well as how urban water suppliers should adopt and implement the UWMP and the associated Water Shortage Contingency Plan (WSCP).

1.3 – Updated Guidance for 2025 Urban Water Management Plans

The Urban Water Management Plan Guidebook was made available by DWR in January 2026. The Guidebook presents applicable legislation, legislative interpretation of minimum requirements, examples and methods for preparing contents, preferences for regulatory review, and supporting research. To extent practical, this plan is organized as presented in the Guidebook.

1.4 – Submittal Tables

> ***Water Code Section 10644***
>
> *(a)(2) The plan, or amendments to the plan, submitted to the department … shall include any standardized forms, tables, or displays specified by the department.*

The Water Use Efficiency (WUE) Tables were uploaded via the portal. Copies of the WUE Tables are provided in Appendix B.

At the end of each chapter, a list of corresponding submittal tables is provided.

1.5 – Report Organization

1.5.1 – Citation of Water Code

By convention, Water Code citations from the Guidebook are provided as shown below, italicized in a frame with a grey background.

> ***Water Code Section XXXXX***
>
> *(X) Direct excerpt from the Water Code as presented in the Guidebook.*

The intent of including relevant excerpts from the Water Code is to give the reader a perspective linking statute and regulations to the content of the plan.

1.5.2 – Description of Chapters

Chapter 1 – Introduction and Overview

This chapter is used to provide a discussion on the fundamentals of the UWMP. It is intended to assist the reader in navigating and contextualizing the plan.

Chapter 2 – Urban Water Management Plan Preparation

This chapter provides information on the processes used for developing the UWMP, including efforts in coordination and outreach.

Chapter 3 – Service Area Description

This chapter includes the required system description. This description includes a map of the service area, an overview of the service area climate, land use, and demographics.

Chapter 4 – Water Use Characterization

This chapter includes a description and quantification of current and projected water uses within the service area.

Chapter 5 – SB X7-7 Baselines, Targets, and Reporting

In this chapter, water use efficiency targets associated with the Water Conservation Act of 2009 are presented and compliance confirmed.

Chapter 6 – Normal-Year Water Supply Characterization

In this chapter, current, projected and planned sources of water supply are described and quantified.

Chapter 7 – Water Service Reliability and Drought Risk Assessment

This chapter provides a comparison of projected water use and supply under normal year, single dry year, and five consecutive dry years conditions. Also included is a comparison of water use and supply under an immediate five year drought.

Chapter 8 – Water Shortage Contingency Plan

The Water Shortage Contingency Plan is provided under a separate cover and in Appendix N.

Chapter 9 – Demand Management Measures

This chapter provides a description of the current water conservation program and associated coordination with wholesalers on additional conservation programs and rebates.

Chapter 10 – Adoption, Submittal, and Implementation

This chapter describes and documents the steps taken to make the UWMP publicly available, as well as the steps taken to adopt and submit the UWMP in accordance with the Water Code.

Appendices

Additional information and documentation are provided to support and further clarify content included in the main chapters. Providing additional information strengthens the plan and offers a complete and well-supported planning document for use by the public and stakeholders.

1.6 – Relation to Other Efforts

The District's 2025 UWMP integrates with related planning efforts of MWD, EMWD, the County of San Diego, and others. Key related planning efforts are listed below:

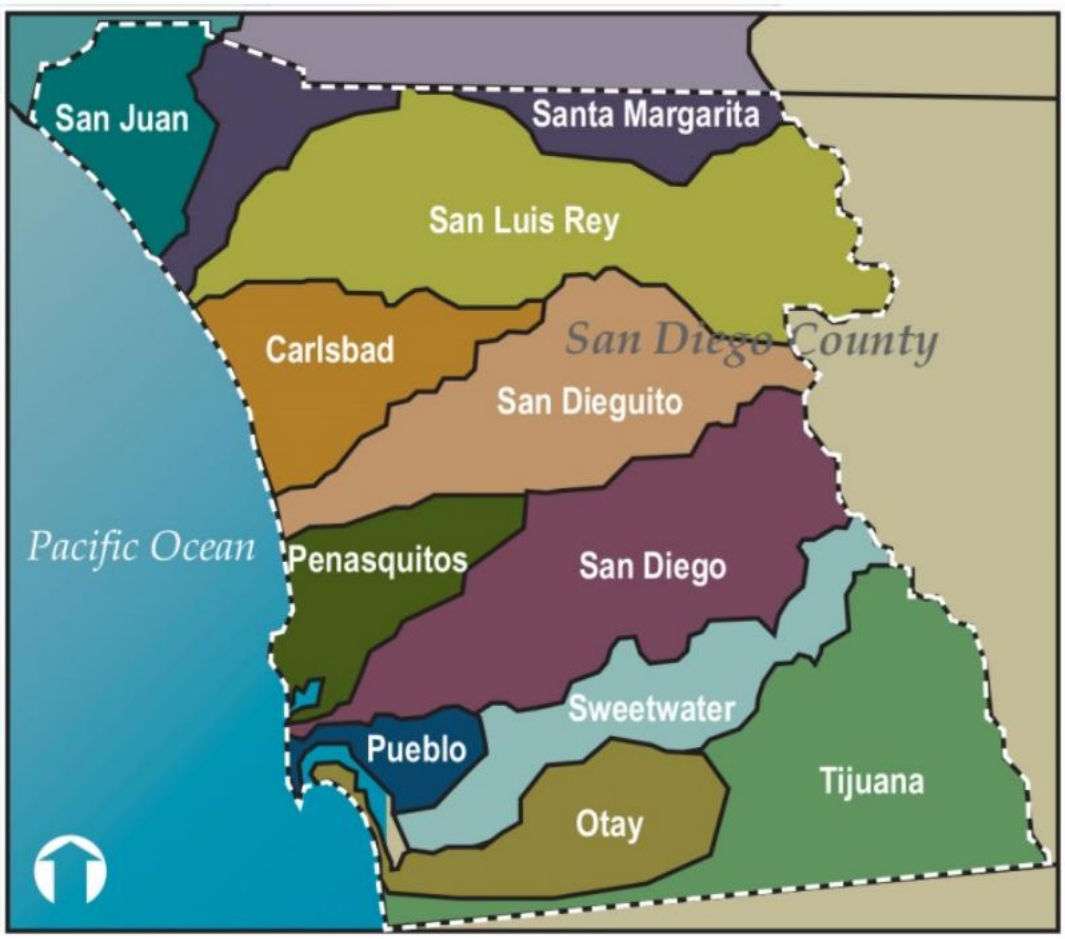
- Eastern Municipal Water District 2025 UWMP: Information on demands from the District's UWMP have been coordinated with EMWD for presentation in its 2025 Wholesaler UWMP.
- Metropolitan Water District of Southern California UWMP: Information on supplies provided to EMWD were noted and integrated into the District's UWMP. Of note is the current Water Supply Allocation Plan (WSAP) which may be implemented in the event of a regional water shortage.
- San Diego Association of Governments (SANDAG) Regional Plan: The District's projections of future water demands are based on demographic projections made by SANDAG as part of its 2025 Regional Plan. The SANDAG projections are fully consistent with the adopted land use plans of the County of San Diego and each of the various municipalities within the county.
- San Diego County General Plan: As noted in the SANDAG Regional Plan description above, the District's water demand projections are consistent with the adopted General Plan land uses of the County of San Diego. The County will be able to use the District's UWMP as needed to provide documentation of available water supplies relative to any land use decisions that come before the County during the five-year life of the current UWMP.
- San Diego Integrated Regional Water Management Plan:

  California legislation that was passed in 2000 promotes the development of Integrated Regional Water Management Plans (IRWMPs). The process involves an integrated approach to water management planning by providing the framework for local agencies to cooperatively manage local and imported water supplies and improve water supply quality, quantity, and reliability.

  The San Diego IRWMP, recently updated in 2019, promotes regional planning and supports projects that aim to increase water supply reliability and improve surface water and groundwater quality. IRWM planning and funding has helped to make water supply projects possible in the areas of seawater desalination, recycled water, local surface water, and groundwater, which are part of the region's projected mix of water resources. The IRWM program also supports water conservation.

The District participated in the development of the San Diego IRWMP, a copy of which can be found at http://www.sdirwmp.org/. The watershed boundaries of the San Diego IRWMP planning region are shown in Figure 1.1.

Figure 1.1 – San Diego IRWMP Region



Excerpt from 2019 San Diego IRWMP

1.7 – Department of Water Resources Review Process

Upon submittal, DWR will review the UWMP and WSCP to ensure that plans address Water Code requirements. Following the review, the District will be notified of the results of the review via a formal review letter.

1.8 – Grant or Loan Eligibility

By virtue of submitting a compliant UWMP, the District is eligible for State grants and low interest loans.

Water Code Section 10608.56

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

(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

Water Code Section 10656

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

23 CCR Section 596.1

(b)(2) "disadvantaged community" means a community with a median household income that is less than 80 percent of the statewide annual median household income.

1.9 – Units of Measurement

Units of measure used for calculations in the WUE Tables are included below:

AF	acre-feet
AFY	acre-feet per year
GPCD	gallons per capita per day
GPMD	gallons per mile of pipe per day
GPSCD	gallons per service connection per day
kWh	kilowatt-hour
MG	millions of gallons

1.10 – Acronyms and Abbreviations

Common acronyms and abbreviations are used throughout the plan. By convention, the first appearance is written out followed by the acronym or abbreviation in parentheses, and subsequent appearances use only the acronym or abbreviation.

UWMP	Urban Water Management Plan
Act	Urban Water Management Planning Act
AD	Domestic Agriculture
AF	acre-feet
AF	acre-feet per year
AG	Agriculture
AWWA	American Water Works Associations
BMPs	best management practices
C	Celsius
CIMIS	California Irrigation Management Information System
CIP	capital improvement program
CM	Commercial Family
CN	Construction
CO2	carbon dioxide
CropSWAP	Sustainable Water for Agricultural Production
CWC	California Water Code
CY	calendar year
District	Rainbow Municipal Water District
DMMs	demand measurement measures
DRA	Drought Risk Assessment
DWR	California Department of Water Resources
EMWD	Eastern Municipal Water District
EOC	Emergency Operations Center
ERP	Emergency Response Plan

ET	evapotranspiration
F	Fahrenheit
FPUD	Fallbrook Public Utility District
GPCD	gallons per capita per day
IRWMP	Integrated Regional Water Management Plan
kWh	kilowatt-hour
MF	Multi-Family Residential
MGD	million gallons per day
MWD	Metropolitan Water District of Southern California
PWS	Public Water System
RMWD	Rainbow Municipal Water District
SANDAG	San Diego Association of Governments
SCADA	supervisory control and data acquisition system
SF	Single Family Residential
SLRWRP	San Luis Rey Water Reclamation Plant
UWUO	Urban Water Use Objectives
Water Authority	San Diego County Water Authority
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan
WUE	Water Use Efficiency

1.11 – Acknowledgements

The District appreciates the participation of the following individuals in preparing, reviewing, and contributing to the UWMP:

Rainbow Municipal Water District

- Jake Wiley, P.E. – General Manager
- Chad Williams – Engineering & CIP Program Manager
- Konstantin Shilkov, CPA – Chief Financial Officer/Treasure
- Esther Lan – Management Analyst
- Terese Quintanar – District Secretary

Engineering Resources of Southern California

- Anthony Herda, P.E. – Senior Principal Engineer
- Trent Brudin, P.E. – Engineering Manager
- Braniah Washington – Engineering Aide

Eastern Municipal Water District

- Kylee Wideman – Water Resources Specialist Associate

Chapter 2 – Urban Water Management Plan Preparation

This chapter presents the basis for preparing the UWMP, units of measure, coordination, and outreach.

2.1 – Basis for Preparing a Plan

Water Code Section 10617

"Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

Water Code Section 10608.12

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

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

Water Code Section 10620

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

Water Code Section 10621

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

In 2025, the District served 9,180 municipal connections with a supply of 12,355 AF. The District exceeds the threshold of 3,000 or more customers and 3,000 AFY or more of supply to those customers and is therefore required to prepare an UWMP.

2.2 – Public Water System

California Health and Safety Code 116275

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

23 CCR Section 980(ddd):

(1) If the supplier owns and operates at least one public water system that has provided an average annual total of 3,000 AF of water or more for municipal purposes for the previous two years, or has served an annual average of 3,000 or more municipal service connections (i.e., residential [single or multifamily], commercial, institutional, industrial, or landscape irrigation) for the previous two years.

(2) Multiple public water systems that are owned and operated by the same supplier are, together, considered an urban retail water supplier provided they:

(A) Individually serve 200 connections or more;

(B) Collectively, meet the criteria in paragraph (1); and

(C) Meet one or more of the criteria below:

(i) The systems are permanently interconnected;

(ii) The service area boundaries are adjacent;

(iii) The supplier is using the system's data, such as population or landscape area, to calculate its urban water use objective pursuant to Water Code Section 10609.20.

The District's Public Water System Number is 3710016. In 2025, the District served 9,180 municipal connections with a supply of 12,355 AF.

2.3 – Individual or Regional Plan

Water Code Section 10620(d)(1):

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

The District has submitted an individual plan and is not participating in a regional plan.

2.4 – Fiscal or Calendar Year and Units of Measure

Water Code Section 10608.20

(a)(1) Urban retail water suppliers … may determine the targets on a fiscal year or calendar year basis.

The plan uses calendar years as a basis for calculating water use targets.

2.5 – Coordination and Outreach

Water Code Section 10631

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

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

This section describes the District's coordination efforts with their wholesaler, as well as other agencies and communities in their service area.

2.5.1 – Wholesale and Retail Coordination

The District is wholly reliant on imported water sources that are delivered through MWD facilities but purchased through EMWD. The District has coordinated the preparation of its UWMP with EMWD including provision of projected population and water demands in five-year increments through 2050.

2.5.2 – Coordination with Other Agencies and the Community

> ***Water Code Section 10620***
>
> *(d)(3) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.*
>
> ***Water Code Section 10642***
>
> *Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan…*

The District coordinated the preparation of this UWMP with appropriate local agencies to the extent practical, including EMWD and MWD.

The Public Draft 2025 UWMP and WSCP were made available on the District's website beginning on May 7, 2026. Within 30 days of their adoption, copies of the final UWMP and final WSCP were sent to DWR, the California State Library, and the County of San Diego, and are posted on the District's website and made available for review in hard copy form at the District's offices during normal working hours.

2.5.3 – Notice to Cities and Counties

> ***Water Code Section 10621(b)***
>
> *Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*

Notifications of the current UWMP and WSCP update were sent via email on February 18, 2026, to the County of San Diego, Eastern Municipal Water District, Fallbrook Public Utility District, and the City of Oceanside.

2.6 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Tables.

- Submittal Table 2-1 Retail: Public Water Systems
- Submittal Table 2-2: Plan Identification
- Submittal Table 2-3: Supplier Identification
- Submittal Table 2-4 Retail: Water Supplier Information Exchange

Copies of the tables may be found in Appendix B.

Chapter 3 – Service Area Description

Water Code Section 10631.

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

> *(a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.*

This chapter describes the District's water system. It contains a description of factors that impact water demand such as service area climate and population.

3.1 – General Description

Water Code Section 10631.

> *(a) Describe the service area of the supplier …*

The District was established in 1953 as a Special District, organized under Section 71000 of the California Water Code. The District provides water services to over 9,000 water customers within an 82-square mile service area which includes unincorporated San Diego County communities of Rainbow, Bonsall, and portions of Vista, Oceanside, and Fallbrook.

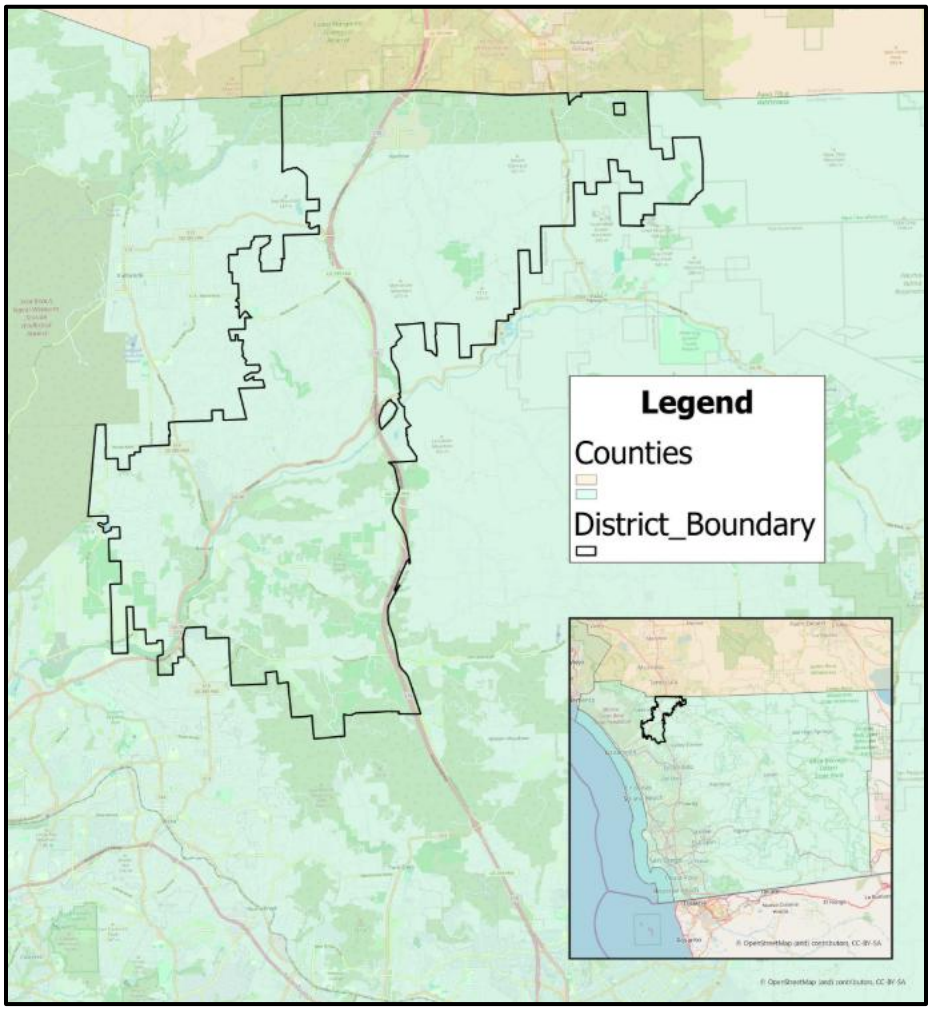
The District imports 100% of its water from Metropolitan Water District's Lake Skinner Water Treatment Plant in Temecula. The District is a member of the Eastern Municipal Water District, a water wholesaler in Riverside County.

The District delivers water to over 52,000 acres via 344 miles of water main, eight pump stations, three reservoirs, and 13 storage tanks.

3.2 – Service Area Boundary

The District serves the unincorporated communities of Rainbow and Bonsall, a portion of the unincorporated community of Fallbrook, and small portions of the City of Oceanside, as shown in Figure 3.1.

Figure 3.1 – Service Area Boundary



3.3 – Service Area Climate

Water Code Section 10631(a)

Describe the service area of the supplier, including … "climate…"

Water Code Section 10630.

It is the intention of the Legislature, in enacting this part, to permit levels of water management planning … while accounting for impacts from climate change.

Climate data were gathered from California Irrigation Management Information System (CIMIS) Weather Station No. 62 located in Temecula.

CIMIS is a program unit in the Water Use and Efficiency Branch, Division of Regional Assistance, California Department of Water Resources (DWR) that manages a network of over 145 automated weather stations in California. It was designed to assist irrigators in managing their water resources more efficiently.

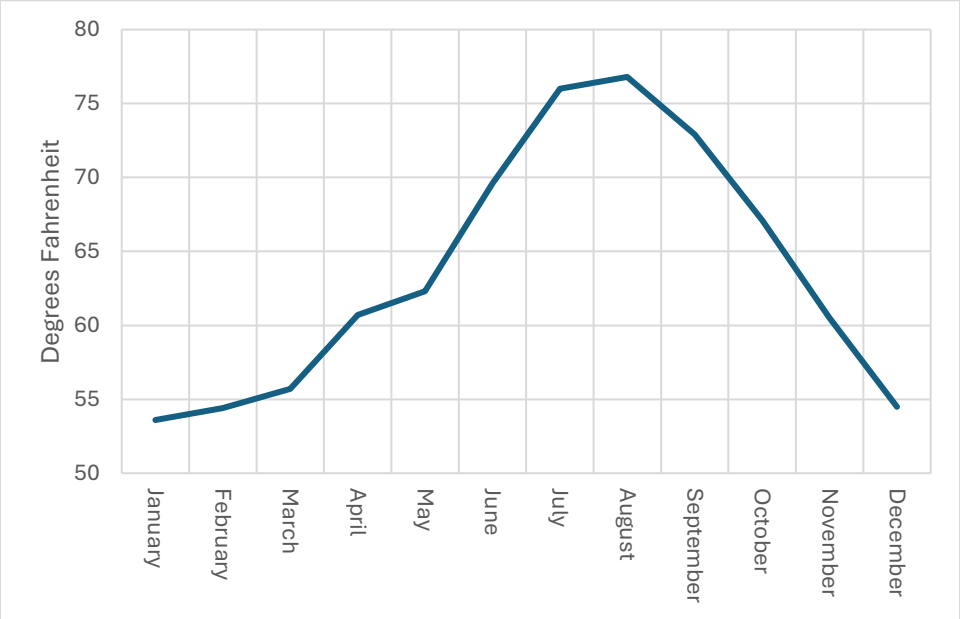
Table 3.1 provides a tabulation of the ten-year (CY 2016 through 2025) monthly averages for temperature, precipitation, and evapotranspiration index (see definition at the end of this section).

Table 3.1 – CIMIS Climate Data

Month	Temperature (degree F)	Precipitation (inches per month)	Evapotranspiration Index (inches per month)
January	53.6	2.2	2.6
February	54.4	1.8	3.2
March	55.7	2.0	4.3
April	60.7	0.7	5.8
May	62.3	0.2	6.3
June	69.6	0.1	7.5
July	76.0	0.1	8.4
August	76.8	0.2	7.9
September	72.9	0.6	5.9
October	67.1	0.7	4.9
November	60.5	1.0	3.4
December	54.5	1.5	2.4

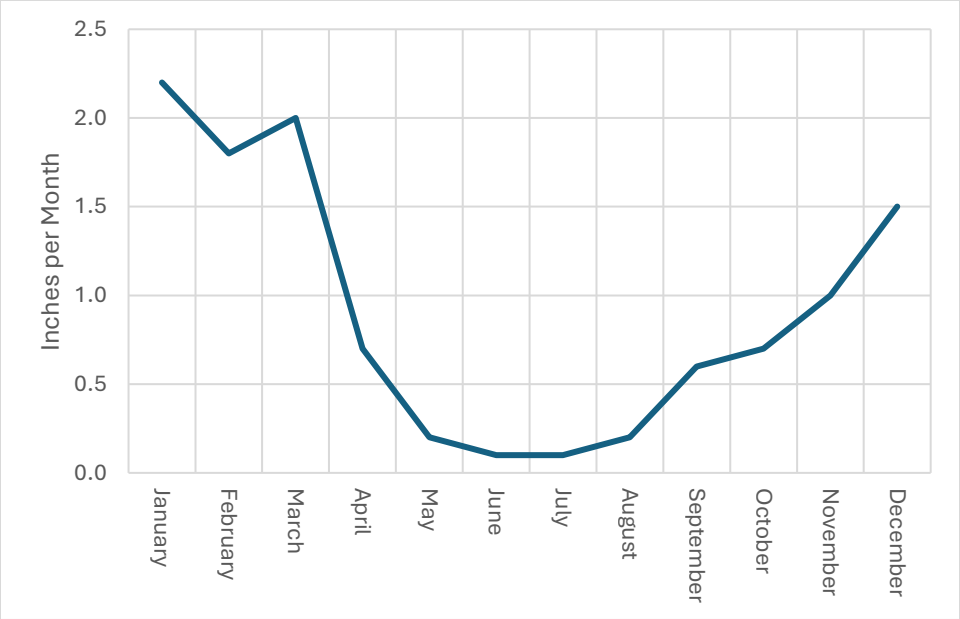
Average monthly temperature variation over the last ten years is shown in Figure 3.2.

Figure 3.2 – 10-year Average Temperature Variation



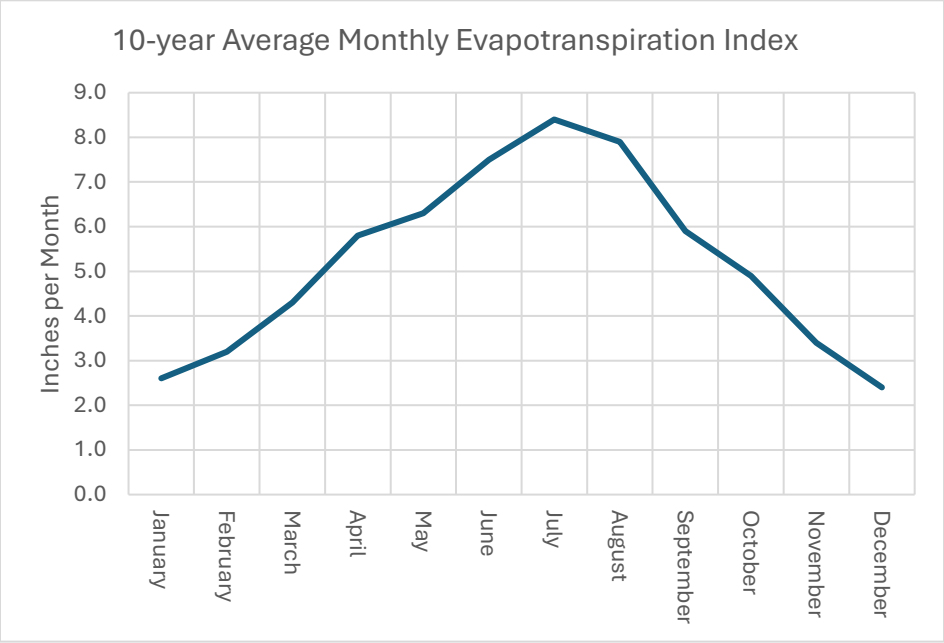
Average monthly precipitation over the last ten years is shown in Figure 3.3.

Figure 3.3 – 10-year Average Precipitation Variation



The average monthly evapotranspiration index over the last ten years is shown in Figure 3.4.

Figure 3.4 – Average Evapotranspiration



Generally, the evapotranspiration index is a measure of the amount of irrigation required to maintain healthy turf grass. A more precise definition is provided below.

Per CIMIS:

> *Water is essential for all living things including plants. Precipitation and irrigation are the two primary sources of water for agricultural crops and landscape vegetation. Plant leaves and soil surfaces temporarily retain parts of water directly applied to them. As solar radiation hits such surface, it breaks the retained water molecules apart and changes liquid water into water vapor. The water vapor is transported away from the surface by winds. The process by which the water molecule is converted from liquid phase into the gaseous phase (and removed from the surface) is called evaporation.*
>
> *The water that is not retained by the plant and soil surfaces infiltrates into the soil. Plants extract the infiltrated water through their roots and transport it to their leaves for photosynthesis, a process by which plants produce glucose (sugar). In addition to water, plants need carbon dioxide (CO2) and light for photosynthesis. The light comes from the sun and CO2 comes from the atmosphere. In order to take atmospheric CO2 in, plants open their stomata, the microscopic pores on plant leaf surfaces, thereby exposing the water in the leaf to solar energy and wind. This results in a loss of water from within plant leaves to the atmosphere through the process known as transpiration.*
>
> *Evapotranspiration (ET) is the term used to describe the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant*

surfaces) and transpiration (from plant tissues). Accurate estimates of ET are needed in many applications. In agricultural and landscape irrigation, for example, estimates of ET are necessary for system design, irrigation scheduling, water rights, water transfers, water resources planning, and other water related issues.

As described above, three conditions must be met for ET to take place. First, water has to be present at the surface-atmosphere interface. Second, there must be some form of energy to convert the liquid water into a water vapor. This conversion requires large amounts of energy (about 540 Calories per gram of water at a temperature of 100 °C), which is usually provided by the sun. Third, there must be a mechanism to transport the water vapor away from the evaporating surface.

3.4 – Service Area Population

Water Code Section 10631(a)

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

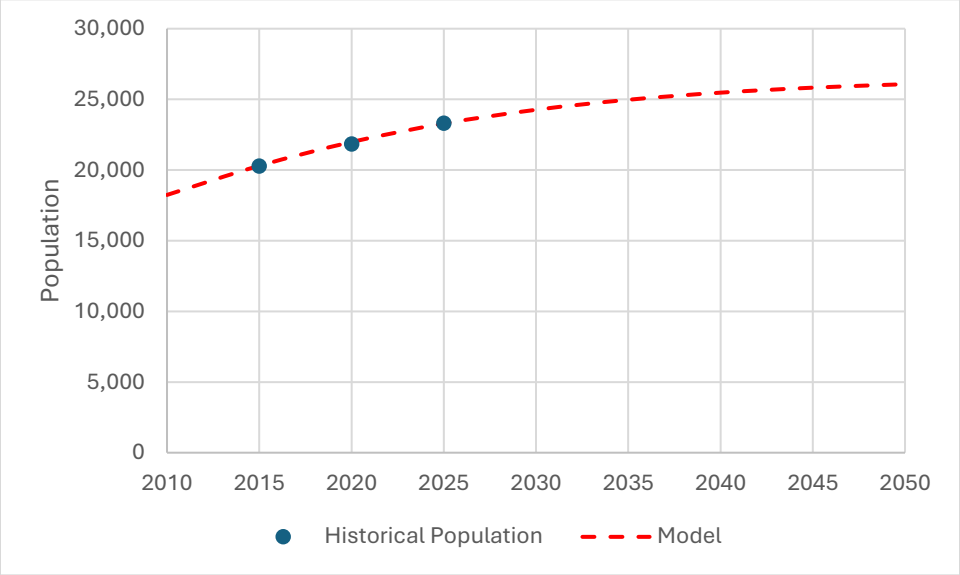
The population projection is based on a combination of historical population estimates from previous UWMPs, input from the San Diego Association of Governments (SANDAG), evaluation of land use, and anticipated growth within the District.

Per current land use as shown in Table 3.3, there are 8,967 residential parcels. Based on interaction with developers, the District anticipates up to 794 additional parcels. Per the US Census, population density is estimated at 2.72 persons per household. At build-out, this equates to a maximum population of 26,599.

Based on previous UWMPs, the District's historical population was 20,279 in 2015, 21,841 in 2020, and 23,299 in 2025.

These data points were used to construct a population projection model based on a best-fit logistics curve, as shown in Figure 3.5.

Figure 3.5 – Population Projection Model



$$P(t) = \frac{P_{max}}{1 + e^{-k(t-t_0)}} = \frac{26{,}599}{1 + e^{-0.078(t-2000)}}$$

Where:

$P(t)$ is the population in year t

P_{max} is the build-out population

t_0 is the inflection point of the logistics curve

k is the growth coefficient

The population model was used to project the population at five increments through 2050, as shown in Table 3.2.

Table 3.2 – Population Projection

Year	2025	2030	2040	2040	2045	2050
Population	23,299	24,262	24,970	25,474	25,827	26,071

3.5 – Other Social, Economic, and Demographic Factors

Water Code Section 10631

(a) Describe the service area of the supplier, including… other social, economic and demographic factors affecting the supplier's water management planning.

The local economy is driven in part by agriculture, which has fostered participation in the CropSWAP (Sustainable Water for Agricultural Production) program. Designed to offer financial incentives to agricultural water users to transition from high-water-use crops to varieties with lower water requirements, the Program aims to alleviate the effects of challenging drought conditions and a declining local agricultural economy.

For additional information on the CropSWAP Program, see Appendix F.

3.6 – Land Uses Within the Service Area

Water Code Section 10631(a)

…The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities…

Current land use data were acquired from SANDAG. Official San Diego County land uses within the service area boundary are provided in Table 3.3.

Table 3.3 – Current Land Uses

Land Use Code	Description	Parcels	Area (acres)
1000	Spaced Rural Residential	4,712	16,385.08
1090	Spaced Rural Residential Without Units	23	45.55
1110	Single Family Detached	2,720	373.56
1120	Single Family Multiple-Units	615	115.82
1190	Single Family Residential Without Units	17	24.45
1200	Multi-Family Residential	219	5.63
1300	Mobile Home Park	661	72.33
1401	Jail/Prison	1	47.33
1409	Other Group Quarters Facility	2	50.06
1501	Hotel/Motel (Low-Rise)	2	3.51
1503	Resort	8	152.01
2103	Light Industry - General	3	16.13
2104	Warehousing	1	0.74
2201	Extractive Industry	3	119.30
2301	Junkyard/Dump/Landfill	1	122.61
4112	Freeway	3	2.11
4113	Communications and Utilities	74	225.07
4116	Park and Ride Lot	1	12.66
4118	Road Right of Way	59	416.45
4119	Other Transportation	4	34.59
5004	Neighborhood Shopping Center	5	23.26
5007	Arterial Commercial	3	1.98
5008	Service Station	3	2.18
5009	Other Retail Trade and Strip Commercial	12	44.60
6003	Government Office/Civic Center	1	2.97
6102	Religious Facility	4	12.74
6105	Fire/Police Station	5	9.28
6109	Other Public Services	1	0.77
6805	Junior High School or Middle School	1	17.00
6806	Elementary School	5	31.91
7203	Racetrack	9	121.01
7204	Golf Course	32	757.73
7205	Golf Course Clubhouse	2	9.14
7211	Other Recreation - Low	2	38.00
7601	Park - Active	6	13.20
7603	Open Space Park or Preserve	143	3,780.65
7606	Landscape Open Space	74	124.64
7607	Residential Recreation	9	12.99
7609	Undevelopable Natural Area	8	401.18
8001	Orchard or Vineyard	799	7,093.34
8002	Intensive Agriculture	145	2,867.82
8003	Field Crops	141	1,731.64
9101	Vacant and Undeveloped Land	1,338	12,182.30
9202	Lake/Reservoir/Large Pond	3	78.43
9501	Residential Under Construction	34	48.76
Totals		**11,916**	**47,632.51**

The total area within the water service area boundary is approximately 51,021 acres and

county land use accounts for 47,633 acres, or approximately 93.4%. The remaining area is associated with Interstate 15, which is not included in the county land use database.

3.7 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Table.

- Submittal Table 3-1 Retail: Population - Current and Projected | Water Code Section 10631(a)

A copy of this table may be found in Appendix B.

Chapter 4 – Water Use Characterization

This chapter presents the historical and projected retail water demands by customer type, climate change considerations, distribution system water losses, and water savings.

4.1 – Non-Potable Versus Potable Water Use

All customers receive potable water.

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

Water Code Section 10635.

(a) Every urban water Supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

Water Code Section 10631(d)

(1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following…

(2). The water use projections shall be in the same five-year increments described in subdivision (a).

(4)(A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(4)(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections. (ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or

> *transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.*

The following sections present details and summaries of current and projected water use by sector.

4.2.1 – Water-Use Sectors

> ***Water Code Section 10631(d)***
>
> *(1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:*
>
> *(A) Single-family residential.*
>
> *(B) Multifamily.*
>
> *(C) Commercial.*
>
> *(D) Industrial.*
>
> *(E) Institutional and governmental.*
>
> *(F) Landscape.*
>
> *(G) Sales to other agencies.*
>
> *(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.*
>
> *(I) Agricultural.*
>
> *(J) Distribution system water loss.*

Per the District billing system, customers are broken down into the following water use sectors.

- AD (Domestic Agriculture)
- AG (Agriculture)
- CM (Commercial Family)
- CN (Construction)
- IS (Institutional)
- MF (Multi-Family Residential)
- SF (Single Family Residential)

4.2.2 – Past Water Use

> ***Water Code Section 10631(d)***
>
> *(1) For an urban retail water supplier, quantify, to the extent records are available, past... water use... based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors...*

Water use for 2021 through 2025 was taken from internal historical water use and water supply records, as shown in Table 4.1.

Table 4.1 – Last Five Years of Water Use in AF

Customers	2021	2022	2023	2024	2025
AD (Domestic Agriculture)	1,590	2,421	1,597	2,122	3,313
AG (Agriculture)	2,772	3,431	2,062	2,604	3,648
CM (Commercial)	828	946	579	718	715
CN (Construction)	227	249	49	64	66
IS (Institutional)	70	69	47	56	57
MF (Multi-Family Residential)	320	332	346	359	385
PC	1,473	1,675	981	957	
PD	1,665	1,979	1,281	1,129	
SC	1,029				
SD	1,293				
SF (Single Family Residential)	3,870	3,673	2,911	3,263	3,473
Water Loss	767	1,570	939	1,417	698
Total	**15,904**	**16,346**	**10,791**	**12,687**	**12,355**

Customer designations PC, PD, SC, and SD refer to agriculture programs administered by the San Diego County Water Authority. These programs have been discontinued since the District now receives wholesale supply from EMWD.

4.2.3 – Current Water Use

> ***Water Code Section 10631(d)***
>
> *(1) For an urban retail water supplier, quantify, to the extent records are available ...current water use... based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors...*

In 2025, water use was distributed as shown Table 4.2 among the District's water use sectors.

Table 4.2 – Current Water Use

Water Use Sector	Volume (AF)
AD (Domestic Agriculture)	3,313
AG (Agriculture)	3,648
CM (Commercial)	715
CN (Commercial Irrigation)	66
IS (Institutional)	57
MF (Multi-Family Residential)	385
SF (Single Family Residential)	3,473
Losses	698
Total	**12,355**

4.2.4 – Projected Water Use

Water Code Section 10631(d)

(1) For an urban retail water supplier, quantify, to the extent records are available, … projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors…

Water Code Section 10633

The plan shall provide, to the extent available, information on recycled water…and shall include all of the following…

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision…

Water Code Section 10635 (a)

Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

Water Code Section 10631(h)

An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available…

If a Retail Supplier receives water from a Wholesale Supplier, the Retail Supplier must provide their projected use of that supply to the Wholesale Supplier. Suppliers will report which wholesale suppliers were informed of their projected use using Submittal Table 2-4 R.

Projected water use is shown Table 4.3 broken down by the District's current water use sectors.

Table 4.3 – Projected Water Use in AF

Water Use Sector (AF)	2030	2035	2040	2045	2050
AD (Domestic Agriculture)	3,109	2,954	2,806	2,666	2,533
AG (Agriculture)	3,526	3,350	3,183	3,024	2,873
CM (Commercial)	844	949	1,024	1,076	1,112
CN (Construction)	100	100	100	100	100
IS (Institutional)	55	55	55	55	55
MF (Multi-Family Residential)	523	628	703	755	791
SF (Single Family Residential)	3,632	3,737	3,812	3,864	3,900
Losses	1,061	942	818	692	568
Total	12,850	12,715	12,501	12,232	11,932

Basis for demand projection:

- CN (Construction) and IS (Institutional) demands will remain flat at the four-year average.
- AD (Domestic Agriculture), AG (Agriculture) demands will decrease by one percent every year from the four-year average due to continued implementation of the CropSWAP Program and an anticipated decline in economic activity in the agricultural sector.
- SF (Single Family Residential), MF (Multi-Family Residential), and CM (Commercial) demands will increase proportionally to population growth from the four-year average adjusted lower by one percent to account for water use efficiency standards per the San Diego County Code of Regulatory Ordinances.
- Water loss is estimated at 10 percent in 2025 and will decrease by one percent every five years through implementation of a planned water loss reduction program.

Demands presented in Table 4.3 represent normal years. In any given year, demands may vary due to weather or unanticipated demographic or economic changes. This volatility is addressed in Chapter 7 where water service reliability and drought are assessed in greater detail.

4.2.5 – Standards, Codes, Ordinances, and Plans

Water Code Section 10631(d)(4)

(A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

Development within the Service Area is subject the San Diego County Code of Regulatory Ordinances, Title 8 (Zoning and Land Use Regulations). These regulations include standards for water conservation in landscaping and water conservation for county facilities and parks.

Based on implementation of the ordinances, new development is assumed to use water more efficiently than comparable existing customers. For purposes of estimating future demand, new development is one percent more efficient than similar existing water use sectors.

4.2.6 – Lower-Income Households

Water Code Section 10631.1.

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

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

California Health and Safety Code Section 50079.5 (a)

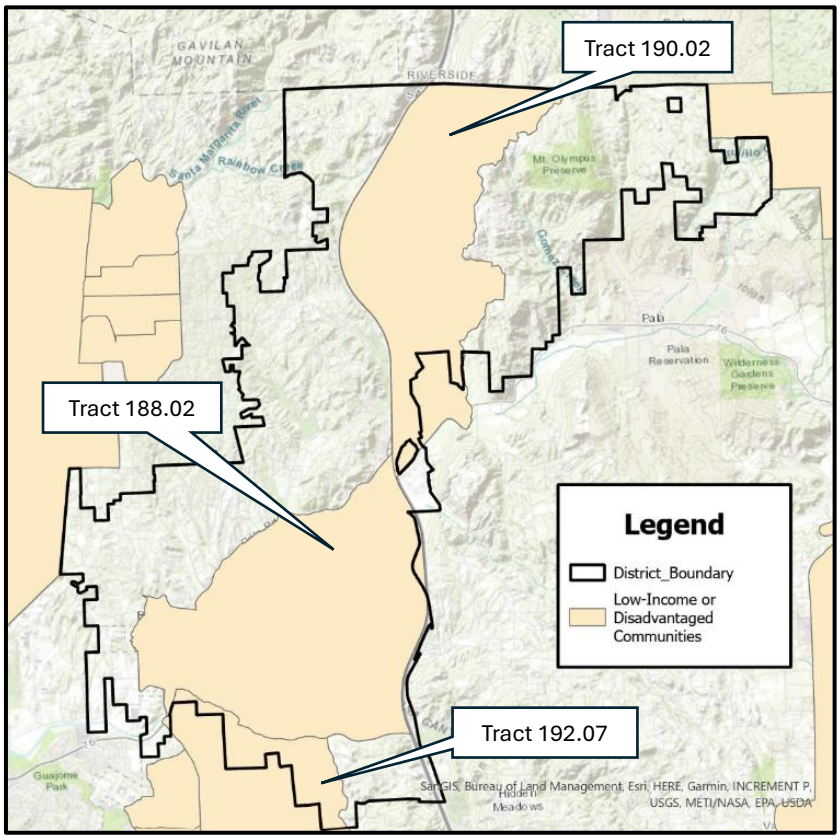
"Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families... In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.

Analysis of lower-income households is based on 2024 spatial data acquired from the Department of Housing and Community Development titled *Low-Income or Disadvantaged Communities Designated by California*.

80 percent of area median income is established at $87,300.

Three Census Tracts that overlie the service area are identified as lower-income as shown in Figure 4.1.

Figure 4.1 – Lower-Income Areas



The sum of the tributary areas within the District's service area boundary is approximately 33.7 square miles, as tabulated in Table 4.4.

Table 4.4 – Tributary Area of Lower-Income Households

Tract	Median Household Income	Tributary Area (square miles)
Census Tract 192.07	$69,125	2.6
Census Tract 188.03	$82,250	17.9
Census Tract 190.02	$80,898	13.2
Total		**33.7**

Lower income households represent approximately 42% of the District's total area of 82 square miles.

Assuming economic conditions remain unchanged and customers are distributed evenly across the District, project lower income water demand is as shown in Table 4.5, calculated as 42% of residential demand.

Table 4.5 – Projected Lower Income Water Use in AF

Water Use Sector	2030	2035	2040	2045	2050
SF (Single Family Residential)	1,525	1,570	1,601	1,623	1,638
MF (Multi-Family Residential)	220	264	295	317	332

4.2.7 – Climate Change Considerations

Water Code Section 10630.

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

Water Code Section 10635(b)

Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment …(and) shall include each of the following …

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

The District imports 100% of its water from Metropolitan Water District's Lake Skinner Water Treatment Plant in Temecula. MWD published its Climate Adaptation Master Plan for Water (CAMP4W) in April 2025. Climate change considerations impacting supply have been addressed as part of inter-agency coordination with EMWD on behalf of MWD.

Climate change may impact outdoor water demand. New construction is subject to San Diego County water conservation standards. The District is part of the Regional CropSWAP (Sustainable Water for Agricultural Production) Program which aims to alleviate the effects of challenging drought conditions and a declining local agricultural economy. Climate change considerations impacting supply reflect implementation of County standards and continued participation in CropSWAP. See Appendix F for more information on the CropSWAP Program.

4.3 – Distribution System Water Loss

Water Code Section 10631(d)(3)

(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

The last five years of American Water Works Associations (AWWA) Water Audits are provided in Appendix E.

4.3.1 – Previous Five Years Distribution System Losses

Distribution system losses taken from the last five years of AWWA Water Audits are summarized in Table 4.6.

Table 4.6 – Five Years of Distribution System Losses

Water Audit Period	Supply (AF)	Consumption (AF)	Loss (AF)	% Loss
FY 2020-21	16,936.1	16,132.9	803.2	4.7%
FY 2021-22	16,237.4	14,990.5	1,246.9	7.7%
FY 2022-23	12,739.8	11,859.4	880.4	6.9%
FY 2023-24	11,270.3	10,238.5	1,031.8	9.2%
FY 2024-25	14,010.0	12,844.0	1,166.0	8.3%

The District was below the typical 10% water loss limit all five years.

4.3.2 – Progress Toward Meeting the Water Loss Performance Standard

The District's Water Loss Performance Standards were updated January 30, 2026, and include a Baseline Real Loss of 604.6 gallons per mile of pipe per day (GPMD) and an Apparent Loss Standard of 97.4 gallons per service connection per day (GPSCD).

Real Loss Calculation

Per the District's GIS, there 344.2 miles of pipe in the distribution system. Per the 2024-25 Water Audit, real loss was estimated at 1,101.74 AF. This is equivalent to 2,857 GPMD:

$$\left(\frac{1{,}101.74\ AF}{334.2\ mi \cdot year}\right)\left(\frac{43{,}560\ ft^2}{acre}\right)\left(\frac{7.481\ gal}{ft^3}\right)\left(\frac{year}{365\ days}\right) \cong 2{,}857\ GPMD$$

At 2,857 GPMD, the District's real loss exceeds the baseline loss of 604.6 GPMD. To address the baseline real loss deficiency, the District plans to initiate a leak detection pilot program to assess methods to reduce real loss.

Apparent Loss Calculation

Per the 2024-25 Water Audit, the District has 9,180 active connections and apparent loss was estimated at 64.061 AF. This is equivalent to 6.5 GPSCD:

$$\left(\frac{64.061\ AF}{9{,}180\ connections \cdot year}\right)\left(\frac{43{,}560\ ft^2}{acre}\right)\left(\frac{7.481\ gal}{ft^3}\right)\left(\frac{year}{365\ days}\right) \cong 6.2\ GPSCD$$

At 6.2 GPSCD, the District's apparent loss meets the apparent loss standard of 97.4 GPSCD.

4.4 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Tables.

- Submittal Table 4-1 Retail: Total Uses for Potable and Non-Potable Water - 2025 Actual | Water Code Section 10631(d)(1)
- Submittal Table 4-2 Retail: Total Uses of Potable, and Non-Potable Water - Projected | Water Code Section 10631(d)(1)
- Submittal Table 4-3 Retail: Inclusion in Water Use Projections | Water Code Section 10631 (a), 10631 (d)(4)(A), and 10631 (d)(4)(B)
- Submittal Table 4-5 Retail: Water Loss Audit Reporting | Water Code Section 10631(d)(3)(A)
- Submittal Table 4-6 Retail: Progress Towards 2028 Water Loss Standard | Water Code Section 10631(d)(3)(C)

Copies of the tables may be found in Appendix B.

Chapter 5 – SB X7-7 Baselines, Targets, and Reporting

This chapter confirms the District's compliance with Senate Bill X7-7 (SB X7-7) regarding achieving its historical water use efficiency baseline by the 2020 deadline.

5.1 – Reporting Requirements

> ***Water Code Section 10608.40***
>
> *Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631.*
>
> ***Water Code Section 10608.12***
>
> *(af) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.*

Per the District's 2020 UWMP, the target baseline for 2020 was calculated at 1,202 gallons per capita per day (GPCD) and the actual water use efficiency in 2020 was 585 GPCD. The District achieved its 2020 water use efficiency goal.

In 2025, the population was 23,299 and the water use was 12,355 AF. This is equivalent to a water use efficiency of 473 GPCD:

$$\left(\frac{12{,}355\ AF}{23{,}299\ persons \cdot 365\ days}\right)\left(\frac{43{,}560\ ft^2}{acre}\right)\left(\frac{7.481\ gallons}{ft^3}\right) \cong 473\ GPCD$$

The District has reduced its per capita water use since 2020 by nearly 24 percent. The continues to be compliant with the achieving the target baseline.

5.2 – Funding Eligibility

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

By virtue of complying with SB X7-7 and submitting this UWMP by the July 1, 2026, deadline, the District maintains its eligibility for state grants and loans.

5.3 – Nexus to State Water Board Urban Water-Use Objectives

23 CCR Section 966

(h) If a supplier's calculated objective-based total use is larger than its target-based total use, the supplier's urban water use objective shall be its Water Code section 10608.20 individual target less excluded demands as described in paragraph (3). If the supplier's section 10608.20 target is expressed in gallons per capita daily, the supplier shall multiply the target by its residential service area population for the reporting year and the number of days in the year.

23 CCR Section 966

(e) If any system owned and operated by a supplier is lacking the data needed to calculate the budgets described in subdivision (c)(1) through (4), that system shall be excluded from the overall objective calculation until the requisite data are obtained. The requisite data must be obtained no later than July 1, 2028, for use in the 2030 reporting year.

(f) For systems that do not meet the criteria to be considered an urban retail water supplier until after the effective date of this section, and for a system that hydraulically consolidates with a supplier, this section applies beginning five (5) years after the system meets the criteria to be considered a supplier or consolidates with a supplier.

This section is provided as a courtesy to make the public aware of pending water use efficiency standards. As part of implementation of the "Making Conservation a Way of Life" Regulation on Urban Water-Use Efficiency Standards, Objectives, and Performance Measures (23 CCR Section 965 et seq.), the State Board will develop regulations for Urban Water Use Objectives (UWUO) calculations to be included in the 2030 UWMP.

5.4 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Table.

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

A copy of this table may be found in Appendix B.

Chapter 6 – Normal-Year Water Supply Characterization

This chapter describes the existing and planned supplies of water available to the District.

6.1 – Water Supply Analysis Overview

California Water Code (Water Code) Section 10631(b)

Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier as described in subdivision (a) [in five-year increments to 20 years or as far as data is available]1, providing supporting and related information, including all of the following:

(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

Water Code Section 10631 (h)

... The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

The District is wholly reliant on imported water from MWD purchased through EMWD. No additional resources are planned at this time.

6.2 – Purchased or Imported Water

The District is wholly reliant on imported water sources that are delivered through MWD facilities and purchased through EMWD. The vast majority of water served to the District comes from the Skinner Water Treatment Plant.

The District has relied upon the water supply information provided by EMWD in preparing this plan and for the purposes of fulfilling the requirements of the Act with respect to inter-agency coordination.

A complete description of MWD supplies may be found in its 2025 UWMP (link).

A complete description of EMWD supplies may be found in its 2025 UWMP (link).

6.3 – Other Local Supplies

6.3.1 – Groundwater

Water Code Section 10631(b)(4)

If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.

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

(C) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(D) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

The District does not currently utilize local groundwater as an existing source of supply.

6.3.2 – Surface Water

The District does not currently utilize local surface water as an existing source of supply. Several small surface water bodies, most notably the San Luis Rey River, run through the District. While the river may see larger flows during storm events, water flow is minimal most of the year. River flows are insufficient for diversion for use as a water supply. The District has no plans to develop surface water within its service area as a water supply.

6.3.3 – Stormwater

The District does not currently utilize stormwater as an existing source of supply. The District has no plans to develop stormwater as a water supply within its service area.

6.3.4 – Recycled Water

The District does not own or operate any recycled water distribution facilities and does not currently utilize recycled water as an existing source of supply. The District has no plans to develop recycled as a water supply within its service area at this time.

6.4 – Wastewater and Recycled Water

Water Code Section 10633R

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

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Wastewater is collected by the District and discharged to the City of Oceanside for treatment. Recycled water is not available to the District at this time.

6.4.1 – Recycled Water Coordination

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

Recycled water is not available to the District at this time.

6.4.2 – Wastewater Collection, Treatment, and Disposal

> ***Water Code Section 10633(a)***
>
> *A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.*

The District has a contract in place with the City of Oceanside in which the District owns 1.5 million gallons per day (MGD) of sewage treatment capacity in the City of Oceanside's San Luis Rey Water Reclamation Plant (SLRWRP). Per the 2016 Sewer System Management Plan (SSMP), the District's sewer service area includes 3,836 active connections mainly along the SR-76 corridor. The remainder of the service area is more rural and uses private septic tank systems. The District conveys the wastewater collected by its system to the SLRWRP via a wastewater line located along North River Road. In 2025, the District conveyed an average of 1.0 MGD to the Oceanside plant, which is equivalent to approximately 1,120 AFY.

6.4.3 – Wastewater Treatment and Discharge

No wastewater is treated or discharged within the service area.

6.4.4 – Recycled Water System Description

> ***Water Code Section 10633 (c)***
>
> *A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.*

The District has no recycled water system.

6.4.5 – Potential and Projected Recycled Water Uses

Water Code Section 10633

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

There are myriad potential recycled water uses within the service area including agricultural irrigation, landscape irrigation, and groundwater recharge. To date, irrigation customers have not been surveyed regarding their willingness to convert from potable water to recycled water; therefore, quantification of potential use would be speculative. Furthermore, no hydrogeological studies have been conducted concerning the feasibility of indirect potable reuse in the local alluvial groundwater aquifer.

There are no projected uses of recycled water within the service area.

6.4.6 – Actions to Encourage and Optimize Future Recycled Water Use

Water Code Section 10633

The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier... and shall include the following: (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

There are no projected uses of recycled water within the service area. Therefore, actions to encourage and optimize recycled water use are moot.

6.4.7 – Desalinated Water Opportunities

Water Code Section 10631(g)

Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

There are no opportunities to develop desalinated water within the service area.

6.4.8 – Water Exchanges and Transfers

Water Code Section 10631(c)

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

Although the District relies entirely upon water purchased from the EMWD, it maintains emergency interconnections with neighboring agencies in order to improve reliability. The District has interconnections with the City of Oceanside at the City's Weese Water Treatment Plant and with the Fallbrook Public Utility District (FPUD). The District has used the interconnections with FPUD to purchase supply.

Regional exchanges and transfers being pursued by EMWD are documented in EMWD's UWMP.

6.5 – Supply From Storage

The District does not take water from surface storage or underground storage.

6.6 – Future Water Projects

Water Code Section 10631 (f)

Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

Future water supply projects are described in the following sections.

6.6.1 – Recycled Water Project

The District is not pursuing recycled water as a source of supply at this time.

6.6.2 – Groundwater Desalter

In January 2016, the District completed a preliminary study (West Yost Associates, 2016) examining the feasibility of developing local San Luis Rey River basin groundwater resources for District use. The project would include a well field, and either the construction of a dedicated groundwater desalting plant or another appropriate form of treatment. The study examined a project developing up to 4,000 AFY of new treated water supply. The water to be treated originates as District-supplied imported water to the basin that percolates into the alluvial aquifer as a result of agricultural irrigation and return flows from septic systems. As such, the District classifies the project as an Imported Water Return Flow Reclamation Project.

The District is currently conducting a feasibility study based on the findings of the preliminary study to determine further action on the project. For purposes of this UWMP, the District has made no conclusions regarding implementation and has not yet incorporated the potential supply into its supply portfolio, pending the outcome of the feasibility study.

6.7 – Energy Use

Water Code Section 10631.2. (a)

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

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

Water energy intensity is the total amount of energy used per AF to power the water management processes occurring within the District's operational control. The District has selected to report its energy intensity using the total utility approach option as outlined in the Guidebook. Energy used in EMWD's water supply process or in the transmission to the District from EMWD is not included in this analysis. Energy usage for each of the 45 water distribution facilities is provided by the associated electricity meter and reported in kilowatt-hours (kWh).

This analysis focuses on energy intensity for calendar year 2025. The volume of water supplied during this period is 12,355 AF. Total energy usage for this period 3,568,716 kWh. This is equivalent to an energy intensity of 886 kWh per million gallons:

$$\left(\frac{3{,}568{,}716\ kWh}{12{,}355\ AF}\right)\left(\frac{AF}{43{,}560\ ft^3}\right)\left(\frac{ft^3}{7.481\ gal}\right)\left(\frac{10^6\ gal}{MG}\right) \cong 886\ kWh\ per\ MG$$

The District has high confidence in its energy intensity data, as all water supply data and energy use data are metered.

6.8 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Tables.

- Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2025 | Water Code Section 10633(a)
- Submittal Table 6-3 Retail: Wastewater Treatment and End Uses Within UWMP Service Area in 2025 | Water Code Section 10633(a)
- Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area | Water Code Section 10633 (c)(d)
- Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual | Water Code Section 10633
- Submittal Table 6-6 Retail: Methods to Encourage Future Recycled Water Use | Water Code Section 10633 (f)
- Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs | Water Code Section 10631 (f)
- Submittal Table 6-8 Retail: Water Supplies — 2025 Actual | Water Code Section 10631 (b)
- Submittal Table 6-9 Retail: Water Supplies — Projected | Water Code Section 10631 (b)
- Table O-1B: Recommended Energy Reporting - Single Delivery Product - Total Utility Approach

Copies of these tables may be found in Appendix B.

Chapter 7 – Water Service Reliability and Drought Risk Assessment

7.1 – Constraints on Water Sources Considerations

Water Code Section 10631 (b)(1)

A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

Water Code Section 10634

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

Water Code Section 10635 (b)(2)

A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

Water Code Section 10635 (b)(4)

Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

As part of inter-agency coordination, EMWD has confirmed sufficient supply to meet the range of demands presented in this chapter.

The supply from EMWD is very consistent in quantity and quality and has sufficient capacity to meet peak demands without any delivery constraints. The District meets or exceeds all state and federal water quality standards for drinking water. The District does not anticipate any shortage or impact to the availability of supply. The EMWD 2025 UWMP Section 7 provides additional information on supply reliability.

7.2 – Water Service Reliability Assessment

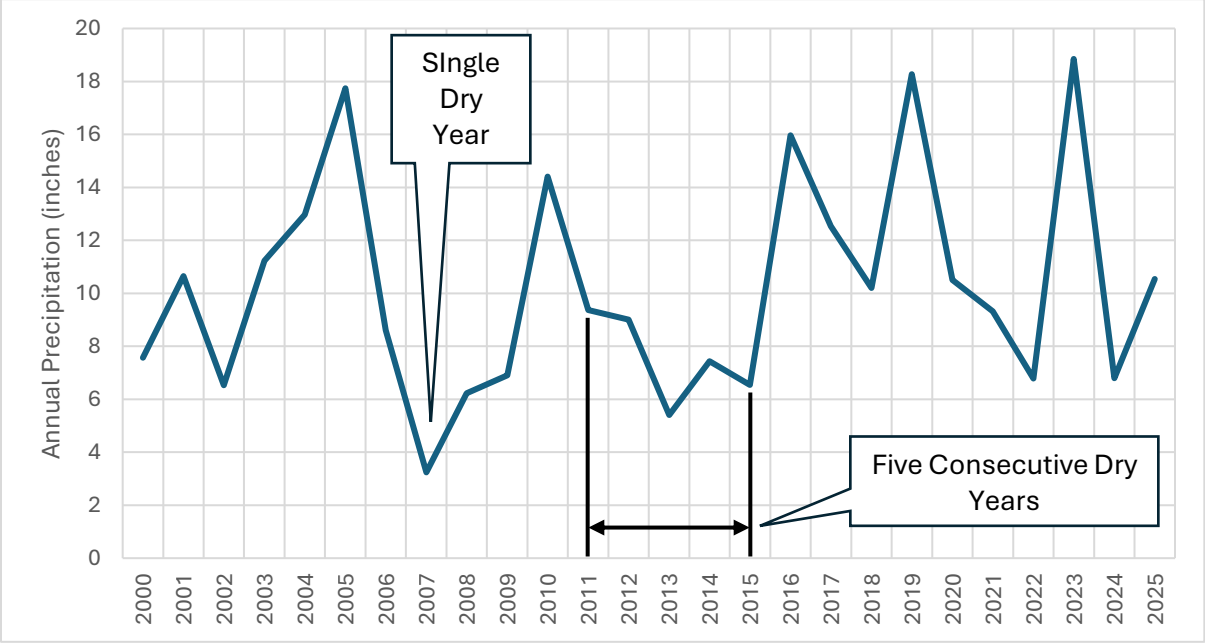
Water Code Section 10635(a)

Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

2025 is considered the normal year.

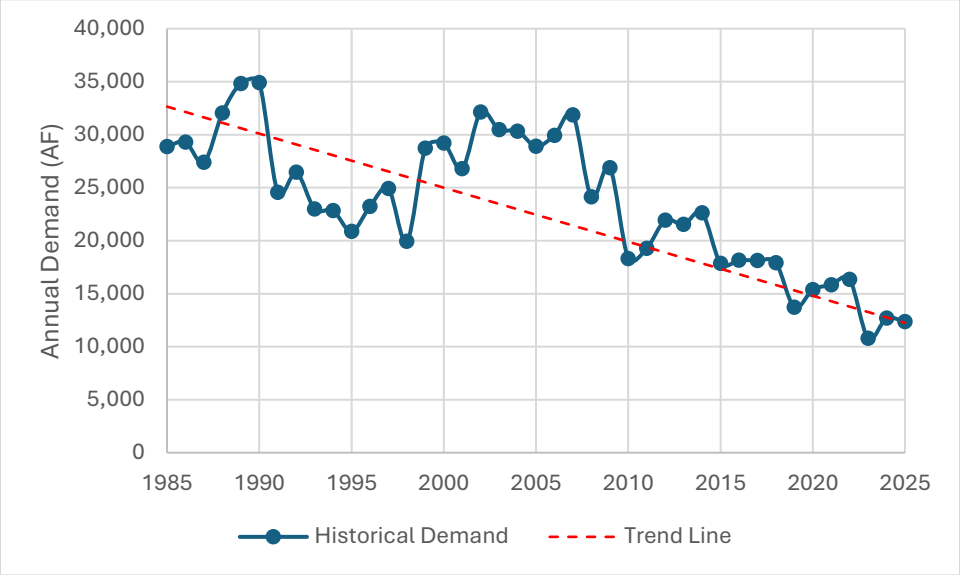
Based on historical precipitation records from CIMIS Weather Station 150 in Miramar, 2007 is identified as the single dry year and 2011-2015 are identified as the five consecutive dry years, as shown in Figure 7.1.

Figure 7.1 – Historical Annual Precipitation



Based on historical demand records, the District has experienced a steady reduction in demand, as shown in Figure 7.2.

Figure 7.2 – Historical Demand



The demand reduction is quantified as the red dashed trend line, which generally represents the running average demand.

7.2.1 – Single Dry Year Evaluation

In 2007 (single driest year), demand varied from the trend line by a factor of 1.47. This variance was due to the large volume of agricultural demand which is sensitive to the impact of weather. In recent years, agricultural demand has decreased due to implementation of the CropSWAP Program (see Appendix F) and local economic pressure on growers. As a result, response of agricultural demand to drought is less sensitive as shown in Figure 7.2 between 2010 and 2025. Therefore, projected single dry years will be assumed to increase by a factor of 1.3 times the normal demand, which is more in line with current volatility.

7.2.2 – Five Consecutive Dry Years Evaluation

From 2011 to 2015, demand varied from the trend line shown in Figure 7.2 by the factors shown in Table 7.1. Projected five consecutive dry years will be assumed to vary by these factors, accordingly.

Table 7.1 – Five Consecutive Dry Years Factors

Year	Factor
2011	0.99
2012	1.16
2013	1.17
2014	1.27
2015	1.03

7.3 – Supply and Demand Comparison

> ***Water Code Section 10635(a)***
>
> *Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.*

The following sections provide a projected comparison of supply and demand under normal year, single dry year, and five consecutive dry years conditions.

Demands are taken from Table 4.3 (Projected Water Use) and scaled as described in §7.2.

Supply is sufficient to meet all demand conditions, as described in §7.1.

7.3.1 – Normal Year

A comparison of projected supply and demand under normal year conditions is provided in Table 7.2.

Table 7.2 – Normal Year Supply and Demand Comparison in AF

Normal Year	2030	2035	2040	2045	2050
Supply	12,850	12,715	12,501	12,232	11,932
Use	12,850	12,715	12,501	12,232	11,932
Surplus	0	0	0	0	0

There is sufficient supply to meet projected normal year demands.

7.3.2 – Single Dry Year

A comparison of projected supply and demand under single dry year conditions is provided in Table 7.3.

Table 7.3 – Single Dry Year Supply and Demand Comparison in AF

Single Dry Year	2030	2035	2040	2045	2050
Supply	16,705	16,530	16,251	15,902	15,512
Use	16,705	16,530	16,251	15,902	15,512
Surplus	0	0	0	0	0

There is sufficient supply to meet projected single dry year demands.

7.3.3 – Five Consecutive Dry Years

A comparison of projected supply and demand under five consecutive dry years conditions is provided in Table 7.4.

Table 7.4 – Five Consecutive Dry Years Supply and Demand Comparison in AF

Five Consecutive Dry Years		2030	2035	2040	2045	2050
First Year	Supply	12,722	12,588	12,376	12,110	11,813
	Use	12,722	12,588	12,376	12,110	11,813
	Surplus	0	0	0	0	0
Second Year	Supply	14,906	14,749	14,501	14,189	13,841
	Use	14,906	14,749	14,501	14,189	13,841
	Surplus	0	0	0	0	0
Third Year	Supply	15,035	14,877	14,626	14,311	13,960
	Use	15,035	14,877	14,626	14,311	13,960
	Surplus	0	0	0	0	0
Fourth Year	Supply	16,320	16,148	15,876	15,535	15,154
	Use	16,320	16,148	15,876	15,535	15,154
	Surplus	0	0	0	0	0
Fifth Year	Supply	13,236	13,096	12,876	12,599	12,290
	Use	13,236	13,096	12,876	12,599	12,290
	Surplus	0	0	0	0	0

There is sufficient supply to meet projected five consecutive dry years demands.

7.4 – Description of Management Tools and Options

Water Code Section 10620(f)

An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

The District is entirely dependent on imported water supply. The District has implemented a robust water conservation program to minimize impact on regional supply.

The District maintains an interconnection with Fallbrook Public Utilities District (FPUD) and has historically purchased supply from FPUD via the interconnection. The District and FPUD do not have a formal supply agreement.

7.5 – Drought Risk Assessment

Water Code 10612

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

Water Code Section 10635(b)

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

(1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

In the event of an immediate five year drought, a comparison of supply and demand is provided in Table 7.5.

Table 7.5 – Drought Risk Assessment

Next Five Consecutive Years		Comparison
2026	Supply	12,329
	Use	12,329
	Surplus	0
2027	Supply	14,561
	Use	14,561
	Surplus	0
2028	Supply	14,803
	Use	14,803
	Surplus	0
2029	Supply	16,194
	Use	16,194
	Surplus	0
2030	Supply	13,236
	Use	13,236
	Surplus	0

Water use is estimated as the projected demand for 2026 through 2030 scaled by factors provided in Table 7.1 which represent response to the five year drought from 2011 to 2015. Note that demands have decreased since the drought of 2011-2015, due in part to water conservation and implementation of the CropSWAP Program which addresses climate change impacts on agricultural water use. As a result, the District is in a better position with cope with the impacts of a multiple year drought.

Supply is sufficient to meet all demand conditions, as described in §7.1.

7.6 – Data, Methods, and Basis for Water Shortage Conditions

The District relies on EMWD and DWR as data sources for water shortage conditions. During inter-agency coordination with EMWD, the District was informed that sufficient supply was anticipated to be available under all demand conditions. For additional context regarding regional supply, EMWD referred the District to MWD's Water Supply Allocation Plan (WSAP) which serves as the basis for the Water Shortage Contingency Plan (WSCP) under separate cover.

7.7 – Individual Water Source Reliability

The District is wholly reliant on imported water sources that are delivered through MWD facilities but purchased through EMWD. These sources represent a diverse supply portfolio which are anticipated to be available under all demand conditions.

7.8 – Total Water Supply and Use Comparison

Supply from EMWD is considered very reliable, and during inter-agency coordination EMWD confirmed that no shortages are anticipated given the range of projected demands in this chapter. Nonetheless, a supply shortage may still occur and that eventuality is discussed in detail in the WSCP (see Appendix N).

7.9 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Tables.

- OPTIONAL Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)
- Submittal Table 7-2 Retail: Normal Year Supply and Demand Use Comparison | Water Code Section 10635 (a)
- Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison | Water Code Section 10635(a)
- Submittal Table 7-4 Retail: Five Consecutive Dry Years Supply and Demand Comparison | Water Code Section 10635(a)
- Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment Tables to address | Water Code Section 10635(b)(3)

Copies of these tables may be found in Appendix B.

Chapter 8 – Water Shortage Contingency Plan

8.1 – WSCP Availability

The Water Shortage Contingency Plan (WSCP) is presented under a separate cover.

8.2 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Tables.

- Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels Water Code Section 10632(a)(3)(B)
- Submittal Table 8-2 Retail: Supply Augmentation and Other Actions | Water Code Section 10632(a)(4)(A),(C) and (E)
- Submittal Table 8-3 Retail: Demand Reduction Actions | Water Code Section 10632(a)(4)(B) and (E)

Copies of these tables may be found in Appendix B.

Chapter 9 – Demand Management Measures

Water Code Section 10631

(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1)(A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(1)(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

Water conservation is an available method to reduce water demands, thereby reducing water supply needs. This chapter presents a description of the District's water conservation program and water Demand Management Measures (DMMs).

9.1 – Implementation Over the Past Five Years

9.1.1 – Implementation to Achieve Water-Use Targets

Water Code Section 10631

(e)(1)(A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

The District has already achieved its water use targets and is committed to continuing its current water conservation program in coordination with EMWD and MWD.

9.2 – Required Demand Management Measures

Water conservation DMMs and the District's compliance status are described in the following sections.

9.2.1 – Water-Waste Prevention Ordinance

Ordinance 16-10 declares the prevention of water waste, unreasonable water use, or unreasonable method of water use. It also declares that water be conserved for the public welfare. See Appendix G.

DMM Status. This DMM is on track.

9.2.2 – Metering

> ***Water Code Section 526***
>
> *(a) Notwithstanding any other provisions of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract… shall do both of the following:*
>
> *(1) On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings… located within its service area.*
>
> ***Water Code Section 527***
>
> *(a) An urban water supplier that is not subject to Section 526 shall do both the following:*
>
> *(1) Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.*

The District is fully metered.

DMM Status. This DMM is on track.

9.2.3 – Conservation Pricing

Ordinance No. 23-04 adopts 2023 Rate Study. The ordinance and rate study are provided in Appendix H. The rate study includes a tier rate structure to promote conservation pricing.

DMM Status. This DMM is on track.

9.2.4 – Public Education and Outreach

The District prepares monthly newsletters and posts them to the District website for public viewing. The District's website also includes conservation information on their water use efficiency management page (https://www.rainbowmwd.com/water-use-efficiency-management). Programs currently available via the site are summarized below:

- Turf Replacement Rebates
    - Landscape Upgrades Made Easier
    - Stacked Turf Replacement
    - California Native Plant Rebate
    - Residential Turf Rebate: Transform your lawn with turf removal, irrigation upgrades, and rainwater retention.
    - Commercial Turf Replacement with SoCal Water$mart
    - MWD rebate for commercial and public agency turf replacement.
    - Personalized Help to Replace Your Lawn
    - Capture More Rain and Rebates
- Landscape Workshops
    - Design Your Sustainable Garden
    - Irrigation & Controller Basics: Smart Watering
    - Irrigation System Overview – Understand how each component works together to deliver water efficiently.
    - CA Friendly® & Native Plant Landscape Training
    - Transforming Lawns: A Sustainable Approach
    - Garden Design Seminar
    - Rain to Roots: Water for Your Garden
- Fix a Leak Week
    - Best Practices and Water Use Efficiency Resources
    - Flow Monitor Devices to Help Identify Leaks
- Flume Water Monitoring System Rebate Program

The District collaborates with EMWD on wholesale conservation programs including the following:

- Residential Water Consultation
- Climate Ready Landscape Academy

- WaterWise Landscape Toolbox
- Inland Empire Landscape Guidebook
- EMWD's Demonstration Garden
- Landscapes for Living: Transform Your Yard and Save Water
- Landscapes for Business and Beyond

The District collaborates with MWD on wholesale conservation programs including the following:

- Commercial and Residential Landscape Surveys from MWD
    - Commercial Surveys
    - Residential Surveys
    - Grower Surveys from Mission Resource Conservation District
- Water Use Survey
    - Commercial Surveys
    - Residential Surveys

DMM Status. This DMM is on track.

9.2.5 – Programs to Assess and Manage Distribution System Real Loss

The District conducts annual Water Audits to quantify real and apparent losses.

The District intends to initiate a pilot study focusing on water loss reduction program in the coming years.

DMM Status. This DMM is in the planning stages.

9.2.6 – Water Conservation Program Coordination and Staffing Support

The District's Customer and Meter Services Supervisor coordinates water conservation practices and programs and establishes an annual program budget based on available funding and resources. The District also hires part-time staff as needed to aid in water conservation program implementation activities.

The contact information for water conservation coordination is:

- CustomerService@rainbowmwd.com.

DMM Status. This DMM is on track.

9.2.7 – Other Demand Management Measures

CropSWAP

The Regional CropSWAP (Sustainable Water for Agricultural Production) Program was formed through collaboration between Regional Partners, including Rancho California Water District, Fallbrook Public Utilities District, Rainbow Municipal Water District, Valley Center Municipal Water District, the City of Escondido and the City of Oceanside. With a focus on enhancing efficiency for agricultural water users in western Riverside and northern San Diego Counties, the Program offers financial assistance for both transitioning away from high-water-use crops and adopting agricultural best management practices (BMPs). Through implementation of the Regional Program, the partnering agencies aim to foster sustainable agricultural water use, support local farmers, and contribute to the long-term resilience of the agricultural communities in the region.

For additional information on the CropSWAP Program, see Appendix F.

Wholesale Rebate Programs

The District collaborates with EMWD on wholesale rebate programs including the following:

- SoCal Water$mart Residential Program Rebates
    - High Efficiency Clothes Washers
    - Premium High Efficiency Toilets (1.06 Gallons per Flush or Less)
    - Weather-Based Irrigation Controllers
    - Rotating Sprinkler Nozzles (Min Qty = 30)
    - Turf Replacement Program*
    - Soil Moisture Sensor System
    - Rain Barrels (Max Qty = 2)
    - Cistern (200 to 500 Gallon Capacity)
    - Cistern (501 to 999 Gallon Capacity)
    - Cistern (1,000+ Gallon Capacity)
- SoCal Water$mart Commercial Program Rebates
    - Indoor Rebates
        - High-efficiency toilets and urinals
        - Irrigation controllers and sprinkler nozzles
        - Food service equipment
        - Clothes washers
    - Outdoor Rebates

- Commercial properties and common areas in townhomes, condominiums, mobile home parks, and apartment complexes
- Turf Replacement Program: Replace high-maintenance grass with drought-tolerant landscaping to lower water and maintenance costs.
- On-Site Retrofit Program: Incentives are provided for converting potable irrigation or industrial water systems to recycled water use—$195 per acre-foot for five years of estimated water use (up to actual retrofit cost).

Chapter 10 – Adoption, Submittal, and Implementation

This chapter contains documents compliance with plan adoption, submittal, and implementation requirements.

10.1 – Notice of Plan Preparation

> ***Water Code Section 10621***
>
> *(b) Every urban water supplier required to prepare a plan shall … at least 60 days prior to the public hearing on the plan … notify any city or county within which the supplier provides waters supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*

The following entities were notified of the District's intent to update the UWMP at least 60 days prior to the public hearing:

- San Diego County
- City of Oceanside
- Eastern Municipal Water District
- Fallbrook Public Utility District

Copies of the notifications are provided in Appendix I.

10.2 – Notice of Public Hearing

Water Code Section 10642

> *…Prior to adopting either [the plan or water shortage contingency plan], the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code [see below]. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area.*

Government Code Section 6066

> *Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.*

Notifications of public hearing were published in the Valley News Newspaper on May 7, 2026, and May 14, 2026.

Copies of the notifications are provided in Appendix J.

10.3 – Public Hearing and Adoption

Water Code Section 10642

> *Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon.... After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.*

Government Code Section 7291

> *...every local public agency... serving a substantial number of non-English-Speaking people, shall employ a sufficient number of qualified bilingual persons in public contact positions or as interpreters to assist those in such positions, to ensure provision of information and services in the language of the non-English-speaking person.*

The Draft 2025 UWMP and Draft 2025 WSCP were posted electronically on the District's website on April XX, 2026, and a hardcopy was maintained and made available for public inspection at the District's Headquarters.

A public hearing was held on May 26, 2026, at a regular meeting of the RMWD Board of Directors. Following the public hearing, the Draft 2025 UWMP and Draft 2025 WSCP were adopted as amended.

The resolutions of adoption are provided in Appendix K.

10.4 – Plan Submittal

Water Code Section 10621

(e) Each urban water supplier shall update and submit its 2025 plan to the department by July 1, 2026…

Water Code Section 10635

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

Water Code Section 10644

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

See sections below for details on compliance with plan submittal requirements.

10.4.1 – Electronic Data Submittal

Water Code Section 10644 (a)(2)

The plan, or amendments to the plan, submitted to the department … shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

The 2025 UWMP, the 2025 WSCP, and supporting documents were submitted electronically to DWR on June XX, 2026, via the Water Use Efficiency portal. Confirmation of submittal is provided in Appendix L.

10.4.2 – Submittal to Cities, Counties, and the California State Library

Copies of 2025 UWMP and the 2025 WSCP were issued to San Diego County, the City of Oceanside, and the State Library on June XX, 2026. Confirmation of transmittal is provided in Appendix M.

10.5 – Public Availability

Water Code Section 10645

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

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

The 2025 UWMP and the 2025 WSCP are available for public review on the District's website at https://www.rainbowmwd.com/ and via the DWR Water Use Efficiency Data portal at https://wuedata.water.ca.gov/.

10.6 – Plan Implementation

Water Code Section 10643

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

The District is committed to implementation of the 2025 UWMP.

10.7 – Amending an Adopted Plan

Water Code Section 10621

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

Water Code Section 10644

(a)(1) Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

In the event the 2025 UWMP or 2025 WSCP are amended, the procedures delineated above will govern.

10.8 – Submitting Revised Water Shortage Contingency Plan

> ***Water Code Section 10644 (b)***
>
> *If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared…no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.*

In the event the 2025 WSCP is revised, the procedures delineated above will govern.

10.9 – DWR Review of Submitted Plans

To assist DWR in the review process, a completed checklist addressing Water Code requirements is provided in Appendix C. In the event DWR needs to contact the District during the review process, the UWMP preparer registered via the WUE portal will respond to any inquiries.

10.10 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Table.

- Submittal Table 10-1 Retail: Notification to Cities and Counties | Water Code Section 10621(b) and 10642

A copy of this table may be found in Appendix B.

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Appendix B – Water Use Efficiency Tables

Appendix C – Urban Water Management Plan Checklist

Appendix D – SB X7-7 Calculations

Appendix E – AWWA Water Audits

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Appendix I – Notices of Plan Preparation

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Appendix L – Confirmation of Electronic Submittal

Appendix M – Confirmation of Transmittal

Appendix N – Water Shortage Contingency Plan

Appendix A – Urban Water Management Planning Act

Appendix A
California Water Code—Urban Water Management Planning

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

This appendix presents updated sections of California Water Code (Water Code) as of the publication of this Guidebook and as compiled by California Department of Water Resources (DWR) staff. The selection here focuses on the portions of Water Code directly relevant to preparation of an Urban Water Management Plan (UWMP), and sections of Water Code that are contextually relevant to urban water suppliers and DWR.

Water Code published here also concerns the Urban Water Management Planning Act, the Water Conservation Act of 2009 (SB X7-7), which covers sustainable water use and demand reduction, and more. Further legislative information is available on the California Legislative Information website.

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Water Conservation Act of 2009 (SB X7-7)

This section contains information extracted from Water Code Division 6, *Conservation, Development, and Utilization of State Water Resources*, Part 2.55, *Sustainable Water Use And Demand Reduction*. Click on any section header below to read Water Code directly at the California Legislative Information website.

Chapter 1. General Declarations and Policy, Sections 10608–10608.8

Section 10608.

The Legislature finds and declares all of the following:

(a) Water is a public resource that the California Constitution protects against waste and unreasonable use.

(b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.

(c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.

(d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.

(e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.

(f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

(g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

(h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less

useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

Section 10608.4.

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

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20- percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(k) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(l) Advance regional water resources management.

Section 10608.8.

(a)

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

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

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

(b) This part does not limit or otherwise affect the application of Chapter 3.5 commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

(c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

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

Chapter 2. Definitions, Section 10608.12

Section 10608.12.

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

(a) "Affordable housing" has the same meaning as defined in Section 34191.30 of the Health and Safety Code.

(b) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor

for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.

(c) "Base daily per capita water use" means any of the following:

(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the

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

(4) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

(d) Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.

(e) "CII water use" means water used by commercial water users, industrial water users, institutional water users, and large landscape water users.

(f) "Commercial water user" means a water user that provides or distributes a product or service.

(g) "Common area" means that portion of a common interest development or of a property owned or managed by a homeowners' association or a community service organization or similar entity that is not assigned or allocated to the exclusive use of the occupants of an individual dwelling unit within the property.

(h) "Common interest development" has the same meaning as in Section 4100 of the Civil Code.

(i) "Community service organization or similar entity" has the same meaning as in Section 4110 of the Civil Code.

(j) "Community space" means an area designated by a property owner or a governmental agency to accommodate human foot traffic for civic, ceremonial, or other community events or social gatherings

(k) Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.

(l) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.

(m) "Functional turf" means a ground cover surface of turf located in a recreational use area or community space. Turf enclosed by fencing or other barriers to permanently preclude human access for recreation or assembly is not functional turf.

(n) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.

(2) The net volume of water that the urban retail water supplier places into long-term storage.

(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.

(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

(o) "Homeowners' association" means an "association" as defined in Section 4080 of the Civil Code.

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

(q) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.

(r) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.

(s) "Large landscape" means a nonresidential landscape as described in the performance measures for CII water use adopted pursuant to Section 10609.10.

(t) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater

than or equal to the present value of the local cost of implementing that measure.

(u) "Nonfunctional turf" means any turf that is not functional turf, and includes turf located within street rights-of-way and parking lots.

(v) "Performance measures" means actions to be taken by urban retail water suppliers that will result in increased water use efficiency by CII water users. Performance measures may include, but are not limited to, educating CII water users on best management practices, conducting water use audits, and preparing water management plans. Performance measures do not include process water.

(w) "Potable reuse" means direct potable reuse, indirect potable reuse for groundwater recharge, and reservoir water augmentation as those terms are defined in Section 13561.

(x) "Potable water" means water that is suitable for human consumption.

(y) "Process water" means water used by industrial water users for producing a product or product content or water used for research and development. Process water includes, but is not limited to, continuous manufacturing processes, and water used for testing, cleaning, and maintaining equipment. Water used to cool machinery or buildings used in the manufacturing process or necessary to maintain product quality or chemical characteristics for product manufacturing or control rooms, data centers, laboratories, clean rooms, and other industrial facility units that are integral to the manufacturing or research and development process is process water. Water used in the manufacturing process that is necessary for complying with local, state, and federal health and safety laws, and is not incidental water, is process water. Process water does not mean incidental water uses.

(z) "Public water system" has the same meaning as defined in Section 116275 of the Health and Safety Code.

(aa) "Recreational use area" means an area designated by a property owner or a governmental agency to accommodate human foot traffic for recreation, including, but not limited to, sports fields, golf courses, playgrounds, picnic grounds, or pet exercise areas. This recreation may be either formal or informal.

(ab) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050.

(ac) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:

(1) The capture and reuse of stormwater or rainwater.

(2) The use of recycled water.

(3) The desalination of brackish groundwater.

(4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.

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

(ae) "Turf" has the same meaning as defined in Section 491 of Title 23 of the California Code of Regulations

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

(ag) "Urban water supplier" has the same meaning as defined in Section 10617.

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

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

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

Chapter 2.5. Nonfunctional Turf

Section 10608.14.

(a) The use of potable water for the irrigation of nonfunctional turf located on commercial, industrial, and institutional properties, other than a cemetery, and on properties of homeowners' associations, common interest developments, and community service organizations or similar entities is prohibited as of the following dates:

(1) All properties owned by the Department of General Services, beginning January 1, 2027.

(2) All properties owned by local governments, local or regional public agencies, and public water systems, except those specified in paragraph (5), beginning January 1, 2027.

(3) All other institutional properties and all commercial and industrial properties, beginning January 1, 2028.

(4) All common areas of properties of homeowners' associations, common interest developments, and community service organizations or similar entities, beginning January 1, 2029.

(5) All properties owned by local governments, local public agencies, and public water systems in a disadvantaged community, beginning January 1, 2031, or the date upon which a state funding source is made available to fund conversion of nonfunctional turf on these properties to climate-appropriate landscapes, whichever is later.

(b) Notwithstanding subdivision (a), the use of potable water is not prohibited by this section to the extent necessary to ensure the health of trees and other perennial nonturf plantings, or to the extent necessary to address an immediate health and safety need.

(c) The board may, upon a showing of good cause for reasons including economic hardship, critical business need, and potential impacts to human health or safety, postpone a compliance deadline in subdivision (a) by up to three years for certain persons, institutions, and businesses, and may create a form to be used for compliance certification to the board by property owners.

(d) Public water systems shall, by no later than January 1, 2027, revise their regulations, ordinances, or policies governing water service to include the requirements of subdivisions (a) and (b), as revised by the board pursuant to subdivision (c), and shall communicate the requirements to their customers on or before that date.

(e)

(1) An owner of commercial, industrial, or institutional property with more than 5,000 square feet of irrigated area other than a cemetery shall certify to the board, commencing June 30, 2030, and every three years thereafter through 2039, that their property is in compliance with the requirements of this chapter.

(2) An owner of a property with more than 5,000 square feet of irrigated common area that is a homeowners' association, common interest development, or community service organization or similar entity shall certify to the board, commencing June 30, 2031, and every three years thereafter through 2040, that their property is in compliance with the requirements of this chapter.

(f) Noncompliance by a person or entity with this chapter or regulations adopted thereunder shall be subject to civil liability and penalties set forth in Section 1846, or to civil liability and penalties imposed by an urban retail water supplier pursuant to a locally adopted ordinance or policy.

(g)

(1) A public water system, city, county, or city and county may enforce the provisions of this chapter.

(2) To avoid duplication of enforcement, any entity identified in paragraph (1) that is not a retail public water system shall notify the retail public water system 30 days prior to enforcement of the provisions of this chapter against a property served by such system.

(3) Nothing in paragraph (2) shall preclude enforcement by any entity identified in paragraph (1) once adequate notice is given.

(h) The department shall, when using funds appropriated for water conservation for turf replacement, prioritize financial assistance for nonfunctional turf replacement to public water systems serving disadvantaged communities and to owners of affordable housing.

(i) The department shall utilize the saveourwater.com internet website and outreach campaign to provide information and resources on converting nonfunctional turf to native vegetation.

(j) The Governor's Office of Business and Economic Development shall support small and minority-owned businesses that provide services that advance compliance with this chapter.

Chapter 3. Urban Retail Water Suppliers, Sections 10608.16–10608.44

Section 10608.16.

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

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

Section 10608.20.

(a)

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

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

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

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

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

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

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

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

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

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

(A) Consider climatic differences within the state.

(B) Consider population density differences within the state.

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

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

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

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

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

(d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.

(e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

(f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.

(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

(h)

(1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:

(A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area

population, indoor residential water use, and landscaped area water use.

(B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.

(2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its internet website, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

(h)

(1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

(j)

(1) An urban retail water supplier is granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow the use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.

(2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water supplier and urban retail water suppliers.

Section 10608.22.

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

Section 10608.24.

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

(b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.

(c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.

(d)

(1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

(e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

(f)

(1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining

gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

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

Section 10608.26.

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

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

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

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under federal Executive Order 13514.

(d)

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

(2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of

Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

Section 10608.28.

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

(1) Through an urban wholesale water supplier.

(2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).

(3) Through a regional water management group as defined in Section 10537.

(4) By an integrated regional water management funding area.

(5) By hydrologic region.

(6) Through other appropriate geographic scales for which computation methods have been developed by the department.

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

Section 10608.32.

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

Section 10608.34.

(a)

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

(A) The conduct of standardized water loss audits by urban retail water suppliers in accordance with the method adopted by the American Water Works Association in the third edition of Water Audits and Loss

Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0.

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

(C) The technical qualifications required of a person to engage in validation, as described in subparagraph (B).

(D) The certification requirements for a person selected by an urban retail water supplier to provide validation of its own water loss audit report.

(E) The method of submitting a water loss audit report to the department.

(2) The department shall update rules adopted pursuant to paragraph (1) no later than six months after the release of subsequent editions of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36. Except as provided by the department, until the department adopts updated rules pursuant to this paragraph, an urban retail water supplier may rely upon a subsequent edition of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36 or the Free Water Audit Software.

(b)

(1) On or before October 1 of each year until October 1, 2023, each urban retail water supplier reporting on a calendar year basis shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year as prescribed by the department pursuant to subdivision (a).

(2) On or before January 1 of each year until January 1, 2024, each urban retail water supplier reporting on a fiscal year basis shall submit a completed and validated water loss audit report for the previous fiscal year as prescribed by the department pursuant to subdivision (a).

(3) On or before January 1, 2024, and on or before January 1 of each year thereafter, each urban retail water supplier shall submit a completed and

validated water loss audit report for the previous calendar year or previous fiscal year as part of the report submitted to the department pursuant to subdivision (a) of Section 10609.24 and as prescribed by the department pursuant to subdivision (a).

(4) Water loss audit reports submitted on or before October 1, 2017, may be completed and validated with assistance as described in subdivision (c).

(c) Using funds available for the 2016–17 fiscal year, the board shall contribute up to four hundred thousand dollars ($400,000) towards procuring water loss audit report validation assistance for urban retail water suppliers.

(d) Each water loss audit report submitted to the department shall be accompanied by information, in a form specified by the department, identifying steps taken in the preceding year to increase the validity of data entered into the final audit, reduce the volume of apparent losses, and reduce the volume of real losses.

(e) At least one of the following employees of an urban retail water supplier shall attest to each water loss audit report submitted to the department:

(1) The chief financial officer.

(2) The chief engineer.

(3) The general manager.

(f) The department shall deem incomplete and return to the urban retail water supplier any final water loss audit report found by the department to be incomplete, not validated, unattested, or incongruent with known characteristics of water system operations. A water supplier shall resubmit a completed water loss audit report within 90 days of an audit being returned by the department.

(g) The department shall post all validated water loss audit reports on its internet website in a manner that allows for comparisons across water suppliers. The department shall make the validated water loss audit reports available for public viewing in a timely manner after their receipt.

(h) Using available funds, the department shall provide technical assistance to guide urban retail water suppliers' water loss detection programs, including, but not limited to, metering techniques, pressure management techniques, condition-based assessment techniques for transmission and distribution pipelines, and utilization of portable and permanent water loss detection devices.

(i) No earlier than January 1, 2019, and no later than July 1, 2020, the board shall adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. In adopting these rules, the board shall employ full life-cycle cost accounting to evaluate the costs of meeting the performance standards. The board may consider establishing a minimum

allowable water loss threshold that, if reached and maintained by an urban water supplier, would exempt the urban water supplier from further water loss reduction requirements.

Section 10608.35.

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

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

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

Section 10608.36.

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

Section 10608.40.

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

Section 10608.42.

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

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

Section 10608.43.

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

(a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.

(b) Evaluation of water demands for manufacturing processes, goods, and cooling.

(c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.

(d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.

(e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

Section 10608.44.

Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

Chapter 5. Sustainable Water Management, Section 10608.50

Section 10608.50.

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

(1) Revisions to the requirements for urban and agricultural water management plans.

(2) Revisions to the requirements for integrated regional water management plans.

(3) Revisions to the eligibility for state water management grants and loans.

(4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.

(5) Increased funding for research, feasibility studies, and project construction.

(6) Expanding technical and educational support for local land use and water management agencies.

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

Chapter 6. Standardized Data Collection, Section 10608.52

Section 10608.52.

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

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

Chapter 7. Funding Provisions, Sections 10608.56–10608.60

Section 10608.56.

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

(b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan

is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

Section 10608.60.

(a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

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

Chapter 9. Urban Water Use Objectives and Water Use Reporting, Sections 10609–10609.38

Section 10609.

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

(b) The Legislature further finds and declares all of the following:

(1) This chapter establishes standards and practices for the following water uses:

(A) Indoor residential use.

(B) Outdoor residential use.

(C) CII water use.

(D) Water losses.

(E) Other unique local uses and situations that can have a material effect on an urban water supplier's total water use.

(2) This chapter further does all of the following:

(A) Establishes a method to calculate each urban water use objective.

(B) Considers recycled water quality in establishing efficient irrigation standards.

(C) Requires the department to provide or otherwise identify data regarding the unique local conditions to support the calculation of an urban water use objective.

(D) Provides for the use of alternative sources of data if alternative sources are shown to be as accurate as, or more accurate than, the data provided by the department.

(E) Requires annual reporting of the previous year's water use with the urban water use objective.

(F) Provides a bonus incentive for the amount of potable recycled water used the previous year when comparing the previous year's water use with the urban water use objective, of up to 10 percent of the urban water use objective.

(3) This chapter requires the department and the board to solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter.

(4) This chapter preserves the Legislature's authority over long- term water use efficiency target setting and ensures appropriate legislative oversight of the implementation of this chapter by doing all of the following:

(A) Requiring the Legislative Analyst to conduct a review of the implementation of this chapter, including compliance with the adopted standards and regulations, accuracy of the data, use of alternate data, and other issues the Legislative Analyst deems appropriate.

(B) Stating legislative intent that the director of the department and the chairperson of the board appear before the appropriate Senate and Assembly policy committees to report on progress in implementing this chapter.

(C) Providing one-time-only authority to the department and board to adopt water use efficiency standards, except as explicitly provided in this chapter. Authorization to update the standards shall require separate legislation.

(c) It is the intent of the Legislature that the following principles apply to the development and implementation of long-term standards and urban water use objectives:

(1) Local urban retail water suppliers should have primary responsibility for meeting standards-based water use targets, and they shall retain the flexibility to develop their water supply portfolios, design and implement water conservation strategies, educate their customers, and enforce their rules.

(2) Long-term standards and urban water use objectives should advance the state's goals to mitigate and adapt to climate change.

(3) Long-term standards and urban water use objectives should acknowledge the shade, air quality, and heat-island reduction benefits provided to communities by trees through the support of water-efficient irrigation practices that keep trees healthy.

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

Section 10609.2.

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

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

(1) Outdoor residential water use.

(2) Outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.

(3) A volume for water loss.

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

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

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

Section 10609.4.

(a)

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

(2) Beginning January 1, 2025, and until January 1, 2030, the standard for indoor residential water use shall be 47 gallons per capita daily.

(3) Beginning January 1, 2030, the standard for indoor residential water use shall be 42 gallons per capita daily.

(b)

(1) The department, in coordination with the board, shall conduct necessary studies and investigations to assess and quantify the economic benefits and impacts of the 2030 indoor residential use standard on water, wastewater, and recycled water systems and shall include saturation end-use studies. The studies and investigations shall build on the standards and potential effects identified pursuant to subdivision (c) of Section 10609.2 and shall also consider, and as appropriate incorporate, other regional and statewide studies that quantify the impacts on water, wastewater, and recycled water systems, and evaluate the long-term effects of telework. To facilitate these studies and investigations, the board may request necessary and relevant information from wastewater agencies, including monthly influent flow, actions taken to reassess treatment processes, and the impact of the implementation of this chapter on wastewater operations, maintenance, and capital investment. The department, in coordination with the board, shall summarize the findings of these studies and investigations in a report to the Legislature on or before October 1, 2028. The report shall be submitted in compliance with Section 9795 of the Government Code.

(2) If the department, in coordination with the board, determines that the 2030 indoor residential use standard is likely to unduly impact affordability of water and wastewater services, the department and the board may jointly recommend to the Legislature an alternate date on which the 2030 indoor residential use standard shall take effect. This determination shall be made using at least two years of data reflecting application of the 2025 indoor residential use standard.

(3) Based upon the studies and investigations conducted pursuant to paragraph (1), the department shall consider whether to recommend, for adoption by the board, additional variances to accommodate unique challenges related to residential indoor water use pursuant to Section 10609.2. Variance options may include, but are not limited to, stranded assets, impacts on disadvantaged communities, impacts to environmental flows, or adverse impacts to wastewater or recycled water operations.

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

(c) An urban retail water supplier shall not be subject to enforcement pursuant to this chapter solely for failing to meet the indoor residential use standard.

Section 10609.6.

(a)

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

(2)

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

(B) The standards shall apply to irrigable lands.

(C) The standards shall include provisions for swimming pools, spas, and other water features. Ornamental water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, shall be analyzed separately from swimming pools and spas.

(b) The department shall, by January 1, 2021, provide each urban retail water supplier with data regarding the area of residential irrigable lands in a manner that can reasonably be applied to the standards adopted pursuant to this section.

(c) The department shall not recommend standards pursuant to this section until it has conducted pilot projects or studies, or some combination of the two, to ensure that the data provided to local agencies are reasonably accurate for the

data's intended uses, taking into consideration California's diverse landscapes and community characteristics.

Section 10609.8.

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

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

(c) The standards shall include an exclusion for water for commercial agricultural use meeting the definition of subdivision (b) of Section 51201 of the Government Code.

Section 10609.9.

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

(a) Evapotranspiration adjustment factors, as applicable.

(b) Landscape area.

(c) Maximum applied water allowance.

(d) Reference evapotranspiration.

(e) Special landscape areas, including provisions governing evapotranspiration adjustment factors for different types of water used for irrigating the landscape.

Section 10609.10.

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

(b) Prior to recommending performance measures for CII water use, the department shall solicit broad public participation from stakeholders and other interested persons relating to all of the following:

(1) Recommendations for a CII water use classification system for California that address significant uses of water.

(2) Recommendations for setting minimum size thresholds for converting mixed CII meters to dedicated irrigation meters, and evaluation of, and recommendations for, technologies that could be used in lieu of requiring dedicated irrigation meters.

(3) Recommendations for CII water use best management practices, which may include, but are not limited to, water audits and water management plans for those CII customers that exceed a recommended size, volume of water use, or other threshold.

(c) Recommendations of appropriate performance measures for CII water use shall be consistent with the October 21, 2013, report to the Legislature by the Commercial, Industrial, and Institutional Task Force entitled "Water Use Best Management Practices," including the technical and financial feasibility recommendations provided in that report, and shall support the economic productivity of California's commercial, industrial, and institutional sectors.

(b)

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

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

Section 10609.12.

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

Section 10609.14.

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

(b) Appropriate variances may include, but are not limited to, allowances for the following:

(1) Significant use of evaporative coolers.

(2) Significant populations of horses and other livestock.

(3) Significant fluctuations in seasonal populations.

(4) Significant landscaped areas irrigated with recycled water having high levels of total dissolved solids.

(5) Significant use of water for soil compaction and dust control.

(6) Significant use of water to supplement ponds and lakes to sustain wildlife.

(7) Significant use of water to irrigate vegetation for fire protection.

(8) Significant use of water for commercial or noncommercial agricultural use.

(d) The department, in recommending variances for adoption by the board, shall also recommend a threshold of significance for each recommended variance.

(e) Before including any specific variance in calculating an urban retail water supplier's water use objective, the urban retail water supplier shall request and receive approval by the board for the inclusion of that variance.

(f) The board shall post on its Internet Web site all of the following:

(1) A list of all urban retail water suppliers with approved variances.

(2) The specific variance or variances approved for each urban retail water supplier.

(3) The data supporting approval of each variance.

Section 10609.15.

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

(a) Identify urban water reporting requirements shared by both agencies, and post on each agency's Internet Web site how the data is used for planning, regulatory, or other purposes.

(b) Analyze opportunities for more efficient publication of urban water reporting requirements within each agency, and analyze how each agency can integrate various data sets in a publicly accessible location, identify priority actions, and implement priority actions identified in the analysis.

(c) Make appropriate data pertaining to the urban water reporting requirements that are collected by either agency available to the public according to the principles and requirements of the Open and Transparent Water Data Act (Part 4.9 (commencing with Section 12400)).

Section 10609.16.

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

(a) Determining the irrigable lands within the urban retail water supplier's service area.

(b) Updating and revising methodologies described pursuant to subparagraph (A) of paragraph (1) of subdivision (h) of Section 10608.20, as appropriate, including methodologies for calculating the population in an urban retail water supplier's service area.

(c) Using landscape area data provided by the department or alternative data.

(d) Incorporating precipitation data and climate data into estimates of a urban retail water supplier's outdoor irrigation budget for its urban water use objective.

(e) Estimating changes in outdoor landscape area and population, and calculating the urban water use objective, for years when updated landscape imagery is not available from the department.

(f) Determining acceptable levels of accuracy for the supporting data, the urban water use objective, and compliance with the urban water use objective.

Section 10609.18.

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

Section 10609.20.

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

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

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

(1) Aggregate estimated efficient indoor residential water use.

(2) Aggregate estimated efficient outdoor residential water use.

(3) Aggregate estimated efficient outdoor irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use.

(4) Aggregate estimated efficient water losses.

(5) Aggregate estimated water use in accordance with variances, as appropriate.

(d)

(1) An urban retail water supplier that delivers water from a groundwater basin, reservoir, or other source that is augmented by potable reuse water may adjust its urban water use objective by a bonus incentive calculated pursuant to this subdivision.

(2) The water use objective bonus incentive shall be the volume of its potable reuse delivered to residential water users and to landscape areas with dedicated irrigation meters in connection with CII water use, on an acre-foot basis.

(3) The bonus incentive pursuant to paragraph (1) shall be limited in accordance with one of the following:

(A) The bonus incentive shall not exceed 15 percent of the urban water supplier's water use objective for any potable reuse water produced at an existing facility.

(B) The bonus incentive shall not exceed 10 percent of the urban water supplier's water use objective for any potable reuse water produced at any facility that is not an existing facility.

(4) For purposes of this subdivision, "existing facility" means a facility that meets all of the following:

(A) The facility has a certified environmental impact report, mitigated negative declaration, or negative declaration on or before January 1, 2019.

(B) The facility begins producing and delivering potable reuse water on or before January 1, 2022.

(C) The facility uses microfiltration and reverse osmosis technologies to produce the potable reuse water.

(e)

(1) The calculation of the urban water use objective shall be made using landscape area and other data provided by the department and pursuant to the standards, guidelines, and methodologies adopted by the board. The department shall provide data to the urban water supplier at a level of detail sufficient to allow the urban water supplier to verify its accuracy at the parcel level.

(2) Notwithstanding paragraph (1), an urban retail water supplier may use alternative data in calculating the urban water use objective if the supplier demonstrates to the department that the alternative data are equivalent, or superior, in quality and accuracy to the data provided by the department. The department may provide technical assistance to an

urban retail water supplier in evaluating whether the alternative data are appropriate for use in calculating the supplier's urban water use objective.

Section 10609.21.

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

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

Section 10609.22.

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

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

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

(1) Aggregate residential water use.

(2) Aggregate outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.

(3) Aggregate water losses.

Section 10609.24.

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

(1) The urban water use objective calculated pursuant to Section 10609.20 along with relevant supporting data.

(2) The actual urban water use calculated pursuant to Section 10609.22 along with relevant supporting data.

(3) Documentation of the implementation of the performance measures for CII water use.

(4) A description of the progress made towards meeting the urban water use objective.

(5) The validated water loss audit report conducted pursuant to Section 10608.34.

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

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

Section 10609.25.

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

Section 10609.26.

(a)

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

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

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

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

(b) On and after January 1, 2025, the board may issue a written notice to an urban retail water supplier that does not meet its urban water use objective required by this chapter. The written notice may warn the urban retail water supplier that it is not meeting its urban water use objective described in Section 10609.20 and is not making adequate progress in meeting the urban water use objective, and may request that the urban retail water supplier address areas of concern in its next annual report required by Section 10609.24. In deciding whether to issue a written notice, the board may consider whether the urban retail water supplier has received an informational order, the degree to which the urban retail water supplier is not

meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet its urban water use objective.

(1) On and after January 1, 2026, the board may issue a conservation order to an urban retail water supplier that does not meet its urban water use objective. A conservation order may consist of, but is not limited to, referral to the department for technical assistance, requirements for education and outreach, requirements for local enforcement, and other efforts to assist urban retail water suppliers in meeting their urban water use objective.

(2) In issuing a conservation order, the board shall identify specific deficiencies in an urban retail water supplier's progress towards meeting its urban water use objective, and identify specific actions to address the deficiencies.

(3) The board may request that the department provide an urban retail water supplier with technical assistance to support the urban retail water supplier's actions to remedy the deficiencies.

(c) A conservation order issued in accordance with this chapter may include requiring actions intended to increase water-use efficiency, but shall not curtail or otherwise limit the exercise of a water right, nor shall it require the imposition of civil liability pursuant to Section 377.

Section 10609.27.

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

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

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

Section 10609.28.

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

Section 10609.30.

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

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

(1) The rate at which urban retail water users are complying with the standards, and factors that might facilitate or impede their compliance.

(2) The accuracy of the data and estimates being used to calculate urban water use objectives.

(3) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.

(4) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.

(5) The early indications of how implementing this chapter might impact the efficiency of statewide urban water use.

6) Recommendations, if any, for improving statewide urban water use efficiency and the standards and practices described in this chapter.

(7) Any other issues the Legislative Analyst deems appropriate.

Section 10609.32.

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

(a) The rate at which urban retail water suppliers are complying with the standards, and factors that might facilitate or impede their compliance.

(b) What enforcement actions have been taken, if any.

(c) The accuracy of the data and estimates being used to calculate urban water use objectives.

(d) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.

(e) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.

(f) An assessment of how implementing this chapter is affecting the efficiency of statewide urban water use.

Section 10609.34.

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

Section 10609.36.

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

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

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

Section 10609.38.

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

Urban Water Management Planning Act

This section contains information extracted from Water Code Division 6, *Conservation, Development, and Utilization of State Water Resources*, Part 2.6, *Urban Water Management Planning*. Click on any section header below to read Water Code directly at the California Legislative Information website.

Chapter 1. General Declaration and Policy, Sections 10610–10610.4

Section 10610.

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

Section 10610.2.

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

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate, and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years now and into the foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require

specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

Section 10610.4.

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

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to achieve the efficient use of available supplies and strengthen local drought planning.

Chapter 2. Definitions, Sections 10611–10618

Section 10611.

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

Section 10611.3.

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

Section 10611.5.

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

Section 10612.

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

Section 10613.

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

Section 10614.

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

Section 10615.

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

Section 10616.

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

Section 10616.5.

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

Section 10617.

"Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

Section 10617.5.

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

Section 10618.

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

Chapter 3. Urban Water Management Plans

Article 1. General Provisions, Sections 10620–10621

Section 10620.

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

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d)

(1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water

management planning where those plans will reduce preparation costs and contribute to the achievement of conservation, efficient water use, and improved local drought resilience.

(2) Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.

(3) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

Section 10621.

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

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

(c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.

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

(e) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

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

Article 2. Contents of Plans, Sections 10630–10634

Section 10630.

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

Section 10630.5.

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

Section 10631.

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

(a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

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

(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the

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

(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.

(B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.

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

(D) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(E) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water

supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

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

(d)

(1) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(J) Distribution system water loss.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(3)

(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met

the distribution loss standards enacted by the board pursuant to Section 10608.34.

(4)

(A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

(a) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1)

(A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

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

Section 10631.1.

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

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under

Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

Section 10631.2.

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

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

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

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

Section 10632.

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

(1) The analysis of water supply reliability conducted pursuant to Section 10635.

(2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:

(A) The written decision making process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

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

(v) A description and quantification of each source of water supply.

(3)

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

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross- reference relating its existing categories to the six standard water shortage levels.

(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state- mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

(5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications.

(6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

(7)

(A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

(8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

(9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

(10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

(b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

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

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

Section 10632.2.

An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from

taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

Section 10632.3.

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

Section 10632.5.

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

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

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

Section 10633.

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

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Section 10634.

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

Article 2.5. Water Service Reliability, Section 10635

Section 10635.

(a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included

in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

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

(d) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(e) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Article 3. Adoption and Implementation of Plans, Sections 10640–10645

Section 10640.

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

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of

Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

Section 10641.

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

Section 10642.

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

Section 10643.

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

Section 10644.

(a)

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

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall

include any standardized forms, tables, or displays specified by the department.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

(c)

(1)

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

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

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

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

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

Section 10645.

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

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

Chapter 4. Miscellaneous Provisions, Sections 10650–10657

Section 10650.

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

(a) An action or proceeding alleging failure to adopt a plan or a water shortage contingency plan shall be commenced within 18 months after that adoption is required by this part.

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

Section 10651.

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

Section 10652.

The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the

plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

Section 10653.

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

Section 10654.

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

Section 10655.

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

Section 10656.

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

Section 10657.

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

Appendix B – Water Use Efficiency Tables

Submittal Table 2-1 Retail: Public Water Systems

Submittal Table 2-2: Plan Identification

Submittal Table 2-3: Supplier Identification

Submittal Table 2-4 Retail: Water Supplier Information Exchange, Water Code Section 10631(h)

Submittal Table 3-1 Retail: Population - Current and Projected, Water Code Section 10631(a)

Submittal Table 4-1 Retail: Total Uses for Potable and Non-Potable Water — Actual, Water Code Section 10631(d)(1)

Submittal Table 4-2 Retail: Total Uses for Potable, and Non-Potable Water — Projected, Water Code Section 10631(d)(1)

Submittal Table 4-3 Retail: Inclusion in Water Use Projections, Water Code Section 10631 (a), 10631 (d)(4)(A), and 10631 (d)(4)(B)

Submittal Table 4-5 Retail: Water Loss Audit Reporting, Water Code Section 10631(d)(3)(A)

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

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

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area, Water Code Section 10633(a)

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

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

Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual, Water Code Section 10633(e)

Submittal Table 6-6 Retail: Methods to Encourage Future Recycled Water Use, Water Code Section 10633(f)

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs, Water Code Section 10631(f)

Submittal Table 6-8 Retail: Water Supplies — Actual, Water Code Section 10631(b)

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

Optional Submittal Table O-1B: Recommended Energy Reporting - Single Delivery Product - Total Utility Approach

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

Submittal Table 7-2 Retail: Normal Year Supply and Use Comparison, Water Code Section 10635 (a)

Submittal Table 7-3 Retail: Single Dry Year Supply and Use Comparison, Water Code Section 10635(a)

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Use Comparison, Water Code Section 10635(a)

Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment, Water Code Section 10635(b)(3)

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

Submittal Table 8-3 Retail: Demand Reduction Actions, Water Code Section 10632(a)(4)(B),(D), and (E)

Submittal Table 10-1 Retail: Notification to Cities and Counties, Water Code Section 10621(b) and 10642

Submittal Table 2-1 Retail: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2025	Volume of Water Supplied 2025 (AF)
Add additional rows as needed			
3710016	Rainbow MWD	9,180	12,355
	Total	9,180	12,355
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES:			

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

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

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

Submittal Table 3-1 Retail: Population - Current and Projected Water Code Section 10631(a)						
Population Served	2025	2030	2035	2040	2045	2050(opt)
	23,299	24,262	24,970	25,474	25,827	26,071
NOTES: Population projection provided by SANDAG and augmented with anticipated development.						

Submittal Table 4-1 Retail: Total Uses for Potable and Non-Potable Water — Actual Water Code Section 10631(d)(1)			
Use Type	Additional Description (as needed)	2025 Actual Water Use	
Drop down list May select each use multiple times These are the only use types that will be recognized by the WUEdata online submittal tool		**Potable or Non-Potable** (OPTIONAL) Drop down list	Volume (AF)
Add additional rows as needed			
Agricultural	AD (Domestic Agriculture)	Potable	3,313
Agricultural	AG (Agriculture)	Potable	3,648
Commercial	CM (Commercial)	Potable	715
Other (optional)	CN (Construction)	Potable	66
Institutional/Governmental	IS (Institutional)	Potable	57
Multi-Family	MF (Multi-Family Residential)	Potable	385
Single Family	SF (Single Family Residential)	Potable	3,473
Distribution System Water Loss	Calculated losses	Potable	698
		Subtotal Potable	12355
		Subtotal Non-Potable	0
		Total	12,355
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES:			

Submittal Table 4-2 Retail: Total Uses for Potable, and Non-Potable Water — Projected Water Code Section 10631(d)(1)							
Use Type		**Projected Water Use** (Report To the Extent that Records are Available)					
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	**Potable or Non-Potable** (OPTIONAL) Drop down list	**2030 (AF)**	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 opt (AF)**
Add additional rows as needed.							
Agricultural	AD (Domestic Agriculture)	Potable	3,109	2,954	2,806	2,666	2,533
Agricultural	AG (Agriculture)	Potable	3,526	3,350	3,183	3,024	2,873
Commercial	CM (Commercial)	Potable	844	949	1,024	1,076	1,112
Other (optional)	CN (Construction)	Potable	100	100	100	100	100
Institutional/Governmental	IS (Institutional)	Potable	55	55	55	55	55
Multi-Family	MF (Multi-Family Residential)	Potable	523	628	703	755	791
Single Family	SF (Single Family Residential)	Potable	3,632	3,737	3,812	3,864	3,900
Distribution System Water Loss	Calculated losses	Potable	1,061	942	818	692	568
		Subtotal Potable	12,850	12,715	12,501	12,232	11,932
		Subtotal Non-Potable	0	0	0	0	0
		Total	12,850	12,715	12,501	12,232	11,932
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.							
NOTES:							

Submittal Table 4-3 Retail: Inclusion in Water Use Projections Water Code Section 10631 (a), 10631 (d)(4)(A), and 10631 (d)(4)(B)	
Are Future Water Savings Included in Projections? **Drop down list (y/n)**	Yes
If "Yes" to above, **state the section or page number**, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found. ***Optional*** Suppliers may complete Optional Submittal Table 4-4 R to quantify the expected savings.	§4.2.5
Are Lower Income Residential Demands Included In Projections? **Drop down list (y/n)**	Yes
Optional If the method for accounting Lower Income Residential Demands has been included, provide page number where this accounting can be found.	§4.2.6
DWR NOTES: Additional guidance is provided in Appendix K.	
NOTES:	

Submittal Table 4-5 Retail: Water Loss Audit Reporting Water Code Section 10631(d)(3)(A)		
Public Water System ID # Reported in Table 2-1 R	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)
Report submittal status for all five years for each Public Water System as available. Add rows as needed		
	FY 2020-21	Yes
	FY 2021-22	Yes
	FY 2022-23	Yes
	FY 2023-24	Yes
	FY 2024-25	Yes
DWR NOTES: Suppliers will provide a link to the WUEdata submittals of their Water Loss Audit Reports.		
NOTES:		

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

Public Water System ID # Reported in Submittal Table 2-1 R	Did the Water Board Calculate a Water Loss Standard for this Public Water System? (y/n) If no, Supplier will not complete this row.	Real Water Loss					Apparent Water Loss				
		State Water Board Standard		Most Recent AWWA Water Loss Audit			State Water Board Standard		Most Recent AWWA Water Loss Audit		
		2028 Real Water Loss Standard per Unit per day	Units for Real Water Loss Drop down list	Number of Units (Connections or Miles corresponding with units selected)	Volume of Total Real Loss (from AWWA Water Loss Audit) (AF)	Real Water Loss Per Unit per Day	2028 Apparent Water Loss Standard per Unit per Day	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss (from AWWA Water Loss Audit) (AF)	Apparent Water Loss Per Unit per Day
Add additional rows as needed.											
CA3710016	Yes	604.6	Gallons per Mile per Day (GPMD)	344.2	1101.74	2,857.6	97.4	Gallons per Service Connection per Day (GPSCD)	9180	64.061	6.2

Water Board's Calculated Water Loss Standards

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

NOTES:

Submittal Table 5-1 Retail: SB X7-7 2020 Target Progress Water Code Section 10608.40						
☐	Check the box if the Supplier was not an Urban Water Supplier during or before the 2020 UWMP reporting cycle. Proceed to the next table.					
Was Supplier part of a merger or consolidation since 2020?	Regional Alliance Target or Individual Target? Drop down list	2020 Target	Actual 2020 GPCD	Did Supplier Achieve Targeted Reduction for 2020?	Only for suppliers that did not meet the Target in 2020 See DWR NOTES below.	
					Actual 2025 GPCD (From SB X7-7 Compliance Form)	Did Supplier meet the 2020 Target in 2025?
No	Individual Target	1202	585	Yes	473	Yes
DWR NOTES: **Suppliers calculating a 2025 GPCD** will need to complete and submit SB X 7-7 Compliance Tables to verify the use of SB X7-7 Methodologies. **Suppliers that were part of a merger or consolidation since 2020** see Chapter 5 and Appendix P for guidance. NA=Not Applicable						
NOTES:						

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area Water Code Section 10633(a)				
☐	Check the box if there is no wastewater collection system. Proceed to the next table.			
	Percentage of 2025 service area served by wastewater collection system (OPTIONAL)			
	Percentage of 2025 service area population served by wastewater collection system (OPTIONAL)			
Wastewater Collection			**Recipient of Collected Wastewater**	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? OPTIONAL **Drop Down List**	Volume of Wastewater Collected from UWMP Service Area 2025 (AF)	Name of Wastewater Treatment Plant (WWTP) and Place ID Number **Drop down list**	Is WWTP Located Within UWMP Area? **Drop Down List**
Add additional rows as needed				
RMWD	Metered	1,120	San Luis Rey Water Reclamation Facility - Recycled Water and Pure Water, Place ID 255386	No
Total Wastewater Received from UWMP Service Area in 2025:		1,120		
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3. **Additional Guidance**: See Appendix M, Section M.21 for detailed guidance on this table.				
NOTES: Assume average flow of 1.0 MGD for the year.				

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

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

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

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

NOTES:

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

☑ Check box if recycled water is not used and is not planned for use within the service area of the supplier. The supplier will only complete the column on "Potential Recycled Water Use" and submit an accompanying narrative on the feasibility of that potential recycled water use.

Name(s) of Facility/ies Producing (Treating) the Recycled Water (OPTIONAL) :	
Name of Supplier Operating the Recycled Water Distribution System (OPTIONAL) :	
Volume of Supplemental Water Added in 2025 (OPTIONAL) :	
Source of 2025 Supplemental Water (OPTIONAL) :	

Use Type **Drop down list**	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop down list	Additional Information (as needed)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)	**Potential Recycled Water Use**	
									Volume	Narrative page number (OPTIONAL)
Add additional rows as needed										
Subtotal Potable			0	0	0	0	0	0	0	
Subtotal Non-Potable			0	0	0	0	0	0	0	
Total			0	0	0	0	0	0	0	0

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

NOTES:

Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual Water Code Section 10633(e)		
☑	Check the box if recycled water was not used in 2025 nor previously projected for use in 2020. Proceed to the next table.	
Use Type Drop Down list	2020 Projection for 2025 (AF)	2025 Actual Use (AF)
Add additional rows as needed		
Total	0	0
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure reported in Submittal Table 2-3 **Additional Guidance:** See Appendix M, Section M.21 for detailed guidance on this table.		
NOTES:		

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

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

Submittal Table 6-8 Retail: Water Supplies — Actual **Water Code Section 10631(b)**				
Water Supply		**2025**		
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Actual Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed				
Purchased or Imported Water	Eastern MWD	Potable	12,355	
		Subtotal Potable	12,355	0
		Subtotal Non-Potable	0	0
		Total	12,355	0
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3. **Total Entitlement:** e.g. Water Right, Groundwater Allocation, Contracted Amount.				
NOTES:				

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

Water Supply			Projected Water Supply (Report to the Extent Practicable)									
			2030		2035		2040		2045		2050 (opt)	
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed												
Purchased or Imported Water	EMWD	Potable	18,431		17,903		17,361		16,812		16,271	
Subtotal Potable			18,431	0	17,903	0	17,361	0	16,812	0	16,271	0
Subtotal Non-Potable			0	0	0	0	0	0	0	0	0	0
Total			18,431	0	17,903	0	17,361	0	16,812	0	16,271	0

DWR NOTES:
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.
Total Entitlement: e.g. Water Right, Groundwater Allocation, Contracted Amount.
NOTES: Supply availability is equal to projected single dry year demand.

Optional **Submittal Table O-1B: Recommended Energy Reporting - SINGLE DELIVERY PRODUCT - TOTAL UTILITY APPROACH**

Water Delivery Product drop down list (If delivering more than one type of product recommend using Table O-1C)	Retail Potable Deliveries	**Only for Water Delivery Products Under the Urban Water Supplier's Operational Control**		
Start Date of Reporting Period	1/1/2025	**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
End Date of Reporting Period	12/31/2025			
Is upstream embedded energy in the values reported?	No			
Units of Measure for Water	AF	**Total Utility** See DWR NOTES	**Hydropower**	**Net Utility**
Volume of Water Entering Process		12,355		12,355
Energy Consumed (kWh)		3,568,716		3,568,716
Energy Intensity (kWh/vol. converted to MG)		886	-	886

DWR NOTES:
Total Utility: The volume of water entered in the "Total Utility" column should equal the volume of water entering the distribution system (excluding recycled water); in most cases, this is the total volume calculated in UWMP Table 4-1: 2025 Actual Total Uses for Potable and Non-Potable Water. Note if recycled water is included in your Submittal Table 4-1, you must exclude it from your volume in this table.

Quantity of Self-Generated Renewable Energy

0 kWh

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

Metered Data

Data Quality Narrative:

All water supply data and energy use data are metered.

Narrative:

The District tracks supply on a daily basis and receives monthly invoices for each facility. Energy intensity is considered total energy use divided by total supplyfor 2025.

NOTES:

Optional Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	**Available Supplies if Year Type Repeats**	
		☐ Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP]	
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (AF)	**% of Average Supply**
Average Year	2025	12,355	100%
Single-Dry Year	2007	31,865	100%
Consecutive Dry Years 1st Year	2011	19,276	100%
Consecutive Dry Years 2nd Year	2012	21,918	100%
Consecutive Dry Years 3rd Year	2013	21,526	100%
Consecutive Dry Years 4th Year	2014	22,625	100%
Consecutive Dry Years 5th Year	2015	17,868	100%

DWR NOTES: Supplier may use multiple versions of Submittal Table 7-1 R if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Submittal Table 7-1 R, in the "Note" section of each submittal table, state that multiple versions of Submittal Table 7-1 R are being used and identify the particular water source that is being reported in each submittal table.
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table reports the units of measure reported in Submittal Table 2-3.

NOTES:

Submittal Table 7-2 Retail: Normal Year Supply and Use Comparison Water Code Section 10635 (a)					
	2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
Supply totals (autofill from Submittal Table 6-9 R)	12,850	12,715	12,501	12,232	11,932
Use totals (autofill from Submittal Table 4-2 R)	12,850	12,715	12,501	12,232	11,932
Surplus/(shortfall)	0	0	0	0	0
OPTIONAL Planned WSCP Actions					
WSCP - supply augmentation benefit					
WSCP - use reduction savings benefit					
Revised Surplus/(shortfall)					
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES:					

Submittal Table 7-3 Retail: Single Dry Year Supply and Use Comparison Water Code Section 10635(a)					
	2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
Supply totals	16,705	16,530	16,251	15,902	15,512
Use totals	16,705	16,530	16,251	15,902	15,512
Surplus/(shortfall)	0	0	0	0	0
OPTIONAL Planned WSCP Actions					
WSCP - supply augmentation benefit					
WSCP - use reduction savings benefit					
Revised Surplus/(shortfall)					
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES Single dry year demand is estimated as the projected average demand times a factor 1.3.					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Use Comparison Water Code Section 10635(a)						
		2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
First year	Supply totals	12,722	12,588	12,376	12,110	11,813
	Use totals	12,722	12,588	12,376	12,110	11,813
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Second year	Supply totals	14,906	14,749	14,501	14,189	13,841
	Use totals	14,906	14,749	14,501	14,189	13,841
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Third year	Supply totals	15,035	14,877	14,626	14,311	13,960
	Use totals	15,035	14,877	14,626	14,311	13,960
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Fourth year	Supply totals	16,320	16,148	15,876	15,535	15,154
	Use totals	16,320	16,148	15,876	15,535	15,154
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Fifth year	Supply totals	13,236	13,096	12,876	12,599	12,290
	Use totals	13,236	13,096	12,876	12,599	12,290
	Surplus/(shortfall)	0	0	0	0	0
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					

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

NOTES: Five consecutive dry years demand is estimated as the projected average demand times factors of 0.99, 1.16, 1.17, 1.27, and 1.03, accordingly.

Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment Water Code Section 10635(b)(3)	
2026	**Total**
Total Water Use (AF)	12,329
Total Supplies (AF)	12,329
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2027	**Total**
Total Water Use (AF)	14,561
Total Supplies (AF)	14,561
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2028	**Total**
Total Water Use (AF)	14,803
Total Supplies (AF)	14,803
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2029	**Total**
Total Water Use (AF)	16,194
Total Supplies (AF)	16,194
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2030	**Total**
Total Water Use (AF)	13,236
Total Supplies (AF)	13,236
Surplus/Shortfall w/o WSCP Action	0
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES: Based on the historical record, the most severe 5-year drought occurred between 2011 and 2015. Water use is estamated as the projected demand for 2026 through 2030 increased by the variation from normal for years 2011 through 2015.	

Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels **Water Code Section 10632(a)(3)(B)**			
☐	Check the box if the Supplier uses the Standard six levels of water shortage. Proceed to the next table.		
Standard Shortage Levels	**Percent Shortage Range**	**Suppliers Shortage Levels**	**Percent Shortage Range**
1	Up to 10%	Up to 90% of WSA	96.7% to 100% of unconstrainted demand
2	Up to 20%	Up to 80% of WSA	93.3% to 96.7% of unconstrained demand
3	Up to 30%	Up to 70% of WSA	90% to 93.3% to of unconstrained demand
4	Up to 40%	Up to 60% of WSA	86.7% to 90% of unconstrained demand
5	Up to 50%	Up to 50% of WSA	83.3% to 86.7% of unconstrained demand
6	>50%	Less than 50% of WSA	Less than 83.3% of unconstrained demand
NOTES: Impact to RMWD is the maximum retail adjustment per Table 1 (Shortage Allocation Index) of the MWD 2014 Water Supply Allocation Plan (WSAP).			

Submittal Table 8-3 Retail: Demand Reduction Actions
Water Code Section 10632(a)(4)(B),(D), and (E)

Is the Supplier completing this table using the standard six levels? (yes/no)

Shortage Level	Demand Reduction Actions **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)	Penalty, Charge, or Other Enforcement? **For Retail Suppliers Only** Drop Down List
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)		
Add additional rows as needed					
1 through 5	Offer Water Use Surveys	Volume	124	In coordination with EMWD, extent program to customers. (1% of ADD)	No
1 through 5	Provide Rebates on Plumbing Fixtures and Devices	Volume	83	In coordination with EMWD, offer rebates and devices to customers. (1% of non-AG)	No
1 through 5	Provide Rebates for Landscape Irrigation Efficiency	Volume	83	In coordination with EMWD, offer rebates and devices to customers. (1% of non-AG)	No
1 through 5	Provide Rebates for Turf Replacement	Volume	167	In coordination with EMWD, offer rebates. (2% of non-AG)	No
1 through 5	Reduce System Water Loss	Volume	124	Accelerate implementation of leak detection and repair program. (1% of ADD)	No
1 through 5	Water Features - Restrict water use for decorative water features, such as fountains	Volume	17	Prohibit the use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system. (0.2% of non-AG)	Yes
2 through 5	Landscape - Restrict or prohibit runoff from landscape irrigation	Volume	42	Enforce normal runoff prohibition. (0.5% of non-AG)	Yes
2 through 5	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Volume	62	Repair all leaks within seventy-two (72) hours of notification by the District unless other arrangements are made with the General Manager. (0.5% of ADD)	Yes
2 through 5	Landscape - Prohibit certain types of landscape irrigation	Volume	6	Prohibit the irrigation with potable water of ornamental turf on public street medians. (10% of Institutional)	
2 through 5	Landscape - Limit landscape irrigation to specific days	Volume	457	Limit residential and commercial landscape irrigation to no more than three (3) assigned days per week on a schedule established by the General Manager and posted by the District. (10% of Residential and Commercial)	Yes
3 through 5	Landscape - Prohibit certain types of landscape irrigation	Volume	137	Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 5 (b) (1), on the same schedule set forth in section 5 (b) (1) by using a bucket, hand-heldhose with positive shut-off nozzle, or low-volume non-spray irrigation. (3% of Residential and Commercial)	Yes
4 through 5	Landscape - Limit landscape irrigation to specific times	Volume	417	Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to weather-based controllers, drip/micro-irrigation systems and stream rotor sprinklers. (5% of non-AG)	Yes
5	CII - Restaurants may only serve water upon request	Volume	4	Prohibit the serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased. (0.5% of Commercial Family)	Yes
5	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Volume	37	Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems. (0.3% of ADD)	Yes
5	Other - Prohibit use of potable water for washing hard surfaces	Volume	83	Prohibit the application of potable water to driveways and sidewalks. (1% of non-AG)	Yes
5	Moratorium or Net Zero Demand Increase on New Connections	Volume	26	No new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) shall be issued, unless (1) a valid, unexpired building permit has already been issued for the project; (2) In the opinion of the District Board of Directors the project is necessary to protect the public's health, safety, and welfare; or (3) The applicant provides substantial evidence of an enforceable binding commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District. (40% of Construction)	Yes
5	Landscape - Limit landscape irrigation to specific days	Volume	229	Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the District. (5% of Residential and Commercial)	Yes
6	Other	Volume	2,471	The District may establish up to a 20% reduction in water allocation for any property served by the District. (20% of ADD)	Yes

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

NOTES: As a reduction target for Level 5, 16.7% of a normal year is appoximately 2,063 AF.

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

Appendix C – Urban Water Management Plan Checklist

Retail	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and overview	n/a	Executive Summary
x	Chapter 1	10630.5	Each plan shall include a simple description of the Supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a Supplier may also choose to include a simple description at the beginning of each chapter.	Plan preparation	n/a	Executive Summary
x	Section 2.1	10620(b)	Every person that becomes a Supplier shall adopt UWMP within one year after it has become a Supplier.	Plan preparation	n/a	§2.1 Basis for Preparing a Plan
x	Section 2.5	10644	Supplier shall report the Public Water Systems number, volume of delivered water, and number of connections that are included in this UWMP.	Plan preparation	2-1	§2.2 Public Water System
x	Section 2.5	10644	Supplier shall report if this UWMP is an individual UWMP and whether the Supplier belongs to a regional UWMP or regional alliance.	Plan preparation	2-2	§2.3 Individual or Regional Plan
x	Section 2.5	10644	Supplier shall report whether the data is in fiscal or calendar years and the units of measure used for reporting water volumes.	Plan preparation	2-3	§2.4 Fiscal or Calendar Year and Untis of Measure
x	Section 2.4	10642	Provide supporting documentation that the Supplier has encouraged active involvement of diverse social, cultura l, and economic elements of the population within the se rvice area prior to and during the preparation of the pla n and contingency plan.	Plan preparation	n/a	§2.5 Coordination and Outreach
x	Section 2.4.2	10620(d)(3)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other Suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan preparation	n/a	§2.5.2 Coordination with Other Agencies and the Community
x	Section 2.4.1	10631(h)	Retail Suppliers will include documentation that they have provided their Wholesale Supplier(s)—if any—with water use projections from that source.	Plan preparation	2-4 R	§4.2.4 Projected Water Use
x	Chapter 3.0	10631(a)	Describe the Supplier service area.	System description	n/a	§3 Service Area Description
x	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System description	n/a	§3.3 Service Area Climate
x	Section 3.4.1	10631(a)	Provide the current and projected service area populations for 2030, 2035, 2040, 2045 and optionally 2050.	System description	3-1	§3.4.1 Service Area Population
x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the Supplier's water management planning.	System description	n/a	§3.4.2 Other Social, Economic, and Demographic Factors
x	Section 3.5	10631(a)	Describe the land uses within the service area… include the current and projected land uses within the existing or anticipated service area affecting the Supplier's water management planning. Describe the land uses within the service area.	System description and baselines	n/a	§3.4.1 Service Area Population
x	Sections 4.2.3 and 4.2.4	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System water use	4-1 and 4-2	§4.2 Past, Current, and Projected Water Use by Sector

Retail	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 4.3.1	10631(d)(3)(A)	Report the distribution system water loss for each of the five years preceding the plan update.	System water use	4-5	§4.3.1 Previous Five Years Distribution System Losses
x	Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System water use	4-6	§4.3.2 Progress Toward Meeting the Water Loss Performance Standard
x	Section 4.2.5.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the Supplier.	System water use	4-3	§4.2.6 Lower-Income Households
x	Section 4.2.5.3	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System water use	4-3	§4.2.5 Standards, Codes, Ordinances, and Plans
x	Section 4.2.5.3	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System water use	4-3	§4.2.5 Standards, Codes, Ordinances, and Plans
x	Section 4.2.5.3	10631(d)(4)(B)(ii)	To the extent that a Supplier reports the information described in subparagraph (A), an urban water Supplier shall… Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.	System water use	4-3	§4.2.5 Standards, Codes, Ordinances, and Plans
x	Section 4.2.5.6	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System water use	n/a	§4.2.7 Climate Change Considerations
x	Section 5.2	10608.40	Retail Suppliers shall report on their compliance in meeting their water use targets. Reporting requirements will vary depending on whether the Supplier: - Was considered an urban retail water supplier in 2020, - Met its 2020 target in 2020, or - Was part of a merger or consolidation since 2020. Chapter 5 Subsections 5.2.1, 5.2.2, and 5.2.3 address each of these situations.	Baselines and targets	5-1	Chapter 5
x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System supplies	n/a	§6.1 Water Supply Analysis Overview
x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System supplies	n/a	§6.1 Water Supply Analysis Overview
x	Section 6.2.2	10631(b)(4)(C)	Indicate whether groundwater is an existing or planned source of water available to the Supplier. If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	Water supplies and recycled water	6-1	§6.3.1 Groundwater
x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the Supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System supplies	n/a	§6.3.1 Groundwater

Retail	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System supplies	n/a	§6.3.1 Groundwater
x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the Supplier has the legal right to pump.	System supplies	n/a	§6.3.1 Groundwater
x	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… (include) information as to whether DWR has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin…	Water supplies and recycled water	n/a	§6.3.1 Groundwater
x	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… describe efforts by the Supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	Water supplies and recycled water	n/a	§6.3.1 Groundwater
x	Section 6.2.2.	10631(b)(4)(C)	If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	System supplies	n/a	§6.3.1 Groundwater
x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System supplies	6-9	§6.3.1 Groundwater
x	Section 6.1	10631(b)	Identify and quantify the existing and planned sources of water available for 2025, 2030, 2035, 2040, 2045 and optionally 2050.	System supplies	6-8 and 6-9	§6.1 Water Supply Analysis Overview
x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System supplies	n/a	§6.4.8 Water Exchanges and Transfers
x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the Supplier's service area with quantified amount of collection and treatment and the disposal methods.	System supplies (recycled water)	6-2	§6.4.2 Wastewater Collection, Treatment and Disposal
x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System supplies (recycled water)	6-3	§6.4.3 Wastewater Treatment and Discharge
x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the Supplier's service area.	System supplies (recycled water)	6-4	§6.4.4 Recycled Water System Description
x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System supplies (recycled water)	6-4	§6.4.5 Potential and Projected Recycled Water Uses
x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the Supplier's service area at the end of 5, 10, 15, and 20 years, and describe the actual use of recycled water in comparison to uses previously projected.	System supplies (recycled water)	6-4 and 6-5	§6.4.5 Potential and Projected Recycled Water Uses
x	Section 6.2.5	10633(f)	Describe the actions that may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System supplies (recycled water)	6-6	§6.4.6 Actions to Encourage and Optimize Future Recycled Water Use

Retail	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the Supplier's service area.	System supplies (recycled water)	n/a	§6.4.6 Actions to Encourage and Optimize Future Recycled Water Use
x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System supplies	6-7	§6.4.7 Desalinated Water Opportunities
x	Section 6.2.10	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water Supplier to address water supply reliability in average, single-dry, and for a period of drought lasting five consecutive water years.	System supplies	6-7	§6.6 Future Water Projects
x	Section 6.3 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a Supplier can readily obtain.	System suppliers, energy intensity	O-1A, O-1B, O-1C, and O- 2	§6.7 Energy Use
x	Section 7.1	10634	Provide information on the quality of existing sources of water available to the Supplier and the manner in which water quality affects water management strategies and supply reliability.	Water supply reliability assessment	n/a	§7.1 Constraints on Water Sources Considerations
x	Section 7.2	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the Supplier with the total projected water use over the next 20 years.	Water supply reliability assessment	7-2, 7-3, and 7-4	§7.2 Water Service Reliability Assessment
x	Section 7.2.3	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water supply reliability assessment	n/a	§7.4 Description of Management Tools and Options
x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water supply reliability assessment	n/a	§7.5 Drought Risk Assessment
x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive years.	Water supply reliability assessment	n/a	§7.5 Drought Risk Assessment
x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water supply reliability assessment	n/a	§7.5 Drought Risk Assessment
x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the Supplier with the total projected water use for the drought period.	Water supply reliability assessment	7-5	§7.5 Drought Risk Assessment
x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water supply reliability assessment	n/a	§7.5 Drought Risk Assessment
x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water shortage contingency planning	n/a	WSCP §8 Water Shortage Contingency Plan
x	Chapter 8	10632(a)(1)	Provide an analysis of water supply reliability (from Guidebook Chapter 7) in the WSCP.	Water shortage contingency planning	n/a	WSCP §2.1 Water Supply Reliability

Retail	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the Supplier will use each year to determine its water reliability.	Water shortage contingency planning	n/a	WSCP §3 Annual Assessment Procedures
x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the Supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water shortage contingency planning	n/a	WSCP §3.3 Supply and Demand Analysis
x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10%, 20%, 30%, 40%, 50% shortage, and greater than 50% shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water shortage contingency planning	n/a	WSCP §4 Six Standard Water Shortage Levels
x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing WSCP that uses different water shortage levels must cross reference their categories with the six standard categories.	Water shortage contingency planning	8-1	WSCP §8.3 Six Standard Water Shortage Levels
x	Section 8.4	10632(a)(4)(A)	Suppliers with WSCPs that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water shortage contingency planning	8-2	WSCP §5.1 Shortage Response Actions
x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water shortage contingency planning	8-3	WSCP §5.3 Demand Reduction
x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water shortage contingency planning	8-2	WSCP §5.4 Locally Appropriate Operational Changes
x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to State-mandated prohibitions are appropriate to local conditions.	Water shortage contingency planning	Table 8-3	WSCP §5.5 Additional Mandatory Prohibitions
x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water shortage contingency planning	8-2 and 8-3	WSCP §5.6 Shortage Response Action Effectiveness
x	Section 8.4.6	10632.5	The UWMP shall include a seismic risk assessment and mitigation plan.	Water shortage contingency plan	n/a	WSCP §6.1 Seismic Risk Assessment and Mitigation Plan
x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water shortage contingency planning	n/a	WSCP §7 Communication Protocols
x	Section 8.5	10632(a)(5)(B), 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water shortage contingency planning	n/a	WSCP §7 Communication Protocols
x	Section 8.6	10632(a)(6)	Retail Supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water shortage contingency planning	n/a	WSCP §8 Compliance and Enforcement
x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the Supplier to enforce shortage response actions.	Water shortage contingency planning	n/a	WSCP §9 Legal Authorities
x	Section 8.7	10632(a)(7)(B)	Provide a statement that the Supplier will declare a water shortage emergency per Water Code Chapter 3. *Water Shortage Emergencies*.	Water shortage contingency planning	n/a	WSCP §9 Legal Authorities

Retail	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 8.7	10632(a)(7)(C)	Provide a statement that the Supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water shortage contingency planning	n/a	WSCP §9 Legal Authorities
x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	WSCP §10 Financial Consequences
x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water shortage contingency planning	n/a	WSCP §10.2 Mitigation Actions
x	Section 8.8	10632(a)(8)(C)	Retail Suppliers must describe the cost of compliance with Water Code Chapter 3.3, *Excessive Residential Water Use During Drought*.	Water shortage contingency planning	n/a	WSCP §10.3 Reporting Cost of Compliance
x	Section 8.9	10632(a)(9)	Retail Suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data are collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water shortage contingency planning	n/a	WSCP §10.3 Reporting Cost of Compliance
x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the WSCP to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water shortage contingency planning	n/a	WSCP §11 Monitoring and Reporting
x	Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water shortage contingency planning	n/a	WSCP §5.2 Special Water Feature Distinction
x	Section 8.12	10632(c)	Make available the WSCP to customers and any city or county where it provides water within 30 days after adoption of the plan.	Water shortage contingency planning	n/a	WSCP §12.2 Plan Adoption, Submittal, Availability, and Amendment Procedures
x	Sections 9.1	10631(e)(1)	Retail Suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand management measures	n/a	§9 Demand Management Measures
x	Chapter 10	10608.26(a)	Retail Suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan adoption, submittal, and implementation	n/a	§10.4 Public Hearing and Adoption
x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the Supplier provides water that the Supplier will be reviewing the UWMP and considering amendments or changes to the plan.	Plan adoption, submittal, and implementation	10-1	§10.2 Notice of Plan Preparation
x	Section 10.4	10621(f)	Each urban water Supplier shall update and submit its 2025 plan to DWR by July 1, 2026.	Plan adoption, submittal, and implementation	n/a	§10.5 Plan Submittal
x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the Supplier made the UWMP and WSCP available for public inspection, published notice of the public hearing, and held a public hearing about the UWMP and WSCP.	Plan adoption, submittal, and implementation	n/a	§10.4 Public Hearing and Adoption
x	Section 10.2.2	10642	The Supplier is to provide the time and place of the hearing to any city or county within which the Supplier provides water.	Plan adoption, submittal, and implementation	10-1	§10.3 Notice of Public Hearing

Retail	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 10.3.2	10642	Provide supporting documentation that the UWMP and WSCP has been adopted as prepared or modified.	Plan adoption, submittal, and implementation	n/a	§10.4 Public Hearing and Adoption
x	Section 10.4	10644(a)	Provide supporting documentation that the Supplier has submitted their UWMP to the California State Library.	Plan adoption, submittal, and implementation	n/a	§10.5.2 Submittal to Cities, Counties, and the California State Library
x	Section 10.4	10644(a)(1)	Provide supporting documentation that the Supplier has submitted their UWMP to any city or county within which the Supplier provides water no later than 30 days after adoption.	Plan adoption, submittal, and implementation	n/a	§10.5.2 Submittal to Cities, Counties, and the California State Library
x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The UWMP, or amendments to the UWMP, submitted to DWR shall be submitted electronically.	Plan adoption, submittal, and implementation	n/a	§10.5.1 Electronic Data Submittal
x	Section 10.7.2	10644(b)	If revised, submit a copy of the WSCP to DWR within 30 days of adoption.	Plan adoption, submittal, and implementation	n/a	§10.9 Submitting Revised WSCP
x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its UWMP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	§10.6 Public Availability
x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its WSCP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan adoption, submittal, and implementation	n/a	§10.6 Public Availability

Appendix D – SB X7-7 Calculations

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: 1) SANDAG Series 14 (version 17) includes DOF methodology.	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	21,841
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.*	
	14,297	-	-	-	-	-	**14,297**
*** Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.							
NOTES:							

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	SDCWA
This water source is *(check one)* **:**	
☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	14,297	-	14,297

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

NOTES

SB X7-7 Table 4-B: 2020 Indirect Recycled Water Use Deduction *(For use only by agencies that are deducting indirect recycled water)*

2020 Compliance Year	**2020 Surface Reservoir Augmentation**					**2020 Groundwater Recharge**			**Total Deductible Volume of Indirect Recycled Water Entering the Distribution System**
	Volume Discharged from Reservoir for Distribution System Delivery[1]	Percent Recycled Water	Recycled Water Delivered to Treatment Plant	Transmission/ Treatment Loss[1]	Recycled Volume Entering Distribution System from Surface Reservoir Augmentation	Recycled Water Pumped by Utility[1,2]	Transmission/ Treatment Losses[1]	Recycled Volume Entering Distribution System from Groundwater Recharge	
	14,297	0%	-	-	-	-	-	-	-

[1] ***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.*

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

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**
14,297	21,841	**584**
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]				
585	-	-	-	-	585	1202	**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 E – AWWA Water Audits

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.
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? Click to access definition
+ Click to add a comment

Water Audit Report for: Rainbow Municipal Water District (CA3710016)
Reporting Year: 2021 7/2020 - 6/2021

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

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

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

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

Master Meter and Supply Error Adjustments

WATER SUPPLIED

				Pcnt:	Value:	
Volume from own sources:	n/a	0.000	acre-ft/yr			acre-ft/yr
Water imported:	7	16,971.700	acre-ft/yr	8	0.21%	acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr			acre-ft/yr

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

WATER SUPPLIED: 16,936.134 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	9	16,112.306	acre-ft/yr			
Billed unmetered:	n/a		acre-ft/yr			
Unbilled metered:	n/a		acre-ft/yr			
Unbilled unmetered:	6	20.630	acre-ft/yr		20.630	acre-ft/yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 16,132.936 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption)

803.198 acre-ft/yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		42.340	acre-ft/yr	0.25%		acre-ft/yr

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

Customer metering inaccuracies:	8	575.738	acre-ft/yr	3.45%	acre-ft/yr
Systematic data handling errors:		10.000	acre-ft/yr	0.25%	acre-ft/yr

Apparent Losses: 628.078 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 175.120 acre-ft/yr

WATER LOSSES: 803.198 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 823.828 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	336.0	miles
Number of active AND inactive service connections:	9	8,757	
Service connection density:		26	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:	8	158.0	psi

COST DATA

Total annual cost of operating water system:	10	$36,796,368	$/Year
Customer retail unit cost (applied to Apparent Losses):	10	$6.50	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	8	$2,215.00	$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 79 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

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

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.
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? Click to access definition
\+ Click to add a comment

Water Audit Report for: Rainbow Municipal Water District (CA3710016)
Reporting Year: 2022 7/2021 - 6/2022

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

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

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

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

					Pcnt:	Value:	
Volume from own sources:	n/a		acre-ft/yr				acre-ft/yr
Water imported:	10	16,315.300	acre-ft/yr	8	0.48%		acre-ft/yr
Water exported:	n/a	0.000	acre-ft/yr				acre-ft/yr

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

WATER SUPPLIED: 16,237.361 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	9	14,964.000	acre-ft/yr			
Billed unmetered:	n/a		acre-ft/yr			
Unbilled metered:	8	0.207	acre-ft/yr			
Unbilled unmetered:	10	26.250	acre-ft/yr		26.250	acre-ft/yr

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

AUTHORIZED CONSUMPTION: 14,990.457 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption) 1,246.904 acre-ft/yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:	40.593	acre-ft/yr	0.25%		acre-ft/yr

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

Customer metering inaccuracies:	7	1,126.338	acre-ft/yr	7.00%	acre-ft/yr
Systematic data handling errors:	7	10.000	acre-ft/yr	0.25% 10.000	acre-ft/yr

Apparent Losses: 1,176.932 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 69.972 acre-ft/yr

WATER LOSSES: 1,246.904 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,273.361 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	354.0	miles
Number of active AND inactive service connections:	9	8,769	
Service connection density:		25	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: 8 158.0 psi

COST DATA

Total annual cost of operating water system:	10	$35,596,022	$/Year
Customer retail unit cost (applied to Apparent Losses):	10	$6.32	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	8	$2,175.00	$/acre-ft

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 89 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: Unauthorized consumption
2: Customer metering inaccuracies
3: Unbilled metered

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

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Water Audit Report for: Rainbow Municipal Water District
Audit Year: 2022 | Jul 01 2022 - Jun 30 2023 | Calendar

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

To edit water system info: go to start page

To access definitions, click the input name

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

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g		0.000	Acre-ft/Yr					VOSEA
WI	Water Imported:	n	g	9	12,653.200	Acre-ft/Yr	n	g	5	0.68% percent	under-registration WIEA
WE	Water Exported:	n	g		0.000	Acre-ft/Yr					WEEA

WATER SUPPLIED: 12,739.831 Acre-ft/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	n	g	9	11,835.310	Acre-ft/Yr					
BUAC	Billed Unmetered:	n	g		0.000	Acre-ft/Yr					
UMAC	Unbilled Metered:	n	g		0.000	Acre-ft/Yr					
UUAC	Unbilled Unmetered:	n	g	10	24.060	Acre-ft/Yr					

choose entry option:
custom 24.060 acre-ft/yr

AUTHORIZED CONSUMPTION: 11,859.370 Acre-ft/Yr

WATER LOSSES

880.461 Acre-ft/Yr

Apparent Losses

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

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	29.588	Acre-ft/Yr	0.25%	default
CMI	Customer Metering Inaccuracies:	n	g	6	11.847	Acre-ft/Yr	0.10%	percent
UC	Unauthorized Consumption:	n	g	3	29.588	Acre-ft/Yr	0.25%	default

under-registration

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

Apparent Losses: 71.024 Acre-ft/Yr

Real Losses

Real Losses: 809.437 Acre-ft/Yr

WATER LOSSES: 880.461 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 904.521 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	8	341.3	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	5	8,769		(active *and* inactive)
	Service connection density:				26	conn./mile main	

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

Lp: n g 10

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

AOP	Average Operating Pressure:	n	g	9	158.0	psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	10	$8.68	$/100 cubic feet (ccf)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	3	$2,757.00	$/acre-ft	$32,624,577	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

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

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

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

1: Variable Production Cost (VPC)
2: Water Imported (WI)
3: Number of Service Connections (Nc)

KEY PERFORMANCE INDICATOR TARGETS:

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

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

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

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

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Water Audit Report for: Rainbow Municipal Water District
Audit Year: 2024 | Jul 01 2023 - Jun 30 2024 | Fiscal

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

To edit water system info: go to start page

To access definitions, click the input name

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

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

VOS	Volume from Own Sources:	n	g	n/a	0.000	Acre-ft/Yr				VOSEA
WI	Water Imported:	n	g	4	11,270.300	Acre-ft/Yr	n	g	3	WIEA
WE	Water Exported:	n	g			Acre-ft/Yr				WEEA

percent

WATER SUPPLIED: 11,270.300 Acre-ft/Yr

AUTHORIZED CONSUMPTION

BMAC	Billed Metered:	n	g	9	10,212.958	Acre-ft/Yr				
BUAC	Billed Unmetered:	n	g	n/a	0.000	Acre-ft/Yr				
UMAC	Unbilled Metered:	n	g	n/a	0.000	Acre-ft/Yr				
UUAC	Unbilled Unmetered:	n	g	3	25.532	Acre-ft/Yr				

choose entry option:

0.25% default

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 10,238.490 Acre-ft/Yr

WATER LOSSES

1,031.810 Acre-ft/Yr

Apparent Losses

choose entry option:

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

SDHE	Systematic Data Handling Errors:	n	g	3	25.532	Acre-ft/Yr	0.25%	default		
CMI	Customer Metering Inaccuracies:	n	g	7	10.223	Acre-ft/Yr	0.10%	percent		under-registration
UC	Unauthorized Consumption:	n	g	3	25.532	Acre-ft/Yr	0.25%	default		

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

Apparent Losses: 61.288 Acre-ft/Yr

Real Losses

Real Losses: 970.522 Acre-ft/Yr

WATER LOSSES: 1,031.810 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,057.342 Acre-ft/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	356.0	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	10	9,073		(active *and* inactive)
	Service connection density:				25	conn./mile main	

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

Lp n g 10

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

AOP	Average Operating Pressure:	n	g	9	158.0	psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	9	$5.07	$/100 cubic feet (ccf)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	9	$1,968.02	$/acre-ft	$32,624,577	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

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

go to dashboard

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

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

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

1: Water Imported (WI)
2: Unauthorized Consumption (UC)
3: Systematic Data Handling Errors (SDHE)

KEY PERFORMANCE INDICATOR TARGETS:

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

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

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

AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association.
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Water Audit Report for: Rainbow Municipal Water District
Audit Year: 2025 | Jul 01 2024 - Jun 30 2025 | Fiscal

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

To edit water system info: go to start page

To access definitions, click the input name

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

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

		n	g								
VOS	Volume from Own Sources:	n	g	n/a	0.000	Acre-ft/Yr					VOSEA
WI	Water Imported:	n	g	4	14,010.000	Acre-ft/Yr	n	g	3		percent WIEA
WE	Water Exported:	n	g			Acre-ft/Yr					WEEA

WATER SUPPLIED: 14,010.000 Acre-ft/Yr

AUTHORIZED CONSUMPTION

		n	g								
BMAC	Billed Metered:	n	g	9	12,812.169	Acre-ft/Yr					
BUAC	Billed Unmetered:	n	g	n/a		Acre-ft/Yr					
UMAC	Unbilled Metered:	n	g	n/a		Acre-ft/Yr					
UUAC	Unbilled Unmetered:	n	g	3	32.030	Acre-ft/Yr					

choose entry option:

0.25% default

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 12,844.199 Acre-ft/Yr

WATER LOSSES

1,165.801 Acre-ft/Yr

Apparent Losses

choose entry option:

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

		n	g								
SDHE	Systematic Data Handling Errors:	n	g	3	32.030	Acre-ft/Yr					
CMI	Customer Metering Inaccuracies:	n	g	7	0.000	Acre-ft/Yr					
UC	Unauthorized Consumption:	n	g	3	32.030	Acre-ft/Yr					

0.25% default

	percent
0.25%	default

under-registration

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

Apparent Losses: 64.061 Acre-ft/Yr

Real Losses

Real Losses: 1,101.740 Acre-ft/Yr

WATER LOSSES: 1,165.801 Acre-ft/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 1,197.831 Acre-ft/Yr

SYSTEM DATA

		n	g				
Lm	Length of mains:	n	g	10	343.3	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	10	9,180		(active *and* inactive)
	Service connection density:				27	conn./mile main	

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

Lp n g 10

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

		n	g			
AOP	Average Operating Pressure:	n	g	9	158.0	psi

COST DATA

		n	g					
CRUC	Customer Retail Unit Charge:	n	g		$5.59		<----Enter units	Total Annual Operating Cost
VPC	Variable Production Cost:	n	g	9	$1,695.95	$/acre-ft		$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

Click 'g' for 1 parameter(s), then complete all visible data grading questions to enable the Data Validity Score to calculate

go to dashboard

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

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

KEY PERFORMANCE INDICATOR TARGETS:

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

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

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

Appendix F – CropSWAP Program

CropSWAP

A Regional Program by Rancho Water

CROPSWAP

Sustainable Water for Agricultural Production

CROPSWAP CONCEPT & HISTORY

The CropSWAP program was developed by the Rancho California Water District (Rancho Water/District) in 2016 to address severe drought conditions and a weakening local agricultural economy. The idea for the program was borrowed from the turf replacement programs (i.e. Cash for Grass) available to urban water users and applied to the agricultural sector. At its core, CropSWAP is a program that pays agricultural water users to replace high-water-use crops with lower-water-use varieties in order to improve water use efficiencies and to give local farmers a better chance of turning a profit.

The early version of the program was implemented exclusively within Rancho Water's service area, which consists of about 1,400 small farms and 9,000 irrigated acres. Although CropSWAP started as a local effort, the program has had far-reaching impacts. In addition to giving local farmers an opportunity to increase profitability, the program has effectively decreased water demand pressures on California's State Water Project and the Colorado River for the benefit of water users throughout California and its neighboring states.

CropSWAP empowers farmers to use water more efficiently, fostering a sustainable and resilient agricultural economy.

THE FUTURE OF CROPSWAP – REGIONAL EXPANSION

With the generous support of federal, state, and local representatives, CropSWAP is now available to Rancho Water's neighboring water agencies and conservation districts. In June 2023, the California Department of Water Resources and select regional partners allocated an additional $6.7 million for implementation of a larger regional program. In addition to supporting crop replacement projects, this new and improved program focuses on sustaining the agricultural economy by providing incentives for other types of projects that increase agricultural productivity and efficiency.

PARTNERS

Department of Water Resources, State of California

Rancho Water
WORKING FOR OUR COMMUNITY

City of Oceanside Water Utilities

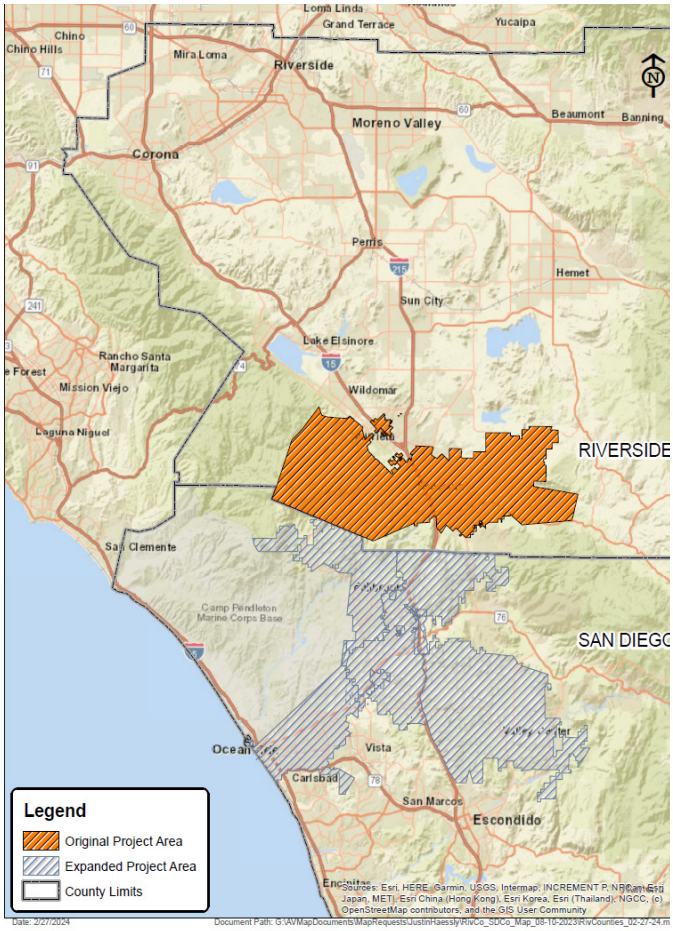
Rainbow Municipal Water District
Established 1953

Valley Center Municipal Water District
Water Conservation / A Way of Life

Fallbrook Public Utility District

EXPANDED PROJECT AREA

Agriculture within the Temecula & Murrieta area is a small portion of a larger regional community that extends north into Riverside County and south into San Diego County. With the additional $6.7 million allocated by state and regional project partners for implementation of an expanded CropSWAP program, financial incentives will be made available to more farmers and additional program benefits will be realized over a larger geographic area.



ADDITIONAL PROJECT TYPES

In addition to providing financial incentives for switching to lower-water-use crops, the expanded regional program will help farmers pay for other sustainable agricultural practices.

Original 2016 Program Incentives

- Crop Replacement
- Rootstock Upgrades

Enhanced Regional Program Incentives

- Crop Replacement
- Rootstock Upgrades
- Regenerative Agricultural Best Management Practices
- Irrigation Efficiency Upgrades
- Irrigation Automation
- Wireless Telemetry
- Advanced Water Treatment
- Nutrient Management
- Fertigation

FUNDING REQUIREMENTS

Because it is anticipated that existing funds will be exhausted quickly, the project partners continue to seek additional funding sources for continuing to support the program.

MORE INFORMATION

Learn more about the Regional CropSWAP program by scanning the QR code for a short video.

Appendix G – Ordinance No. 16-10

ORDINANCE NO. 16-10

AN ORDINANCE OF RAINBOW MUNICIPAL WATER DISTRICT ADOPTING A DROUGHT RESPONSE CONSERVATION PROGRAM

Be it ordained by the Board of Directors of Rainbow Municipal Water District as follows;

WHEREAS, article 10, section 2 of the California Constitution declares that waters of the State are to be put to beneficial use, that waste, unreasonable use, or unreasonable method of use of water be prevented, and that water be conserved for the public welfare; and

WHEREAS, conservation of current water supplies and minimization of the effects of water supply shortages that are the result of drought are essential to the public health, safety and welfare; and

WHEREAS, regulation of the time of certain water use, manner of certain water use, design of rates, method of application of water for certain uses, installation and use of water-saving devices, provide an effective and immediately available means of conserving water; and

WHEREAS, California Water Code sections 375 ct seq. authorize water suppliers to adopt and enforce a comprehensive water conservation program; and

WHEREAS, adoption and enforcement of a comprehensive water conservation program will allow the Rainbow Municipal Water District to delay or avoid implementing measures such as water rationing or more restrictive water use regulations pursuant to a declared water shortage emergency as authorized by California Water Code sections 350 et seq.; and

WHEREAS, San Diego County is a semi-arid region and local water resources are scarce. The region is dependent upon imported water supplies provided by the San Diego County Water Authority, which obtains a substantial portion of its supplies from the Metropolitan Water District of Southern California. Because the region is dependent upon imported water supplies, weather and other conditions in other portions of this State and of the Southwestern United States affect the availability of water for use in San Diego County; and

WHEREAS, the San Diego County Water Authority has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of the Water Authority's programs to provide a reliable supply of water to meet the needs of the Water Authority's 24 member public agencies, including the Rainbow Municipal Water District. The Water Authority's Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Water Authority's Urban Water Management Plan; and

WHEREAS, as anticipated by its Urban Water Management Plan, the San Diego County Water Authority, in cooperation and consultation with its member public agencies, has adopted a Drought Management Plan, which establishes a progressive program for responding to water

supply limitations resulting from drought conditions. This ordinance is intended to be consistent with and to implement the Water Authority's Drought Management Plan; and

WHEREAS, the Water Authority's Drought Management Plan contains three stages containing regional actions to be taken to lessen or avoid supply shortages. This ordinance contains drought response levels that correspond with the Drought Management Plan stages; and

WHEREAS, the Rainbow Municipal Water District, due to the geographic and climatic conditions within its territory and its dependence upon water imported and provided by the San Diego County Water Authority, may experience shortages due to drought conditions, regulatory restrictions enacted upon imported supplies and other factors. The Rainbow Municipal Water District has adopted an Urban Water Management Plan that includes water conservation as a necessary and effective component of its programs to provide a reliable supply of water to meet the needs of the public within its service territory. The Rainbow Municipal Water District Urban Water Management Plan also includes a contingency analysis of actions to be taken in response to water supply shortages. This ordinance is consistent with the Urban Water Management Plan adopted by the Rainbow Municipal Water District; and

WHEREAS, the Governor of California issued an Executive Order on May 9, 2016 revising certain water use restrictions and conservation targets for water utilities, and

WHEREAS, the State Water Resources Control Board adopted revised emergency regulations implementing the Governor's Executive Order on May 18, 2016, and

WHEREAS, the revised emergency regulations contain certain mandatory end-user restrictions on water use that prohibit certain practices, and

WHEREAS, the water conservation measures and progressive restrictions on water use and method of use identified by this ordinance provide certainty to water users and enable Rainbow Municipal Water District to control water use, provide water supplies, and plan and implement water management measures in a fair and orderly manner for the benefit of the public.

NOW, THEREFORE, the Board of Directors of Rainbow Municipal Water District does ordain as follows:

SECTION 1.0 DECLARATION OF NECESSITY AND INTENT

(a) This ordinance establishes water management requirements necessary to conserve water, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, prevent unreasonable method of use of water within the Rainbow Municipal Water District (RMWD) in order to assure adequate supplies of water to meet the needs of the public, and further the public health, safety, and welfare, recognizing that water is a scarce natural resource that requires careful management not only in times of drought, but at all times.

(b) This ordinance establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies.

(c) Level 1 condition drought response measures include certain mandatory end user water use restrictions and will be reinforced through local and regional public education and awareness measures that may be funded in part by RMWD. During drought response condition Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals.

(d) During a Drought Response Level 2 condition or higher, the water conservation measures and water use restrictions established by this ordinance are mandatory and violations are subject to criminal, civil, and administrative penalties and remedies specified in this ordinance and as provided in RMWD Administrative or Municipal Code.

SECTION 2.0 DEFINITIONS

(a) The following words and phrases whenever used in this chapter shall have the meaning defined in this section:

1. "Grower" refers to those engaged in the growing or raising, in conformity with recognized practices of husbandry, for the purpose of commerce, trade, or industry, or for use by public educational or correctional institutions, of agricultural, horticultural or floricultural products, and produced: (1) for human consumption or for the market, or (2) for the feeding of fowl or livestock produced for human consumption or for the market, or (3) for the feeding of fowl or livestock for the purpose of obtaining their products for human consumption or for the market. "Grower" does not refer to customers who purchase water subject to the Metropolitan Interim Agricultural Water Program or the Water Authority Special Agricultural Rate programs.

2. "Water Authority" means the San Diego County Water Authority.

3. "DMP" means the Water Authority's Drought Management Plan in existence on the effective date of this ordinance and as readopted or amended from time to time, or an equivalent plan of the Water Authority to manage or allocate supplies during shortages.

4. "Metropolitan" means the Metropolitan Water District of Southern California.

5. "Person" means any natural person, corporation, public or private entity, public or private association, public or private agency, government agency or institution, school district, college, university, or any other user of water provided by the RMWD.

SECTION 3.0 APPLICATION

(a) The provisions of this ordinance apply to any person in the use of any water provided by the RMWD.

(b) This ordinance is intended solely to further the conservation of water. It is not intended to implement any provision of federal, State, or local statutes, ordinances, or regulations relating to protection of water quality or control of drainage or runoff. Refer to the local jurisdiction or Regional Water Quality Control Board for information on any stormwater ordinances and stormwater management plans.

(c) Nothing in this ordinance is intended to affect or limit the ability of the RMWD to declare and respond to an emergency, including an emergency that affects the ability of the RMWD to supply water.

(d) Notwithstanding any other section of this ordinance, the restrictions imposed upon the use of water herein do not apply to use of water from private wells or to recycled water.

(e) Nothing in this ordinance shall apply to use of water that is subject to a special supply program, such as the Water Authority Transitional Special Agricultural Water (TSAWR) Rate program, except as may be specified in that program. For instance, the water reductions contained in this ordinance shall not be in addition to any mandatory reductions which may apply to a participant in the TSAWR, unless expressly stated in the TSAWR. Violations of the conditions of special supply programs are subject to the penalties established under the applicable program. A person using water subject to a special supply program and other water provided by the RMWD is subject to this ordinance in the use of the other water.

SECTION 4.0 DROUGHT RESPONSE LEVEL 1 — DROUGHT WATCH CONDITION

(a) A Drought Response Level 1 condition is also referred to as a "Drought Watch" condition. A Level 1 condition applies when the Water Authority notifies its member agencies that due to drought or other supply reductions, there is a reasonable probability there will be supply shortages and that a consumer demand reduction is required in order to ensure that sufficient supplies will be available to meet anticipated demands. A Drought Response Level 1 condition will also apply if the State Water Resources Control Board adopts regulations that place restrictions on certain end user water use. The General Manager shall declare the existence of a Drought Response Level 1 and take action to implement the Level 1 conservation practices identified in this ordinance.

(b) During a Level 1 Drought Watch condition, RMWD will increase its public education and outreach efforts to emphasize increased public awareness of the need to implement water conservation practices. In accordance with the State Water Resources Control Board regulations, the following end-user practices are prohibited:

(1) The application of potable water to outdoor landscapes in a manner that causes excessive runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots or structures.

(2) The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.

(3) The application of potable water to driveways and sidewalks.

(4) The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system.

(5) The application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall.

(6) The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.

(7) The irrigation with potable water of ornamental turf on public street medians.

(8) The irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.

(c) During a Drought Response Level 2 condition or higher, all persons shall be required to implement the conservation practices established in a Drought Response Level 1 condition.

SECTION 5.0 DROUGHT RESPONSE LEVEL 2 — DROUGHT ALERT CONDITION

(a) A Drought Response Level 2 condition is also referred to as a "Drought Alert" condition. A Level 2 condition may apply when the Water Authority notifies its member agencies that due to cutbacks caused by drought or other reduction in supplies, a consumer[1] demand reduction is required in order to have sufficient supplies available to meet anticipated demands. The RMWD Board of Directors shall consider the Water Authority declaration of a "Drought Alert" condition, and may declare the existence of a Drought Response Level 2 condition and direct the General Manager to implement the mandatory Level 2 conservation measures identified in this ordinance. The RMWD Board of Directors may make a determination to enter or exit the Drought Response Level 2 stage depending on a variety of factors, including but not limited to local water availability, RMWD's ability to meet their allocation supply, and/or the financial impact of implementation on RMWD.

'Also referred to as Municipal or Industrial (M&I) water user.

(b) All persons using RMWD water shall comply with Level 1 Drought Watch water conservation practices during a Level 2 Drought Alert, and shall also comply with the following additional conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the RMWD. This section shall not apply to commercial growers or nurseries.

2. Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to: weather based controllers, drip/micro-irrigation systems and stream rotor sprinklers.

a. Operating irrigation systems in a manner that allows water to run off the property is defined as water waste. In cases where irrigating for 10 minutes per station will result in water runoff due to the inability of the soil or landscape materials to absorb that amount of water, customers shall alter their watering schedules to prevent such runoff. The customcr shall modify the schedules to prevent runoff but shall ensure that the total reduction in irrigation is equivalent to the two day per week watering schedule. Customers may adjust their schedules to water on more than two days per week so long as the equivalent reduction in irrigation is achieved.

3. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 5 (b) (l), on the same schedule set forth in section 5 (b) (1) by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.

4. Repair all leaks within seventy-two (72) hours of notification by the RMWD unless other arrangements are made with the General Manager.

5. No application of potable water to outdoor landscapes is allowed during and within 48 hours of measureable rainfall.

SECTION 6.0 DROUGHT RESPONSE LEVEL 3 — DROUGHT CRITICAL CONDITION

(a) A Drought Response Level 3 condition is also referred to as a "Drought Critical" condition. A Level 3 condition applies when the Water Authority notifies its member agencies that due to increasing cutbacks caused by drought or other reduction of supplies, a consumer demand reduction is required in order to have sufficient supplies available to meet anticipated demands. The RMWD Board of Directors shall declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in this ordinance.

(b) All persons using RMWD water shall comply with Level 1 Drought Watch and Level 2 Drought Alert water conservation practices during a Level 3 Drought Critical condition and shall also comply with the following additional mandatory conservation measures:

1. Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the RMWD. During the months of November through May, landscape irrigation is limited to no more than once per week on a schedule established by the General Manager and posted by the RMWD. This section shall not apply to commercial growers or nurseries.

2. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 6 (b) (1), on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation.

3. Stop filling or re-filling swimming pools, spas, ornamental fountains, lakes ponds or other water features, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to declaration of a drought response level under this ordinance.

4. Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.

5. Repair all leaks within forty-eight (48) hours of notification by the RMWD unless other arrangements are made with the General Manager.

(c) Upon the declaration of a Drought Response Level 3 condition, no new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) shall be issued, except under the following circumstances:

1. A valid, unexpired building permit has already been issued for the project; or

2. In the opinion of the RMWD Board of Directors the project is necessary to protect the public's health, safety, and welfare; or

3. The applicant provides substantial evidence of an enforceable binding commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of RMWD.

This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore service that has been interrupted **for a period of one**

year or less, provided that such period shall in no event commence before the effective date of this ordinance.

(d) Upon the declaration of a Drought Response Level 3 condition, RMWD will suspend consideration of annexations to its service area until such time that the Drought Response Level 2 is decreased to a Drought Response Level 1 condition or lower.

(e) The RMWD may establish a water allocation for any property served by the RMWD using a method that does not penalize persons for previous implementation of conservation methods or the installation of water saving devices. The decision to establish a water allocation and the method utilized to determine the amount of the allocation shall be at the sole discretion of RMWD.

SECTION 7.0 DROUGHT RESPONSE LEVEL 4 — DROUGHT EMERGENCY CONDITION

(a) A Drought Response Level 4 condition is also referred to as a "Drought Emergency" condition. A Level 4 condition applies when the Water Authority Board of Directors declares a water shortage emergency pursuant to California Water Code section 350 and notifies its member agencies that Level 4 requires a demand reduction in order for the RMWD to have maximum supplies available to meet anticipated demands. The RMWD Board of Directors shall declarc a Drought Emergency in the manner and on the grounds provided in California Water Code section 350.

(b) All persons using RMWD water shall comply with conservation measures required during Level 1 Drought Watch, Level 2 Drought Alert, and Level 3 Drought Critical conditions and shall also comply with the following additional mandatory conservation measures:

(1) Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries. This restriction shall not apply to the following categories of use unless the RMWD has determined that recycled water is available and may be lawfully applied to the use:

A. Maintenance of trees and shrubs that are watered on the same schedule set forth in section 6 (b) (1) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation;

B. Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshal of the local fire protection agency having jurisdiction over the property to be irrigated;

C. Maintenance of existing landscaping for erosion control;

D. Maintenance of plant materials identified to be rare or essential to the well being of rare animals;

E. Maintenance of landscaping within active public facilities, including parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week according to the schedule established under section 6 (b) (1);

F. Watering of livestock; and

G. Public works projects and actively irrigated environmental mitigation projects.

2. Repair all water leaks within twenty-four (24) hours of notification by the RMWD unless other arrangements are made with the General Manager.

(c) The RMWD may establish a water allocation for any property served by the RMWD using a method that does not penaliz.e persons for previous implementation of conservation methods or the installation of water saving devices. The decision to establish a water allocation and the method utilized to determine the amount of the allocation shall be at the sole discretion of RMWD.

SECTION 8.0 CORRELATION BETWEEN DROUGHT MANAGEMENT PLAN **AND DROU€IHT RESPONSE LEVELS**

(a) The correlation between the Water Authority's DMP stages and the RMWD's drought response levels identified in this ordinance is described herein. Under DMP Stage 1, the RMWD would implement Drought Response Level 1 actions. Under DMP Stage 2, the RMWD would implement Drought Response Level 1 or Level 2 actions. Under DMP Stage 3, the RMWD would implement Drought Response Level 2, Level 3, or Level 4 actions.

(b) the drought response levels identified in this ordinance correspond with the Water Authority DMP as identified in the following table:

Drought Response Levels	Use Restrictions	Conservation Target	DMP Stage
1 - Drought Watch	Voluntary	0% to 10%	Stage 1 or 2
2 - Drought Alert	Mandatory	Up to 20%	Stage 2 or 3
3 - Drought Critical	Mandatory	>20 to 40%	Stage 3
4 - Drought Emergency	Mandatory	Above 40%	Stage 3

SECTION 9.0 PROCEDURES FOR **DETERMINATION AND NOTICATION OF DROUGHT RESPONSE LEVEL**

(a) The existence of a Drought Response Level 1 condition may be declared by the General Manager upon a written determination of the existence of the facts and circumstances supporting the determination. A copy of the written determination shall be filed with the Clerk or Secretary of the RMWD and provided to the RMWD Board of Directors. The General Manager may publish a notice of the determination of existence of Drought Response Level 1

condition in one or more newspapers, including a newspaper of general circulation within the RMWD. The RMWD may also post notice of the condition on their website.

(b) The existence of Drought Response Level 2 or Level 3 conditions may be declared by resolution of the RMWD Board of Directors adopted at a regular or special public meeting held in accordance with State law. The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, or as soon thereafter as reasonably practicable, the RMWD shall publish a copy of the resolution in a newspaper used for publication of official notices.

(c) The existence of a Drought Response Level 4 condition may be declared in accordance with the procedures specified in California Water Code sections 351 and 352. The mandatory conservation measures applicable to Drought Response Level 4 conditions shall take effect on the tenth (10) day after the date the response level is declared. Within five (5) days following the declaration of the response level, or as soon thereafter as reasonably practicable, the RMWD shall publish a copy of the resolution in a newspaper used for publication of official notices. If the RMWD establishes a water allocation, it shall provide notice of the allocation by including it in the regular billing statement for the fee or charge or by any other mailing to the address to which the RMWD customarily mails the billing statement for fees or charges for on-going water ser›°ice. Water allocation shall be effective on the fifth (5) day following the date of mailing or at such later date as specified in the notice.

(d) the RMWD Board of Directors may declare an end to a Drought Responsc Level by the adoption of a resolution at any regular or special meeting held in accordance with State law.

SECTION 10.0 HARDSHIP VARIANCE

(a) If, due to unique circumstances, a specific requirement of this ordinance would result in undue hardship to a person using agency water or to property upon which agency water is used, that is disproportionate to the impacts to RMWD water users generally or to similar property or classes of water uses, then the person may apply for a variance to the requirements as provided in this section.

(b) The variance may be granted or conditionally granted, only upon a written finding of the existence of facts demonstrating an undue hardship to a person using agency water or to property upon with agency water is used, that is disproportionate to the impacts to RMWD water users generally or to similar property or classes of water use due to specific and unique circumstances of the user or the user's property.

1. Application. Application for a variance shall be a form prescribed by RMWD and shall be accompanied by a non-refundable processing fee in an amount set by resolution of the RMWD Board of Directors.

2. Supporting Documentation. The application shall be accompanied by photographs, maps, drawings, and other information, including a written statement of the applicant.

3. Required Findings for Variance. An application for a variance shall be denied unless the approving authority finds, based on the information provided in the application, supporting documents, or such additional information as may be requested, and on water use information for the property as shown by the records of the RMWD, all of the following:

A. That the variance does not constitute a grant of special privilege inconsistent with the limitations upon other RMWD customers.

B. That because of special circumstances applicable to the property or its use, the strict application of this ordinance would have a disproportionate impact on the property or use that exceeds the impacts to customers generally.

C. That the authorizing of such variance will not be of substantial detriment to adjacent properties, and will not materially affect the ability of the RMWD to effectuate the purpose of this chapter and will not be detrimental to the public interest.

D. That the condition or situation of the subject property or the intended use of the property for which the variance is sought is not common, recurrent or general in nature.

4. Approval Authority. The General Manager shall exercise approval authority and act upon any completed application no later than 30 days after submittal and may approve, conditionally approve, or deny the variance. The applicant requesting the variance shall be promptly notified in writing of any action taken. Unless specified otherwise at the time a variance is approved, the variance applies to the subject property during the term of the mandatory drought response.

(c) Appeals to RMWD Board of Directors. An applicant may appeal a decision or condition of the General Manager on a variance application to the being mailed to the applicant. The appeal must be in the form of a written request for a hearing, and shall state the grounds for the appeal. At a public meeting, the RMWD Board of Directors shall act as the approval authority and review the appeal de novo by following the regular variance procedure. The decision of the RMWD Board of Directors is final.

SECTION 11.0 VIOLATIONS AND PENALTIES

(a) Any person, who uses, causes to be used, or permits the use of water in violation of this ordinance is guilty of an offense punishable as provided herein.

(b) Each day that a violation of this ordinance occurs is a separate offense.

(c) Administrative fines may be levied for each violation of a provision of this ordinance as follows:

1. One hundred dollars for a first violation.
2. Two hundred dollars for a second violation of any provision of this ordinance within one year from occurrence of the first violation.
3. Five hundred dollars for each additional violation of this ordinance within one year of the first violation.

(d) Violation of a provision of this ordinance is subject to enforcement through installation of a flow-restricting device in the meter.

(e) Each violation of this ordinance may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days or by a fine not exceeding
$1,000, or by both as provided in Water Code section 377.

(I) Willful violations of the mandatory conservation measures and water use restrictions as set forth in Section 7.0 and applicable during a Level 4 Drought Emergency condition may be enforced by discontinuing service to the property at which the violation occurs as provided by Water Code section 356.

(g) All remedies provided for herein shall be cumulative and not exclusive.

SECTION 12.0 EFFECTIVE DATE

This ordinance is effective immediately upon adoption or as otherwise established by State law for RMWD.

PASSED, APPROVED AND ADOPTED this 28th day of June 2016, by the following vote:

AYES: Directors Bigley, Brazier, Sanford, and Walker
NOES: None
ABSTAIN: None
ABSENT: Director Stewart

Denn side

ATTEST:

Dawn Washburn, Board Secretary

Appendix H – Ordinance 23-04 and 2023 Rate Study

ORDINANCE NO. 23-04

ORDINANCE OF THE RAINBOW MUNICIPAL WATER DISTRICT REVISING APPENDIX A OF THE RULES AND REGULATIONS REGARDING WATER AND WASTEWATER SERVICE CHARGES

WHEREAS, the Rainbow Municipal Water District ("RMWD" or the "District") Board of Directors is committed to providing reliable, high-quality water services at the most efficient costs for our ratepayers; and

WHEREAS, to meet this commitment, the District undertook an evaluation of the infrastructure needs, programs, and operations and maintenance costs of its water and wastewater services; and

WHEREAS, on or around December 2022, the District retained IB Consulting ("IB"), an industry-leading third party rate and fee public finance consultant, to perform a full financial plan, cost of service study, and assist the district in updating rates that support and optimize a blend of various utility objectives, such as affordability for essential needs, revenue sufficiency and stability, drought conditions, and ease of implementation, as well as ensure compliance with California Constitution Article XIII D, section 6 ("Proposition 218"); and

WHEREAS, between December 2022 and June 2023, the District held a series of meetings with staff and the District Budget and Finance Committee to discuss the IB study and details regarding the proposed water and wastewater increases, which meetings were publicly noticed and open to the public; and

WHEREAS, the District Board of Directors reviewed and heard presentations on the proposed rate changes at a regular board meeting on April 25, 2023 and were presented with IB's updated Financial Plan, which remains available to the public on RMWD's website; and

WHEREAS, the Board of Directors is provided authority to establish rates and charges by California Water Code §71616 and §71670; and

WHEREAS, Proposition 218 requires that prior to imposing any increase to the water or wastewater service rates, the District shall provide written notice (the "Notice") by mail of: (1) the proposed increases to such rates and charges to the record owner of each parcel upon which the rates and charges are proposed for imposition and any tenant directly liable for payment of the rates and charges; (2) the amount of the rates and charges proposed to be imposed on each parcel; (3) the basis upon which the rates and charges were calculated; (4) the reason for the rates and charges; and (5) the date, time, and location of a public hearing (the "Public Hearing") on the proposed rates and charges; and

WHEREAS, pursuant to Proposition 218, such Notice is required to be provided to the affected property owners and any tenant directly liable for the payment of the rates and charges not less than forty-five days prior to the Public Hearing on the proposed rates and charges; and

WHEREAS, the District did provide such timely Notice of the Public Hearing to the affected property owners and tenants of the proposed water and wastewater service rate increases in compliance with Proposition 218 on or before May 13, 2023, and the District's Notice set forth a procedure by which property owners and tenants may submit written protests to the proposed water and wastewater service fee increase; and

WHEREAS, the Public Hearing was held at the duly noticed public meeting on June 27, 2023; and

WHEREAS, at the Public Hearing the District Board of Directors heard and considered all oral testimony, written materials, and written protests concerning the establishment and imposition of the proposed rate increases for water services, and at the close of the Public Hearing the District did not receive written protests against the establishment and imposition of the proposed rate increases for water services from a majority of the affected property owners and tenants directly liable for the payment of the water service rates; and

WHEREAS, the water rates will be adjusted effective with all bills issued for service that occurs on or after July 1, 2023.

NOW, THEREFORE, BE IT ORDAINED by the Board of Directors of the Rainbow Municipal Water District as follows:

SECTION 1: The District Board of Directors finds and determines that the foregoing Recitals are true and correct and incorporates the Recitals herein.

SECTION 2: The District Board of Directors hereby finds that the administration, operation, maintenance, and improvements of the water and wastewater system, which are to be funded by the water and wastewater service rates set forth herein, are necessary to maintain service within the District's existing service area. The District Board of Directors further finds that such water service rates are necessary and reasonable to fund the administration, operation, maintenance, and improvements of the water system. More specifically, the changes in rates and charges established by this Ordinance are for the purposes of (a) meeting operating expenses, including employee wages and benefits, (b) purchasing and leasing of supplies, equipment and materials, (c) meeting financial reserve needs and requirements as set forth in the District Budget, and (d) passing through wholesale water rates charged by the San Diego County Water Authority and the Metropolitan Water District of Southern California. Based on these findings, the District Board of Directors hereby determines that this Ordinance is exempt from the requirements of the California Environmental Quality Act (CEQA).

SECTION 3: Based on IB's recommendations and findings, together with all prior public meetings, staff reports, recommendations and presentations, as well as all oral testimony, written materials, and written protests concerning the establishment and imposition of the proposed rate increases for water services presented to the Board of Directors before the close of the duly noticed Public Hearing, the District Board of Directors hereby finds and determines that the proposed rates for water and wastewater service comply substantively with Proposition 218 for the following reasons:

a) The revenues derived from the service rates do not exceed the funds required to provide services;
b) The revenues derived from the service rates will not be used for any purpose other than that for which the fee is being imposed;
c) The service rates do not exceed the proportional cost of the services attributable to each parcel upon which they are imposed;
d) The service rates will not be imposed on a parcel unless the services are actually used by, or immediately available to, the owner of the parcel; and

e) The service rates will not be imposed for general governmental services, such as police, fire, ambulance, or libraries, where service is available to the public in substantially the same manner as it is to property owners and tenants.

SECTION 4: Effective July 1, 2023, the District Board of Directors hereby adopts and implements the rates for the District's water services as set forth in the "Revised Appendix A" attached hereto as **Exhibit 1**, entitled "Water and Sewer Rates and Charges – Effective July 1, 2023". Exhibit 1 hereby replaces in its entirety former Appendix A to the District Rules and Regulations. The rates and charges set forth in Exhibit 1 shall be applicable to all water use and other charges billed on or after July 1, 2023.

SECTION 5: Through this Ordinance, and as set forth in Exhibit 1, the District's Rules and Regulations are hereby being amended to include the following provisions:

PROSPECTIVE ANNUAL RATE INCREASES VIA PASS THROUGH CHARGES FOR WATER AND WASTEWATER

To avoid operational deficits, depletion of reserves, an inability to address infrastructure and water quality improvements, and to continue to provide a safe, reliable water supply, the District will pass through to its customers: (1) any increases in the rates of the SDCWA Fixed Charges imposed on the District by SDCWA (an "SDCWA Fixed Pass Through"); (2) any future charges and any rate increases to any other existing charges, including imported water charges, that are imposed on the District by SDCWA (a "SDCWA Pass Through"); and The foregoing are collectively referred to in this notice as "Pass Through Increases."

Any SDCWA Fixed Pass Through will only impact the rates of the SDCWA Fixed Charges. The District may annually implement the Pass Through Increases provided, however, that (1) any increase to the rates described above as a result of any SDCWA Pass Through, and (2) in no event shall such rates be increased by more than the cost of providing service.

SECTION 6: The District Board of Directors hereby authorizes and directs the District General Manager to (a) implement and take all actions necessary to effectuate the rates for services as set forth herein and in Exhibit 1; as of July 1, 2023, to include the Pass Through Increases set forth herein and in Exhibit 1; and (c) file a Notice of Exemption with the County Clerk for San Diego County within five (5) working days of the date of the adoption of this Ordinance.

SECTION 7: If any section, subsection, subdivision, sentence, clause, or phrase in this Ordinance or any part thereof is for any reason held to be unconstitutional or invalid, ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this Ordinance or any part thereof. The District Board of Directors hereby declares that it would have adopted each section irrespective of the fact that any one or more subsections, subdivisions, sentences, clauses, or phrases be declared unconstitutional, invalid, or ineffective.

SECTION 8: This Ordinance shall supersede all other previous District Board of Directors resolutions and ordinances that may conflict with, or be contrary to, this Ordinance.

SECTION 9: This Ordinance amends Ordinance 21-03 dated September 1, 2021 as of July 1, 2023; the rates prescribed by Ordinance 21-03 shall remain in effect through June 30, 2023.

PASSED AND ADOPTED at a meeting of the Board of Directors of Rainbow Municipal Water District held on the 27th day of June 2023 by the following roll call vote:

AYES:	Directors Gasca, Hamilton, Johnson, Mack, and Townsend-Smith
NOES:	None
ABSTAIN:	None
ABSENT:	None

C. H. Hamilton, III

Hayden Hamilton, Board President

ATTEST:

Dawn Washburn

Dawn Washburn, Board Secretary

RAINBOW MUNICIPAL WATER DISTRICT

Appendix A

Water and Sewer Rates and Charges

EFFECTIVE July 1, 2023
Adopted by Ordinance No. 23-04

WATER VARIABLE RATES

A. BASIC WATER VARIABLE RATE

Basic rate for all water delivered through the water meter
1 Unit = 748 Gallons = 100 cubic feet (cf)
Permanent Special Agricultural Water Rates (PSAWR)
Single Family Residential (SFR), Multifamily Residential (MFR), Commercial (COM), Institutional (INST)

Customer Class	FY 2024 ($/Unit)	FY 2025 ($/Unit)	FY 2026 ($/Unit)	FY 2027 ($/Unit)	FY 2028 ($/Unit)
SFR, MFR, COM, INST	$5.53	$6.03	$6.58	$7.18	$7.83
Agriculture	$4.53	$4.94	$5.39	$5.88	$6.41
PSAWR Domestic					
Tier 1 (1-22 Units)	$4.53	$4.94	$5.39	$5.88	$6.41
Tier 2 (22+Units)	$4.00	$4.36	$4.76	$5.19	$5.66
PSAWR Commercial	$4.00	$4.36	$4.76	$5.19	$5.66

B. WATER PUMPING ZONE CHARGES

Pumping Zone	FY 2024 ($/HCF)	FY 2025 ($/HCF)	FY 2026 ($/HCF)	FY 2027 ($/HCF)	FY 2028 ($/HCF)
Pump Zone 1 Rainbow Heights	$2.60	$2.84	$3.10	$3.38	$3.69
Pump Zone 2 Imp District U-1	$1.39	$1.52	$1.66	$1.81	$1.98
Pump Zone 3 Vallecitos	$0.26	$0.29	$0.32	$0.35	$0.39
Pump Zone 4 Northside	$0.13	$0.15	$0.17	$0.19	$0.21
Pump Zone 5 Morro Tank	$0.35	$0.39	$0.43	$0.47	$0.52
Pump Zone 6 Huntley	$1.40	$1.53	$1.67	$1.83	$2.00
Pump Zone 7 Magee Tank	$0.71	$0.78	$0.86	$0.94	$1.03
Monthly Fixed Charge for all Pumping Zones	$8.39	$9.15	$9.98	$10.88	$11.86

Future year rate increase for RMWD effective July 1, 2024, 2025, 2026, & 2027 will be a maximum revenue adjustment of 9% per year in addition to any pass through increases.

C. WATER ALLOCATION PENALTY RATES

The Water Allocation Penalty charges shall apply only to PSAWR customers in the event that the San Diego County Water Authority (SDCWA) establishes mandatory PSAWR allocation cutbacks. During a PSAWR allocation, SDCWA will establish an allocation reduction percentage. Each PSAWR customer will be issued a baseline allocation that is calculated from a base year defined by SDCWA and this allocation will be reduced by the SDCWA defined reduction percentage.

WATER FIXED ACCOUNT CHARGES

A. METER SERVICES CHARGES

Single Family Residential (SFR), Multifamily Residential (MFR), Commercial (COM), Institutional (INST)

Monthly Fixed Charges

SFR, MFR, COM, INST

Capacity Class	Meter Size	FY 2024 ($/Month)	FY 2025 ($/Month)	FY 2026 ($/Month)	FY 2027 ($/Month)	FY 2028 ($/Month)
A	5/8"	$89.59	$97.66	$106.45	$116.04	$126.49
B	3/4"	$89.59	$97.66	$106.45	$116.04	$126.49
C	1"	$145.42	$158.52	$172.79	$188.35	$205.31
D	1 1/2"	$285.01	$310.66	$338.62	$369.10	$402.32
E	2"	$452.51	$493.24	$537.64	$586.03	$638.78
F	3"	$982.92	$1,071.39	$1,167.82	$1,272.93	$1,387.50
G	4"	$1,764.59	$1,923.41	$2,096.52	$2,285.21	$2,490.88
H	6"	$3,635.01	$3,962.16	$4,318.76	$4,707.45	$5,131.13

Agriculture w/ Residence, Agriculture

Capacity Class	Meter Size	FY 2024 ($/Month)	FY 2025 ($/Month)	FY 2026 ($/Month)	FY 2027 ($/Month)	FY 2028 ($/Month)
A	5/8"	$142.17	$154.97	$168.92	$184.13	$200.71
B	3/4"	$142.17	$154.97	$168.92	$184.13	$200.71
C	1"	$233.06	$254.04	$276.91	$301.84	$329.01
D	1 1/2"	$460.27	$501.70	$546.86	$596.08	$649.73
E	2"	$732.93	$798.90	$870.81	$949.19	$1,034.62
F	3"	$1,596.36	$1,740.03	$1,896.64	$2,067.34	$2,253.41
G	4"	$2,868.77	$3,126.96	$3,408.39	$3,715.15	$4,049.52
H	6"	$5,913.47	$6,445.69	$7,025.81	$7,658.14	$8,347.38

PSAWR Domestic, PSAWR Commercial

Capacity Class	Meter Size	FY 2024 ($/Month)	FY 2025 ($/Month)	FY 2026 ($/Month)	FY 2027 ($/Month)	FY 2028 ($/Month)
A	5/8"	$127.47	$138.95	$151.46	$165.10	$179.96
B	3/4"	$127.47	$138.95	$151.46	$165.10	$179.96
C	1"	$208.56	$227.33	$247.79	$270.10	$294.41
D	1 1/2"	$411.27	$448.29	$488.64	$532.62	$580.56
E	2"	$654.53	$713.45	$777.67	$847.67	$923.97
F	3"	$1,424.86	$1,553.10	$1,692.88	$1,845.24	$2,011.32
G	4"	$2,560.07	$2,790.48	$3,041.63	$3,315.38	$3,613.77
H	6"	$5,276.47	$5,751.36	$6,268.99	$6,833.20	$7,448.19

Future year rate increase for RMWD effective July 1, 2024, 2025, 2026, & 2027 will be a maximum revenue adjustment of 9% per year in addition to any pass through increases.

B. OTHER FIXED ACCOUNT CHARGES

(Additional charges added to the basic meter service charge to reflect other special service conditions.)

Backflow Test Fee

Backflow preventers are required by State Law for properties that meet certain criteria, such as having agricultural uses, onsite wells, or other water supplies, or pumping systems downstream of the meter. Its sole job is to prevent drinking water from being contaminated due to backflow.

State Law requires all backflow devices must be tested annually to ensure they are functioning properly. The district provides this service to our customers in a cost-effective manner.

Backflow device annual testing is charged as a monthly fee:

Meter Size	Monthly Charge
5/8 "	$ 4.81
3/4 "	$ 4.81
1"	$ 4.81
1 1/2"	$ 4.81
2"	$ 4.81
3"	$ 8.14
4"	$ 8.14
6"	$ 8.14

Service Conditions	Monthly Charge
Bypass Meter (for detector check systems) or Fire Service Only Meters	$10.00
Fire Standby Charge (Vista Valley Area) (Applicable to properties under the jurisdiction of the Vista Fire Department. See Resolution No. 85-24)	$5.00
Fire Standby Charge (All Other Areas)	$5.00

MISCELLANEOUS CHARGES

A. CONSTRUCTION METERS

Deposit	$1,825.00
Installation Fee	$115.00
Relocation Fee	$50.00
Meter Service Fee (3" O & M)	$438.55
Water Commodity Charge	$5.53/100 cf

B. OTHER CHARGES

Unpaid Bills (delinquency)	5% of unpaid balance-1st month 1.5% of unpaid balance per month thereafter.
Returned Check Charge	$30.00
Tax Roll Fee (Accounts collected through SD County Assessor's Office)	$45.00
48-hour Lock Off Notice	$40.00
Service Turn-on Fee	$50.00
After hours Turn-on-Fee	$75.00
Cut Padlock Fee	$22.00
Meter Testing Charge (testing for 3" and greater is outsourced)	$50.00 (1" or smaller) $71.00 (1 1/2" or 2") $225.00 (3" or 4") $225.00 (6")

WATER CAPACITY CHARGES

The SDCWA new meter fee is collected by RMWD forwarded quarterly to the SDCWA.
Capacity fees list are for **residential only**, all other land use types will be calculated case by case based on the number of EDUs (equivalent dwelling unit).

Water Capacity Fees

Class	Meter Size	Max CF/month	Material	RMWD Capacity	SDCWA Capacity	SDCWA Treatment	Inspection Deposit	Total
A	5/8"	30	$ 228	$ 6,241	$ 5,328	$ 149	$ 1,100	**$ 13,046**
B	3/4"	50	$ 267	$ 10,401	$ 5,328	$ 149	$ 1,100	**$ 17,245**
C	1"	80	$ 355	$ 16,642	$ 8,525	$ 238	$ 1,100	**$ 26,860**
D	1 1/2"	130	$ 693	$ 27,043	$ 15,984	$ 447	$ 1,100	**$ 45,267**
E	2"	300	$ 693	$ 62,406	$ 27,706	$ 775	$ 1,100	**$ 92,680**
F	3"	600	$ 1,826	$ 124,812	$ 51,149	$ 1,430	$ 1,100	**$ 180,317**
G	4"	1,000	$ 2,288	$ 208,020	$ 87,379	$ 2,443	$ 1,100	**$ 301,230**

- For capacity class A, lot sizes must be less than 5,000 sqft. (0.11 acres) with irrigation area less than 1,000 sqft.
- Lot size less than 21,780 sqft (0.5 acres) may qualify for a 3/4 inch meter.
- To qualify for a downsize, usage must be within the Max CF/month for the desired meter size for the most current 12-month average.
- For cases where demand qualifies for a smaller capacity meter but requires a larger meter to meet fire flow requirements only, a meter one size larger may be installed, and a monthly fire standby charge will be assessed. Written confirmation from the fire department is required.
- Downsizing from a 1 inch to a 3/4 inch requires written approval by the fire department if the structure is required to have fire sprinklers.

WASTEWATER CHARGES

A. MONTHLY SERVICE CHARGE PER EQUIVALENT DWELLING UNIT (EDU)

Customer Class	FY 2024 ($/EDU)	FY 2025 ($/EDU)	FY 2026 ($/EDU)	FY 2027 ($/EDU)	FY 2028 ($/EDU)
All Customer Classes	$66.57	$75.23	$85.01	$96.07	$108.56

Future year rate increase for RMWD effective July 1, 2024, 2025, 2026, & 2027 will be a maximum revenue adjustment of 13% per year in addition to any pass through increases.

B. EDU description and basis for Wastewater Capacity Charges

Single Family Residential, Apartment, Condominium, Duplex or Mobile home, Each Unit

Square Footage	
≤1,250	0.8 EDU
1,251 to 2,000	1.0 EDU
2,001 to 3,000	1.2 EDU
3,001 to 4,500	1.5 EDU
4,501 to 6,000	2.0 EDU
>6,000	Case by Case

Motel or Hotel	
Each Living Unit with Kitchen	0.8 EDU
Each Living Unit without Kitchen	0.4 EDU
Commercial Business - Retail shop or Offices	
• Equipped with Restroom, Up to 1,000 sf.	1.2 EDU
Commercial Business – Each additional 1,000 sf.	
• of gross floor space or part thereof.	0.8 EDU
Automobile Service Stations	
• Providing RV holding tank disposal station	2.0 EDU
• Four (4) or under Gas Pumps	0.8 EDU
• Over four (4) Gas Pumps	1.0 EDU
Church, Fraternal Lodge or similar Auditorium	1.0 EDU
Each unit of seating capacity for 200 persons	
Bakery	1.0 EDU
Theater - 200 seating capacity	1.4 EDU
Hospital - per bed	0.4 EDU
Convalescent Hospital - Boarding Home - per bed	0.4 EDU
Labor Camp, Per Bed	0.1 EDU
Mortuary	1.2 EDU
Car Wash	1.2 EDU
Grocery Store	1.2 EDU
Self Service Laundry - each washing machine	0.4 EDU
Swimming Pool - with restrooms	1.2 EDU
Spas - with restrooms	1.2 EDU
Country Clubs with common restroom facilities	1.2 EDU
Each additional shower unit, wash closet and/or fixture	
Restaurant – Base (Using non-disposable tableware	2.7 EDU
Per each seven (7) seats or part thereof	1.2 EDU
Restaurants—Base (Using disposable tableware)	1.2 EDU
Per each twenty-one (21) seats or part thereof	1.2 EDU

Schools (Public or Private)

- Elementary — Per each 60 students — 1.2 EDU
- Junior High School — Per each 40 students — 1.2 EDU
- High School — Per each 30 students — 1.2 EDU

Theatre – 200 Seating Capacity — 1.4 EDU

C. WASTEWATER CAPACITY CHARGES

EDU	Land Use Factor	Living Area (SqFt)	Expansion	Upgrade	Treatment	Inspection Deposit	Total
0.8	House	≤1,250	$ 8,912	$ 1,677	$ 712	$ 1,100	**$ 12,401**
1	House	1,251 to 2,000	$ 11,140	$ 2,096	$ 890	$ 1,100	**$ 15,226**
1.2	House	2,001 to 3,000	$ 13,368	$ 2,515	$ 1,068	$ 1,100	**$ 18,051**
1.5	House	3,001 to 4,500	$ 16,710	$ 3,144	$ 1,335	$ 1,100	**$ 22,289**
2	House	4,501 to 6,000	$ 22,280	$ 4,192	$ 1,780	$ 1,100	**$ 29,352**
	House	≥6,001	Case by Case				

PROSPECTIVE ANNUAL RATE INCREASES VIA PASS THROUGH CHARGES

To avoid operational deficits, depletion of reserves, an inability to address infrastructure and water quality improvements, and to continue to provide a safe, reliable water supply, the District will pass through to its customers: (1) any increases in the rates of the SDCWA Charges imposed on the District by SDCWA ("SDCWA Pass Through"); (2) any future charges and any rate increases to any other existing charges, including imported water charges, that are imposed on the District by SDCWA (a "SDCWA Pass Through"); (3) any incremental increases in the cost of energy; (4) increases in the cost of wastewater treatment by the City of Oceanside: The foregoing are collectively referred to in this ordinance as "Pass Through Increases."

The District may annually implement the Pass Through Increases commencing January 1, 2024, 2025, 2026, 2027, & 2028.

Public Hearing
June 27, 2023

Comprehensive Cost-of-Service Rate Study

RAINBOW
MUNICIPAL WATER DISTRICT
Committed to Excellence

IB CONSULTING

IB Consulting, LLC
31938 Temecula Parkway, Suite A #350
Temecula, CA. 92592

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Executive Summary

Rainbow Municipal Water District (District) periodically reviews the financial position of its utilities. This review is essential to determine if adjustments are required to continue meeting operational costs, cover system repairs and replacements, and adequately fund reserves based on Board adopted policies. The most recent updates occurred in 2021 for the water utility and 2018 for the wastewater utility. Due to significant increases in capital expenses and the recent hyper-inflationary climate over the past year, the District anticipated rate increases would be needed. For the water utility, the proposed rates within this report will replace the previously noticed rates for Fiscal Year 2023-24 (FY 2024) through FY 2026. Therefore, the District hired IB Consulting to conduct a comprehensive cost-of-service update to its water and wastewater utilities. This report provides a basis for developing and implementing cost-based utility rates from FY 2024 through FY 2028 (Rate Setting Period) in compliance with California Constitution Article XIII D, section 6 (Proposition 218).

Water Utility Summary

Updating the long-term financial plan and performing a comprehensive cost-of-service analysis is a prudent business practice to ensure the District can fully fund its utility needs over the Rate Setting Period and beyond. As part of reviewing and updating water rates, the first step is to conduct a thorough review of the utility's financial health at current rates. Based on a financial review of the water utility at current FY 2023 rates the District's is projected to generate positive net income for FY 2024 and FY 2025, but by FY 2026 an operating deficit of almost $600k is projected, which would grow to approximately $2.3M by FY 2028. Net operating income is used to fund the District's capital plan and replenish reserves. However, the District's Capital Improvement Plan (CIP) requires $33.6M in spending over the Rate Setting Period (annual average of $6.7M), and with limited net income, CIP would need to be deferred. The District has remaining proceeds from a recent wholesale water efficiency loan equal to $7.6M that will cover approximately half of the planned capital in FY 2024 and FY 2025, but the remaining funding would need to come from annual rate revenue or reserves. FY 2026 through FY 2028 capital needs are approximately $20M and, without increases to rates, reserves would be depleted by FY 2026. Therefore, the proposed financial plan generates additional rate revenue that is phased in over the Rate Setting Period to operating, capital spending, and maintain healthy reserves.

The District's current water rate structure includes monthly fixed charges that vary by customer class and meter size, and uniform variable rates, in Hundred Cubic Feet (HCF[1]) increments, which differ by customer class (domestic accounts versus agricultural accounts). The rate structure includes eight distinct customer classes, including Single-Family, Multi-Family, Commercial, Institutional, Agricultural with Residence, Agricultural without Residence, Permanent Special Agricultural Water Rate (PSAWR) Domestic, and PSAWR Commercial. Single-Family, Multi-Family, Commercial, and Institutional customers all have the same uniform rate. Agricultural accounts (with and without residences) are charged a lower uniform rate as these accounts recover a greater amount of their costs through higher fixed charges due to the volatility of their usage patterns. PSAWR customers are charged uniform rates that account for credits received from the San Diego County Water Authority (SDCWA), PSAWR customers may receive less water during water shortages and emergencies. Therefore, the SDCWA program exempts PSAWR customers from paying emergency storage and supply reliability fixed charges and receive a commodity credit. PSAWR Domestic received the commodity credit for usage that exceeds what the SDCWA deems to be needed for residential use (22 HCF per month). Therefore, the Tier 2 rate for PSAWR Domestic is solely for tracking the usage that received the commodity credits from the SDCWA. Lastly, the District also has pumping fixed charges and pumping variable

[1] One HCF equals 748 gallons of water.

rates to recover the costs associated with pumping water to higher elevations. The pumping fixed charges and variable rates have been recalibrated based on energy costs within the District's audited financials.

The recommended rates were included within a notice and mailed to each property owner in compliance with Proposition 218. A Public Hearing was held on June 27, 2023 to consider the proposed rates identified in Table 1 through Table 3, which include SDCWA current known charges. Any Incremental increases or decreases in water costs will be passed through to customers when known as allowed by the pass-through provisions of Government Code section 53756.

Table 1: Proposed Monthly Fixed Charges

Fixed Charges ($/Month)					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family, Multi-Family, Commercial, Institutional					
5/8"	$89.59	$97.66	$106.45	$116.04	$126.49
≤ 3/4"	$89.59	$97.66	$106.45	$116.04	$126.49
1"	$145.42	$158.52	$172.79	$188.35	$205.31
1 1/2"	$285.01	$310.66	$338.62	$369.10	$402.32
2"	$452.51	$493.24	$537.64	$586.03	$638.78
3"	$982.92	$1,071.39	$1,167.82	$1,272.93	$1,387.50
4"	$1,764.59	$1,923.41	$2,096.52	$2,285.21	$2,490.88
6"	$3,635.01	$3,962.16	$4,318.76	$4,707.45	$5,131.13
Agriculture w/ Residence, Agriculture					
5/8"	$142.17	$154.97	$168.92	$184.13	$200.71
≤ 3/4"	$142.17	$154.97	$168.92	$184.13	$200.71
1"	$233.06	$254.04	$276.91	$301.84	$329.01
1 1/2"	$460.27	$501.70	$546.86	$596.08	$649.73
2"	$732.93	$798.90	$870.81	$949.19	$1,034.62
3"	$1,596.36	$1,740.03	$1,896.64	$2,067.34	$2,253.41
4"	$2,868.77	$3,126.96	$3,408.39	$3,715.15	$4,049.52
6"	$5,913.47	$6,445.69	$7,025.81	$7,658.14	$8,347.38
PSAWR Domestic, PSAWR Commercial					
5/8"	$127.47	$138.95	$151.46	$165.10	$179.96
≤ 3/4"	$127.47	$138.95	$151.46	$165.10	$179.96
1"	$208.56	$227.33	$247.79	$270.10	$294.41
1 1/2"	$411.27	$448.29	$488.64	$532.62	$580.56
2"	$654.53	$713.45	$777.67	$847.67	$923.97
3"	$1,424.86	$1,553.10	$1,692.88	$1,845.24	$2,011.32
4"	$2,560.07	$2,790.48	$3,041.63	$3,315.38	$3,613.77
6"	$5,276.47	$5,751.36	$6,268.99	$6,833.20	$7,448.19

Table 2: Proposed Variable Rates

Variable Rates ($/HCF)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	$5.53	$6.03	$6.58	$7.18	$7.83
Multi-Family	$5.53	$6.03	$6.58	$7.18	$7.83
Commercial	$5.53	$6.03	$6.58	$7.18	$7.83
Institutional	$5.53	$6.03	$6.58	$7.18	$7.83
Agriculture w/ Res	$4.53	$4.94	$5.39	$5.88	$6.41
Agriculture	$4.53	$4.94	$5.39	$5.88	$6.41
PSAWR Domestic					
Tier 1	$4.53	$4.94	$5.39	$5.88	$6.41
Tier 2	$4.00	$4.36	$4.76	$5.19	$5.66
PSAWR Commercial	$4.00	$4.36	$4.76	$5.19	$5.66

Table 3: Proposed Pumping Charges and Pumping Rates

Pumping						
Pumping Zone	Zone Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Fixed ($/Month)						
All Zones		$8.39	$9.15	$9.98	$10.88	$11.86
Variable ($/HCF)						
Pump Zone 1	*Rainbow Heights*	$2.60	$2.84	$3.10	$3.38	$3.69
Pump Zone 2	*Improvement District U-1*	$1.39	$1.52	$1.66	$1.81	$1.98
Pump Zone 3	*Vallecitos*	$0.26	$0.29	$0.32	$0.35	$0.39
Pump Zone 4	*Northside*	$0.13	$0.15	$0.17	$0.19	$0.21
Pump Zone 5	*Morro Tank*	$0.35	$0.39	$0.43	$0.47	$0.52
Pump Zone 6	*Huntley*	$1.40	$1.53	$1.67	$1.83	$2.00
Pump Zone 7	*Magee Tank*	$0.71	$0.78	$0.86	$0.94	$1.03

Wastewater Utility Summary

The District's wastewater utility is in the process of completing a significant capital replacement project for the Thoroughbred Lane Lift Station and Pipeline Repair. The cost of the project was originally estimated at $19M and the District's funding sources included $10.5M from a Community Facilities District with the remainder covered by rates/reserves. However, the project cost now exceeds $21.5M, which requires additional contributions from District reserves to complete. The wastewater FY 2023 starting reserves balance (approximately $1.6M) is not sufficient to cover the difference in project costs. As such, the District requires increases in its wastewater rates and is currently in the process of securing a loan of $5M to finish the replacement project and cover additional capital needs scheduled over the next couple of years. The proposed financial plan will generate an additional $13M in rate revenue that is phased in over the Rate Setting Period.

The recommended rates were included within a notice and mailed to each property owner in compliance with Proposition 218. A Public Hearing on June 27, 2023 will consider the proposed rates identified in Table 4.

Table 4: Proposed Wastewater Charges

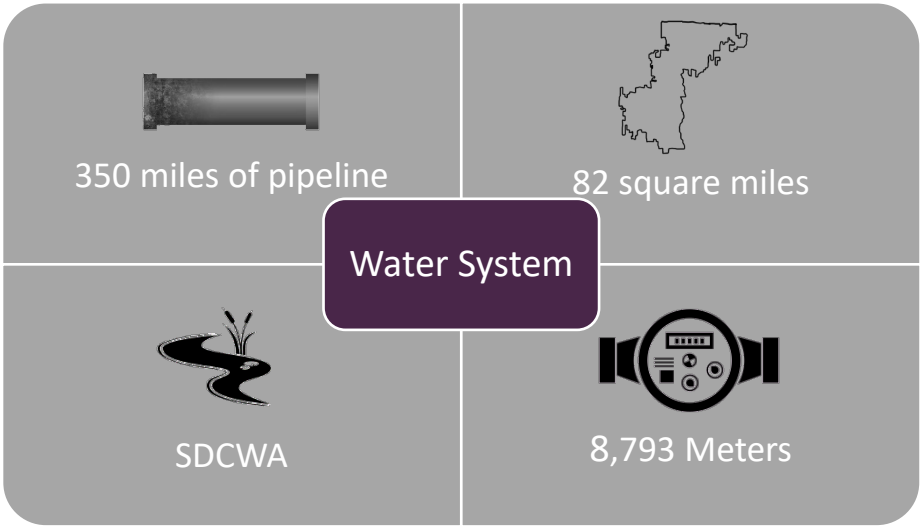
Wastewater Charges ($/Month)					
Customer Class	FY 2024 ($/EDU)	FY 2025 ($/EDU)	FY 2026 ($/EDU)	FY 2027 ($/EDU)	FY 2028 ($/EDU)
Single-Family	$66.57	$75.23	$85.01	$96.07	$108.56
Multi-Family	$66.57	$75.23	$85.01	$96.07	$108.56
Residential - WW Only	$66.57	$75.23	$85.01	$96.07	$108.56
Commercial	$66.57	$75.23	$85.01	$96.07	$108.56
Commercial w/ Irrigation	$66.57	$75.23	$85.01	$96.07	$108.56

Water Utility

Water System

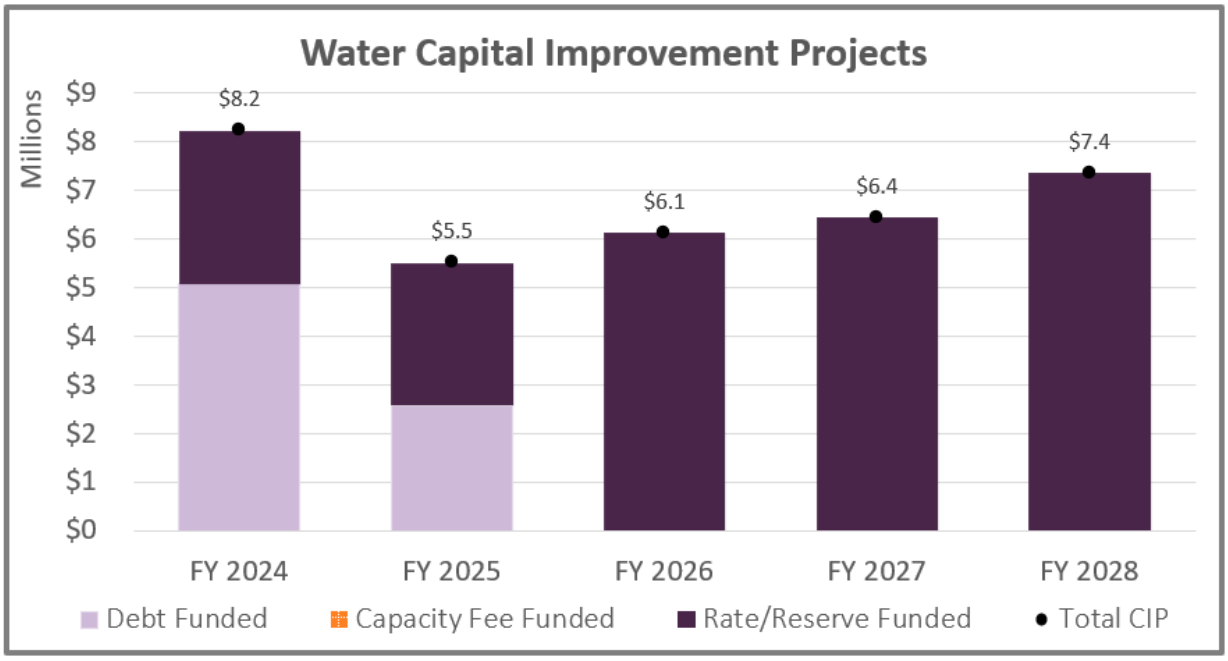
The District provides water to a service area encompassing approximately 82 square miles, located in northern San Diego County and the District has one of the largest agricultural areas in the state. The District is 100% dependent on imported water, currently provided by SDCWA, which purchases the vast majority of its water from Metropolitan Water District of Southern California (MWD). MWD imports water from the Colorado River Aqueduct and Northern California via the State Water Project. The District's water system includes 350 miles of transmission & distribution lines, 13 water tanks, 7 pump stations, and 4 reservoirs.

Figure 1: District Water System



The District's most recent Capital Improvement Plan (CIP) includes approximately $33.6M in spending over the Rate Setting Period, with almost $10.4M related to water efficiency projects that may be funded by the recent Wholesale Water Efficiency loan. Figure 2 shows the District's projected capital spending through FY 2028 with funding sources, including remaining proceeds from the loan.

Figure 2: Water Capital Improvement Plan



Customers

The District currently serves 8,793 active meters, with just over 70% classified as residential (Single-Family and Multi-Family). Table 5 summarizes accounts by meter size and customer class. Customer classes can be separated between Non-Agricultural accounts (Single-Family, Multi-Family, Commercial, and Institutional), and Agricultural accounts (Agriculture w/ Residence, Agriculture, PSAWR Domestic, and PSAWR Commercial). Agricultural customers are charged a higher fixed charge and receive a lower variable rate. In addition, PSAWR customers do not incur certain fixed charges and receive a credit on the variable rates from SDCWA.

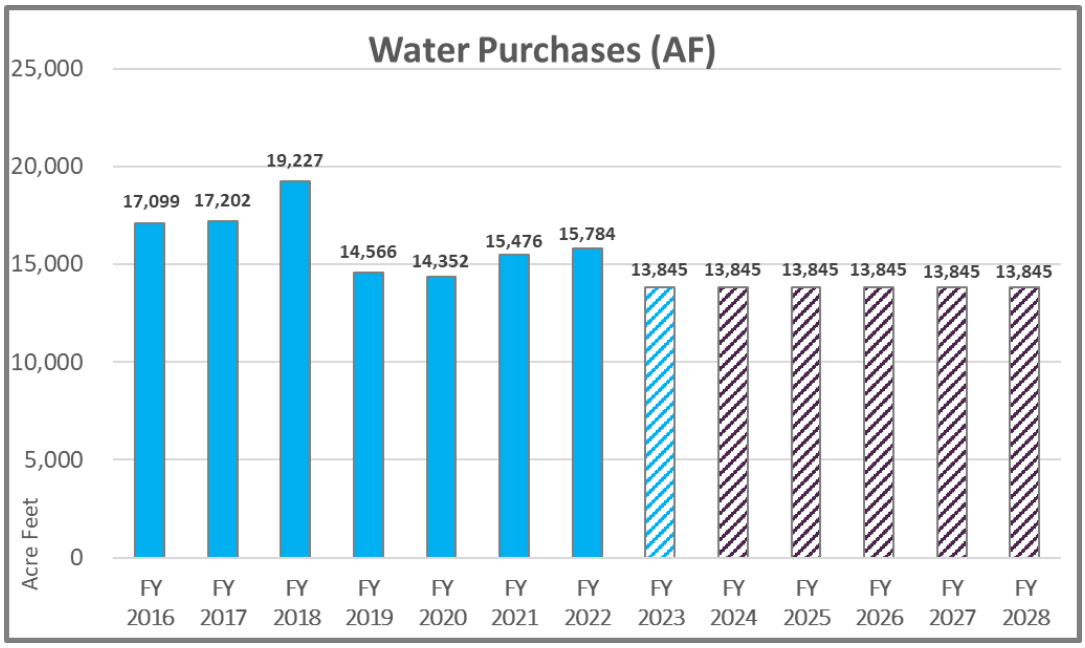
Table 5: Water Accounts by Meter Size

Water Accounts by Customer Class and Meter Size									
Meter Size	Single-Family	Multi-Family	Commercial	Institutional	Agriculture w/ Res	Agriculture	PSAWR Domestic	PSAWR Commercial	Total Accounts
5/8"	234	-	1	-	2	1	-	-	**238**
3/4"	3,202	39	33	3	170	44	16	4	**3,511**
1"	2,523	5	105	2	800	236	167	40	**3,878**
1 1/2"	169	31	56	4	147	104	61	33	**605**
2"	113	39	55	5	69	117	51	48	**497**
3"	5	3	6	1	3	16	4	5	**43**
4"	1	5	4	2	1	6	-	1	**20**
6"	-	-	-	-	-	1	-	-	**1**
Total	6,247	122	260	17	1,192	525	299	131	**8,793**

Figure 3 shows historical water purchases (blue bars) from FY 2016 and projected water purchases (purple bars) in acre-feet (1 acre-foot = 325,851 gallons) through the Rate Setting Period. Water purchases have drastically changed from year to year primarily due to agricultural use within the District's service area. While residential customers make up nearly 70% of the accounts, agricultural customers usage constitutes 66%-80% of the total water usage. This volatility creates revenue instability in variable revenues collected by the District. The District mitigates this revenue volatility by shifting more cost recovery from Agricultural and PSAWR accounts to their fixed charges. As such, Agricultural and PSAWR fixed charges are more than non-agricultural accounts. Proposed rates will continue this approach to ensure revenue stability.

The projected FY 2024 water purchases reflect 13,845 AF. The study used conservative projections for water purchases given the historic volatility and the District also anticipates land-use conversions from agricultural use to residential developments over the coming years.

Figure 3: Water Purchases



As previously mentioned, the existing rate structure consists of monthly fixed meter charges and variable rates, separated between SDCWA and District charges. Existing metered fixed charges and variable rates are shown in Table 6 and Table 7, respectively, followed by pumping charges in Table 8.

Table 6: FY 2023 Metered Fixed Charges

Fixed Charges ($/Month)		
Meter Size	SDCWA - Fixed Charge	RMWD Existing Fixed
Single-Family, Multi-Family, Commercial, Institutional		
≤ 3/4"	$28.19	$41.01
1"	$46.98	$68.34
1 1/2"	$93.97	$136.69
2"	$150.35	$218.70
3"	$328.88	$478.39
4"	$591.99	$861.10
6"	$1,221.56	$1,776.87
Agriculture w/ Residence, Agriculture		
≤ 3/4"	$28.19	$90.73
1"	$46.98	$151.20
1 1/2"	$93.97	$302.41
2"	$150.35	$483.86
3"	$328.88	$1,058.42
4"	$591.99	$1,905.17
6"	$1,221.56	$3,931.29
PSAWR Domestic, PSAWR Commercial		
≤ 3/4"	$13.51	$89.90
1"	$22.52	$149.83
1 1/2"	$45.04	$299.65
2"	$72.07	$479.44
3"	$157.65	$1,048.78
4"	$283.77	$1,887.79
6"	$585.57	$3,895.43

Table 7: FY 2023 Variable Rates

Variable Rates ($/HCF)		
Customer Class	SDCWA Variable Rate	RMWD Variable
Single-Family	$3.64	$1.83
Multi-Family	$3.64	$1.83
Commercial	$3.64	$1.83
Institutional	$3.64	$1.83
Agriculture w/ Res	$3.64	$0.92
Agriculture	$3.64	$0.92
PSAWR Domestic	$3.11	$0.90
PSAWR Commercial	$3.11	$0.90
Construction	$3.64	$0.90

Table 8: FY 2023 Pumping Charges and Pumping Rates

Pumping		
Pumping Zone	Zone Description	Existing
Fixed ($/Month)		
All Zones		$7.14
Variable ($/HCF)		
Pump Zone 1	*Rainbow Heights*	$1.02
Pump Zone 2	*Improvement District U-1*	$0.63
Pump Zone 3	*Vallecitos*	$0.36
Pump Zone 4	*Northside*	$0.14
Pump Zone 5	*Morro Tank*	$0.19
Pump Zone 6	*Huntley*	$0.75
Pump Zone 7	*Magee Tank*	$3.31

Financial Plan Overview – Water Utility

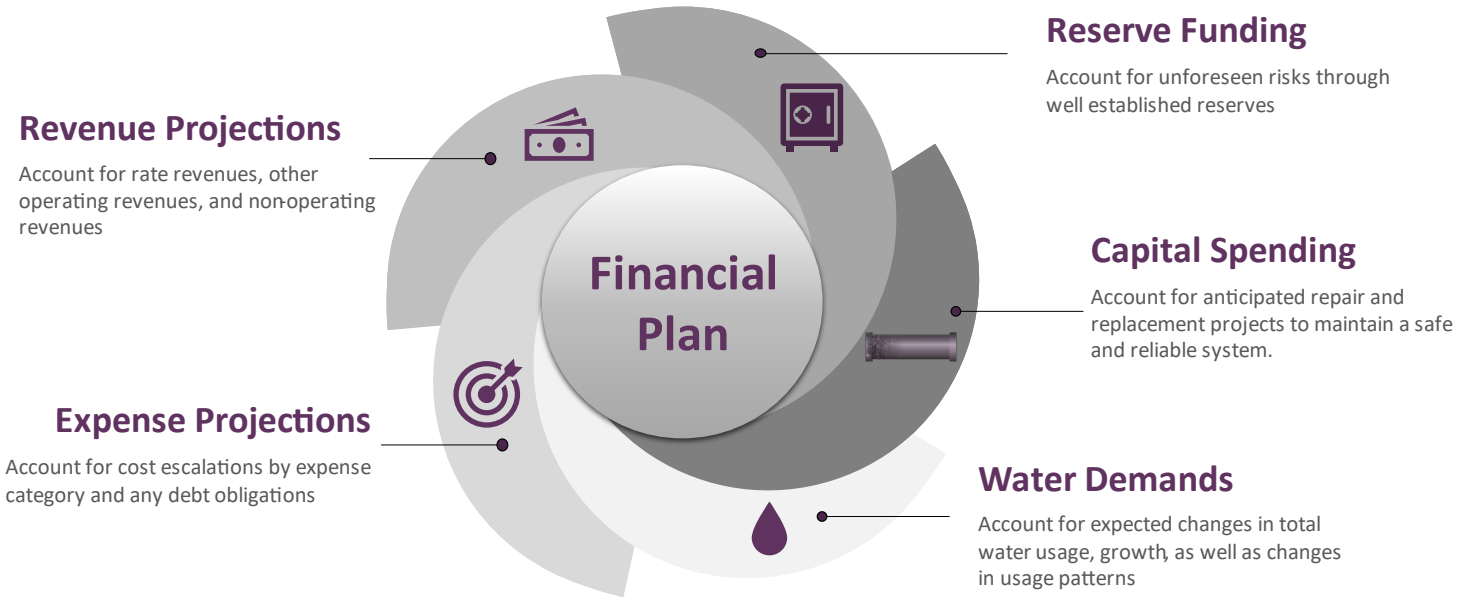
Financial Planning

Financial planning incorporates numerous considerations, including projecting revenues and forecasting expected costs using various inflationary adjustments. Utilities also need to account for changes in water demand driven by variations in weather, changes to water supplies and water availability, state mandates, growth, and economic factors. In addition, system maintenance and reinvestment, reserves, and debt compliance all influence the revenues needed in future years. Therefore, a comprehensive financial plan reviews the following:

1) Historical water sales and consumption patterns to determine an appropriate level of usage for projecting future water demands.
2) Operational costs that may change over the planning period because of inflation, unique circumstances of the agency, new expenditures added to meet strategic goals, state mandates, or changes in operations.
3) Multi-year system improvement needs, and scheduling based on priority. This review also considers available funding sources to complete projects such as Pay-As-You-Go (PAYGO), grants, loans, and debt financing.
4) Reserve funding to meet adopted reserve policies. The goal is to generate adequate cash on hand to mitigate financial risks related to operating cashflow needs, unexpected increases in expenses, shortages in system reinvestment, and mitigating potential system failures.

Figure 4 illustrates the key elements when developing a long-term financial plan.

Figure 4: Water Financial Plan Key Elements



Financial Planning Assumptions

Developing a long-term financial plan requires an understanding of the District's financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, existing debt requirements, and reserve policies. With these considerations, certain assumptions are required for projecting revenues, expenses, and expected ending fund balances. Through discussions with staff and their understanding of historical budget data and future obligations, Table 9 identifies assumptions used for forecasting revenues. For forecasting revenues, our analysis assumes no growth in accounts as a conservative assumption so projected revenues do not rely on growth to occur. The number of accounts by meter size and customer class can be found in Table 5 and was held constant through the Rate Setting Period. Table 10 provides details on the number of accounts by pumping zone. Table 11 identifies projected usage by customer class. Table 12 identifies the amount of projected usage through each elevation zone. As shown in both the usage tables, the financial plan does not account for any changes in demand. The District anticipates agriculture in the service area will continue to decline as the cost of water continues to increase, making growing crops increasingly difficult. The timing and magnitude of this transition is uncertain and therefore the financial plan used a wet year as the basis for projections and held it constant for the Rate Setting Period

Table 9: Water Assumptions for Forecasting Revenues

Revenue Forecasting					
Key Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Escalation					
Non-Rate Revenues	0.0%	0.0%	0.0%	0.0%	0.0%
Reserve Interest	1.5%	1.5%	1.5%	1.5%	1.5%
Account Growth	0.0%	0.0%	0.0%	0.0%	0.0%
Water Sales					
Customer Usage (AF)	12,738	12,738	12,738	12,738	12,738
Customer Usage (HCF)	5,548,472	5,548,472	5,548,472	5,548,472	5,548,472

Table 10: Water Accounts by Pumping Zone - FY 2024 through FY 2028

Accounts by Pumping Zone						
Pumping Zone		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pump Zone 1	*Rainbow Heights*	181	181	181	181	181
Pump Zone 2	*Improvement District U-1*	111	111	111	111	111
Pump Zone 3	*Vallecitos*	60	60	60	60	60
Pump Zone 4	*Northside*	430	430	430	430	430
Pump Zone 5	*Morro Tank*	349	349	349	349	349
Pump Zone 6	*Huntley*	152	152	152	152	152
Pump Zone 7	*Magee Tank*	59	59	59	59	59
Total Pumping Zone Meters		**1,342**	**1,342**	**1,342**	**1,342**	**1,342**

Table 11: Projected Consumption (HCF) – FY 2024 through FY 2028

Projected Consumption (HCF)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	1,521,953	1,521,953	1,521,953	1,521,953	1,521,953
Multi-Family	130,046	130,046	130,046	130,046	130,046
Commercial	362,543	362,543	362,543	362,543	362,543
Institutional	26,318	26,318	26,318	26,318	26,318
Agriculture w/ Res	918,501	918,501	918,501	918,501	918,501
Agriculture	1,243,086	1,243,086	1,243,086	1,243,086	1,243,086
PSAWR Domestic	721,309	721,309	721,309	721,309	721,309
PSAWR Commercial	604,716	604,716	604,716	604,716	604,716
Construction	20,000	20,000	20,000	20,000	20,000
Total Consumption (HCF)	**5,548,472**	**5,548,472**	**5,548,472**	**5,548,472**	**5,548,472**

Table 12: Projected Pumping Consumption (HCF) – FY 2024 through FY 2028

Projected Zone Consumption (HCF)						
Pumping Zone		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Pump Zone 1	*Rainbow Heights*	183,452	183,452	183,452	183,452	183,452
Pump Zone 2	*Improvement District U-1*	38,945	38,945	38,945	38,945	38,945
Pump Zone 3	*Vallecitos*	67,006	67,006	67,006	67,006	67,006
Pump Zone 4	*Northside*	363,390	363,390	363,390	363,390	363,390
Pump Zone 5	*Morro Tank*	128,436	128,436	128,436	128,436	128,436
Pump Zone 6	*Huntley*	131,538	131,538	131,538	131,538	131,538
Pump Zone 7	*Magee Tank*	12,127	12,127	12,127	12,127	12,127
Total Consumption by Zone (HCF)		**924,894**	**924,894**	**924,894**	**924,894**	**924,894**

Table 13 identifies assumptions used for forecasting increases in expenses over the Rate Setting Period. Purchased water costs are held constant and any increases will be captured through the pass-through provisions of Government Code section 53756.

Table 13: Water Assumptions for Forecasting Expenses[2]

Expenditure Forecasting						
Key Assumptions	*Source:*	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Expenditure Escalation						
Benefits		3.00%	3.00%	3.00%	3.00%	3.00%
Capital Construction	*ENR 20-City*	7.20%	7.20%	3.93%	3.93%	3.93%
Energy Costs		5.00%	5.00%	5.00%	5.00%	5.00%
General Costs	*CPI - SD (CA DIR)*	7.71%	7.71%	4.03%	4.03%	4.03%
Retirement		5.00%	5.00%	5.00%	5.00%	5.00%
Salaries		6.00%	6.00%	6.00%	6.00%	6.00%
Purchased Water	*SDCWA*	*Pass-Through*	*Pass-Through*	*Pass-Through*	*Pass-Through*	*Pass-Through*

Current Financial Position

Revenues

Based on the forecasting assumptions, fixed meter revenues were calculated using account data by meter size (Table 5) multiplied by existing fixed meter charges (Table 6) times the number of billing periods[3]. Similarly, fixed pumping revenues were calculated using pumping zone accounts (Table 10) multiplied by pumping zone fixed charges (Table 8). Variable revenues were calculated using existing variable rates (Table 7) and variable pumping zone rates(Table 8) and projected total water sales by customer class (Table 11) and projected usage by pumping zone (Table 12). Table 14 shows the calculated rate revenues through the Rate Setting Period. Table 15 summarizes calculated rate revenues and other non-rate revenues available through the Rate Setting Period with future projections rounded to the nearest thousands.

[2] Capital Construction inflation and General Costs for FY 2024 and FY 2025 were increased to 7.20% and 7.71%, respectively to account for the most recent annual increase due to inflation. Outer years reduce to 3.93% and 4.03%, reflecting the 5-year average of the Engineer's News Record – CCI index and the SD Consumer Price Index, respectively.

[3] The District bills customers on a monthly basis; therefore, there are 12 billing periods during the fiscal year.

Table 14: Water Calculated Rate Revenues

Calculated Revenue						
Fixed Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
RMWD O&M Fixed Charge						
Single-Family		$4,372,787	$4,372,787	$4,372,787	$4,372,787	$4,372,787
Multi-Family		$245,381	$245,381	$245,381	$245,381	$245,381
Commercial		$414,815	$414,815	$414,815	$414,815	$414,815
Institutional		$49,207	$49,207	$49,207	$49,207	$49,207
Agriculture w/ Res		$2,633,839	$2,633,839	$2,633,839	$2,633,839	$2,633,839
Agriculture		$1,921,504	$1,921,504	$1,921,504	$1,921,504	$1,921,504
PSAWR Domestic		$880,623	$880,623	$880,623	$880,623	$880,623
PSAWR Commercial		$556,633	$556,633	$556,633	$556,633	$556,633
Total RMWD O&M Fixed Charge		**$11,074,789**	**$11,074,789**	**$11,074,789**	**$11,074,789**	**$11,074,789**
SDCWA Fixed Charge						
Single-Family		$3,005,979	$3,005,979	$3,005,979	$3,005,979	$3,005,979
Multi-Family		$168,691	$168,691	$168,691	$168,691	$168,691
Commercial		$285,170	$285,170	$285,170	$285,170	$285,170
Institutional		$33,828	$33,828	$33,828	$33,828	$33,828
Agriculture w/ Res		$818,389	$818,389	$818,389	$818,389	$818,389
Agriculture		$597,063	$597,063	$597,063	$597,063	$597,063
PSAWR Domestic		$132,367	$132,367	$132,367	$132,367	$132,367
PSAWR Commercial		$83,670	$83,670	$83,670	$83,670	$83,670
Total SDCWA Fixed Charge		**$5,125,158**	**$5,125,158**	**$5,125,158**	**$5,125,158**	**$5,125,158**
Total Fixed Pumping Charge		**$114,983**	**$114,983**	**$114,983**	**$114,983**	**$114,983**
Variable Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
RMWD Variable Rate Revenue						
Single-Family		$2,785,174	$2,785,174	$2,785,174	$2,785,174	$2,785,174
Multi-Family		$237,984	$237,984	$237,984	$237,984	$237,984
Commercial		$663,454	$663,454	$663,454	$663,454	$663,454
Institutional		$48,162	$48,162	$48,162	$48,162	$48,162
Agriculture w/ Res		$845,021	$845,021	$845,021	$845,021	$845,021
Agriculture		$1,143,639	$1,143,639	$1,143,639	$1,143,639	$1,143,639
PSAWR Domestic		$649,178	$649,178	$649,178	$649,178	$649,178
PSAWR Commercial		$544,244	$544,244	$544,244	$544,244	$544,244
Construction		$36,600	$36,600	$36,600	$36,600	$36,600
Total RMWD Variable Rate Revenue		**$6,953,456**	**$6,953,456**	**$6,953,456**	**$6,953,456**	**$6,953,456**
SDCWA Variable Rate Revenue						
Single-Family		$5,539,909	$5,539,909	$5,539,909	$5,539,909	$5,539,909
Multi-Family		$473,367	$473,367	$473,367	$473,367	$473,367
Commercial		$1,319,657	$1,319,657	$1,319,657	$1,319,657	$1,319,657
Institutional		$95,798	$95,798	$95,798	$95,798	$95,798
Agriculture w/ Res		$3,343,344	$3,343,344	$3,343,344	$3,343,344	$3,343,344
Agriculture		$4,524,833	$4,524,833	$4,524,833	$4,524,833	$4,524,833
PSAWR Domestic		$2,243,271	$2,243,271	$2,243,271	$2,243,271	$2,243,271
PSAWR Commercial		$1,880,667	$1,880,667	$1,880,667	$1,880,667	$1,880,667
Construction		$72,800	$72,800	$72,800	$72,800	$72,800
Total SDCWA Variable Rate Revenue		**$19,493,645**	**$19,493,645**	**$19,493,645**	**$19,493,645**	**$19,493,645**
Pumping - Variable						
Pump Zone 1	*Rainbow Heights*	$187,121	$187,121	$187,121	$187,121	$187,121
Pump Zone 2	*Improvement District U-1*	$24,535	$24,535	$24,535	$24,535	$24,535
Pump Zone 3	*Vallecitos*	$24,122	$24,122	$24,122	$24,122	$24,122
Pump Zone 4	*Northside*	$50,875	$50,875	$50,875	$50,875	$50,875
Pump Zone 5	*Morro Tank*	$24,403	$24,403	$24,403	$24,403	$24,403
Pump Zone 6	*Huntley*	$98,654	$98,654	$98,654	$98,654	$98,654
Pump Zone 7	*Magee Tank*	$40,140	$40,140	$40,140	$40,140	$40,140
Total Variable Pumping Revenue		**$449,850**	**$449,850**	**$449,850**	**$449,850**	**$449,850**
Total Rate Revenue		**$43,211,881**	**$43,211,881**	**$43,211,881**	**$43,211,881**	**$43,211,881**

Table 15: Water Projected Revenues

Projected Water Revenues					
Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Rate Revenues					
RMWD Rate Revenues					
RMWD O&M Fixed Charge	$11,075,000	$11,075,000	$11,075,000	$11,075,000	$11,075,000
RMWD Variable Rate Revenue	$6,953,000	$6,953,000	$6,953,000	$6,953,000	$6,953,000
Pumping Revenue (Fixed + Variable)	$565,000	$565,000	$565,000	$565,000	$565,000
Subtotal RMWD Rate Revenues	$18,593,000	$18,593,000	$18,593,000	$18,593,000	$18,593,000
SDCWA Pass-through Revenues					
SDCWA Fixed Charge	$5,125,000	$5,125,000	$5,125,000	$5,125,000	$5,125,000
SDCWA Variable Rate Revenue	$19,494,000	$19,494,000	$19,494,000	$19,494,000	$19,494,000
Subtotal SDCWA Pass-through Revenues	$24,619,000	$24,619,000	$24,619,000	$24,619,000	$24,619,000
Subtotal Rate Revenues	$43,212,000	$43,212,000	$43,212,000	$43,212,000	$43,212,000
Operating Revenues					
Readiness-To-Serve Revenue	$295,000	$295,000	$295,000	$295,000	$295,000
Unlock Fees	$5,000	$5,000	$5,000	$5,000	$5,000
RP Charges	$246,000	$246,000	$246,000	$246,000	$246,000
Inspections	$20,000	$20,000	$20,000	$20,000	$20,000
Install-Hydrant	$2,000	$2,000	$2,000	$2,000	$2,000
Miscellaneous	$7,000	$7,000	$7,000	$7,000	$7,000
New Meter/Install Parts	$40,000	$40,000	$40,000	$40,000	$40,000
Notice Delivery Revenue	$5,000	$5,000	$5,000	$5,000	$5,000
Subtotal Operating Revenues	$620,000	$620,000	$620,000	$620,000	$620,000
Non-Operating Revenues					
NSF Fees	$3,000	$3,000	$3,000	$3,000	$3,000
Recycling Revenue	$8,000	$8,000	$8,000	$8,000	$8,000
Miscellaneous Revenue	$95,000	$95,000	$95,000	$95,000	$95,000
Interest Revenues	$59,000	$103,000	$131,000	$154,000	$247,000
Property Tax Revenue	$650,000	$650,000	$650,000	$650,000	$650,000
Subtotal Non-Operating Revenues	$815,000	$859,000	$887,000	$910,000	$1,003,000
Other Revenues					
Penalty Charges	$405,000	$405,000	$405,000	$405,000	$405,000
Plan Check Rev.	$81,000	$81,000	$81,000	$81,000	$81,000
Miscellaneous Revenue	$61,000	$61,000	$61,000	$61,000	$61,000
Misc. Revenue - Eng. Services	$4,000	$4,000	$4,000	$4,000	$4,000
Subtotal Other Revenues	$551,000	$551,000	$551,000	$551,000	$551,000
Total Revenues	**$45,198,000**	**$45,242,000**	**$45,270,000**	**$45,293,000**	**$45,386,000**

Expenses

The FY 2023 adopted budget was used as the utility's baseline Operational & Maintenance (O&M) expenses and adjusted in subsequent years based on the escalation factors shown in Table 13. Table 16 provides projected O&M expenses through the Rate Setting Period with projections rounded to the nearest thousands. Each expense category includes detailed line-item expenditures that we discussed with staff to determine the appropriate escalation factor for forecasting how costs will increase over time.

Table 16: Water Projected O&M Expenses

Projected Operating & Maintenance Expenses					
O&M Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Purchased Water Costs					
Fixed Purchased Water Costs					
MWD Readiness-to-Serve Charge	$457,000	$457,000	$457,000	$457,000	$457,000
MWD Capacity Charge	$327,000	$327,000	$327,000	$327,000	$327,000
Supply Reliability Charge	$1,041,000	$1,041,000	$1,041,000	$1,041,000	$1,041,000
Customer Service Charge	$1,040,000	$1,040,000	$1,040,000	$1,040,000	$1,040,000
Emergency Storage Charge	$1,517,000	$1,517,000	$1,517,000	$1,517,000	$1,517,000
Infrastructure Access Charge	$761,000	$761,000	$761,000	$761,000	$761,000
Subtotal Fixed Purchased Water Costs	$5,143,000	$5,143,000	$5,143,000	$5,143,000	$5,143,000
Variable Purchased Water Costs					
Purchased Water (Variable Costs)	$20,467,000	$20,467,000	$20,467,000	$20,467,000	$20,467,000
PSAWR Credit/Discount	($659,000)	($659,000)	($659,000)	($659,000)	($659,000)
Subtotal Variable Purchased Water Costs	$19,808,000	$19,808,000	$19,808,000	$19,808,000	$19,808,000
Total Purchased Water Costs	$24,951,000	$24,951,000	$24,951,000	$24,951,000	$24,951,000
Operating Expenses					
Operating and Maintenance					
Administration	$1,726,000	$1,832,000	$1,930,000	$2,033,000	$2,142,000
Board of Directors	$44,000	$46,000	$48,000	$50,000	$52,000
Customer Service	$511,000	$541,000	$567,000	$596,000	$625,000
Distribution / Capital Construction	$2,426,000	$2,579,000	$2,699,000	$2,825,000	$2,957,000
Engineering	$983,000	$1,039,000	$1,095,000	$1,155,000	$1,218,000
Finance	$1,001,000	$1,058,000	$1,112,000	$1,169,000	$1,230,000
Fleet/Garage	$544,000	$578,000	$605,000	$633,000	$663,000
General Fund Expense	$561,000	$604,000	$629,000	$654,000	$680,000
Human Resources	$384,000	$407,000	$428,000	$449,000	$472,000
Information Technology	$1,385,000	$1,476,000	$1,545,000	$1,618,000	$1,694,000
Meters	$1,091,000	$1,156,000	$1,211,000	$1,269,000	$1,331,000
Operations	$3,163,000	$3,369,000	$3,522,000	$3,681,000	$3,848,000
Risk Management	$817,000	$877,000	$914,000	$953,000	$994,000
Valve Maintenance	$389,000	$411,000	$432,000	$453,000	$476,000
Subtotal Operating and Maintenance	$15,025,000	$15,973,000	$16,737,000	$17,538,000	$18,382,000
Pumping Costs					
Pumping Operations	$135,000	$145,000	$151,000	$158,000	$165,000
Pumping Energy	$830,000	$871,000	$915,000	$961,000	$1,009,000
Subtotal Pumping Costs	$965,000	$1,016,000	$1,066,000	$1,119,000	$1,174,000
Total Operating Expenses	$15,990,000	$16,989,000	$17,803,000	$18,657,000	$19,556,000
Debt Service					
Existing Debt	$3,077,000	$3,077,000	$3,077,000	$3,076,000	$3,076,000
Subtotal Debt Service	$3,077,000	$3,077,000	$3,077,000	$3,076,000	$3,076,000
Total Expenses	**$44,018,000**	**$45,017,000**	**$45,831,000**	**$46,684,000**	**$47,583,000**

Reserves

Figure 5: Water Utility Reserves

Established reserves include Operating Reserve, Capital Project Reserve, Rate Stabilization Reserve, and two Designated Reserves. These reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund annual system improvements. Most recently, reserves have been used to cover increased costs in capital projects due to hyper-inflation over the past year. In addition, these reserves may be used to help smooth rates and mitigate rate spikes due to emergencies. The most recently adopted reserve policies identify the function of each reserve. Table 17 summarizes the minimum requirements and the ideal funding targets of each reserve. In addition, the District has a separate account for capacity fees from new connections that funds a portion of capital projects.

Table 17: Water Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
Operating	60 days of operating costs	90 days of operating costs
Capital Projects	1-year of CIP based on 5-year average	2-years of CIP based on 5-year average
Rate Stabilization	5% of rate revenue	10% of rate revenue
Liability Self-Insurance	Fixed amount of $100,000	N/A
New Source Water	N/A	N/A

The estimated projected ending reserve balance for June 30, 2023, equals approximately $5.8M.

Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenues from existing rates can cover operating expenses through FY 2025. However, without adjustments, the District will experience an operating deficit and depleted reserves by the end of FY 2026. The planned CIP averages $6.7M annually. Therefore, scheduled capital projects would need to be deferred. Table 18 forecasts existing revenues and expenses through the Rate Setting Period. Table 19 identifies reserve transfers and reserves activity, with projected FY 2024 starting reserve balances shown for each reserve.

Table 18: Water Financial Plan at Existing Rates

Financial Plan at Existing Rates						
Revenue		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Rate Revenues						
RMWD O&M Fixed Charge		$11,075,000	$11,075,000	$11,075,000	$11,075,000	$11,075,000
RMWD Variable Rate Revenue		$6,953,000	$6,953,000	$6,953,000	$6,953,000	$6,953,000
Pumping Revenue (Fixed + Variable)	**Table 15**	$565,000	$565,000	$565,000	$565,000	$565,000
SDCWA Fixed Charge		$5,125,000	$5,125,000	$5,125,000	$5,125,000	$5,125,000
SDCWA Variable Rate Revenue		$19,494,000	$19,494,000	$19,494,000	$19,494,000	$19,494,000
Total Rate Revenues		$43,212,000	$43,212,000	$43,212,000	$43,212,000	$43,212,000
Operating Revenues						
Readiness-To-Serve Revenue		$295,000	$295,000	$295,000	$295,000	$295,000
Unlock Fees		$5,000	$5,000	$5,000	$5,000	$5,000
RP Charges		$246,000	$246,000	$246,000	$246,000	$246,000
Inspections	**Table 15**	$20,000	$20,000	$20,000	$20,000	$20,000
Install-Hydrant		$2,000	$2,000	$2,000	$2,000	$2,000
Miscellaneous		$7,000	$7,000	$7,000	$7,000	$7,000
New Meter/Install Parts		$40,000	$40,000	$40,000	$40,000	$40,000
Notice Delivery Revenue		$5,000	$5,000	$5,000	$5,000	$5,000
Subtotal Operating Revenues		$620,000	$620,000	$620,000	$620,000	$620,000
Non-Operating Revenues						
NSF Fees		$3,000	$3,000	$3,000	$3,000	$3,000
Recycling Revenue		$8,000	$8,000	$8,000	$8,000	$8,000
Miscellaneous Revenue	**Table 15**	$95,000	$95,000	$95,000	$95,000	$95,000
Interest Revenues		$59,000	$86,000	$96,000	$93,000	$78,000
Property Tax Revenue		$650,000	$650,000	$650,000	$650,000	$650,000
Subtotal Non-Operating Revenues		$815,000	$842,000	$852,000	$849,000	$834,000
Other Revenues						
Penalty Charges		$405,000	$405,000	$405,000	$405,000	$405,000
Plan Check Rev.	**Table 15**	$81,000	$81,000	$81,000	$81,000	$81,000
Miscellaneous Revenue		$61,000	$61,000	$61,000	$61,000	$61,000
Misc. Revenue - Eng. Services		$4,000	$4,000	$4,000	$4,000	$4,000
Subtotal Other Revenues		$551,000	$551,000	$551,000	$551,000	$551,000
Total Revenues		**$45,198,000**	**$45,225,000**	**$45,235,000**	**$45,232,000**	**$45,217,000**

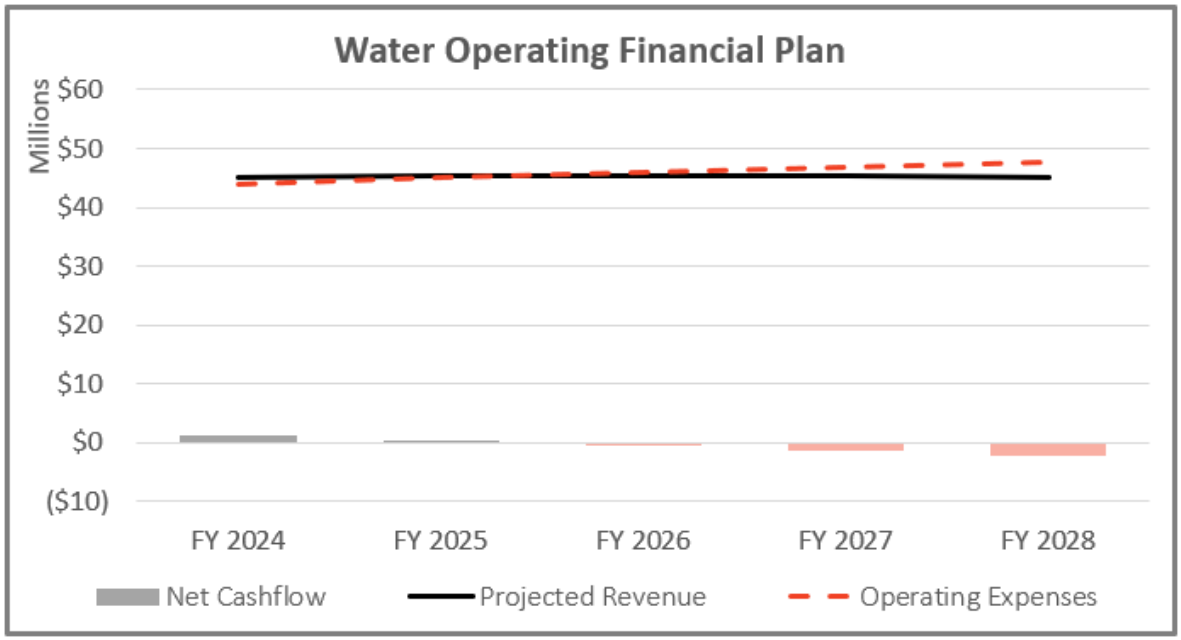
Financial Plan (continued)						
O&M Expenditures		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Purchased Water Costs						
Fixed Purchased Water Costs						
MWD Readiness-to-Serve Charge	Table 16	$457,000	$457,000	$457,000	$457,000	$457,000
MWD Capacity Charge		$327,000	$327,000	$327,000	$327,000	$327,000
Supply Reliability Charge		$1,041,000	$1,041,000	$1,041,000	$1,041,000	$1,041,000
Customer Service Charge		$1,040,000	$1,040,000	$1,040,000	$1,040,000	$1,040,000
Emergency Storage Charge		$1,517,000	$1,517,000	$1,517,000	$1,517,000	$1,517,000
Infrastructure Access Charge		$761,000	$761,000	$761,000	$761,000	$761,000
Subtotal Fixed Purchased Water Costs		$5,143,000	$5,143,000	$5,143,000	$5,143,000	$5,143,000
Variable Purchased Water Costs						
Purchased Water (Variable Costs)	Table 16	$20,467,000	$20,467,000	$20,467,000	$20,467,000	$20,467,000
PSAWR Credit/Discount		($659,000)	($659,000)	($659,000)	($659,000)	($659,000)
Subtotal Variable Purchased Water Costs		$19,808,000	$19,808,000	$19,808,000	$19,808,000	$19,808,000
Total Purchased Water Costs		$24,951,000	$24,951,000	$24,951,000	$24,951,000	$24,951,000
Operating Expenses						
Operating and Maintenance						
Administration	Table 16	$1,726,000	$1,832,000	$1,930,000	$2,033,000	$2,142,000
Board of Directors		$44,000	$46,000	$48,000	$50,000	$52,000
Customer Service		$511,000	$541,000	$567,000	$596,000	$625,000
Distribution / Capital Construction		$2,426,000	$2,579,000	$2,699,000	$2,825,000	$2,957,000
Engineering		$983,000	$1,039,000	$1,095,000	$1,155,000	$1,218,000
Finance		$1,001,000	$1,058,000	$1,112,000	$1,169,000	$1,230,000
Fleet/Garage		$544,000	$578,000	$605,000	$633,000	$663,000
General Fund Expense		$561,000	$604,000	$629,000	$654,000	$680,000
Human Resources		$384,000	$407,000	$428,000	$449,000	$472,000
Information Technology		$1,385,000	$1,476,000	$1,545,000	$1,618,000	$1,694,000
Meters		$1,091,000	$1,156,000	$1,211,000	$1,269,000	$1,331,000
Operations		$3,163,000	$3,369,000	$3,522,000	$3,681,000	$3,848,000
Risk Management		$817,000	$877,000	$914,000	$953,000	$994,000
Valve Maintenance		$389,000	$411,000	$432,000	$453,000	$476,000
Subtotal Operating and Maintenance		$15,025,000	$15,973,000	$16,737,000	$17,538,000	$18,382,000
Pumping Costs						
Pumping Operations	Table 16	$135,000	$145,000	$151,000	$158,000	$165,000
Pumping Energy		$830,000	$871,000	$915,000	$961,000	$1,009,000
Subtotal Pumping Costs		$965,000	$1,016,000	$1,066,000	$1,119,000	$1,174,000
Total Operating Expenses		$15,990,000	$16,989,000	$17,803,000	$18,657,000	$19,556,000
Debt Service						
Existing Debt	Table 16	$3,077,000	$3,077,000	$3,077,000	$3,076,000	$3,076,000
Subtotal Debt Service		$3,077,000	$3,077,000	$3,077,000	$3,076,000	$3,076,000
Total Expenses		**$44,018,000**	**$45,017,000**	**$45,831,000**	**$46,684,000**	**$47,583,000**
Net Cashflow (Revenue - Expenses)		**$1,180,000**	**$208,000**	**($596,000)**	**($1,452,000)**	**($2,366,000)**

Table 19: Water – Transfers and Reserve Activity at Existing Rates

Water Reserve Activity					
Operating Fund	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$3,705,993	$4,885,993	$5,093,993	$4,497,993	$3,045,993
Transfers (Net Cashflow)	$1,180,000	$208,000	($596,000)	($1,452,000)	($2,366,000)
Ending Balance	**$4,885,993**	**$5,093,993**	**$4,497,993**	**$3,045,993**	**$679,993**
Liability Self-Insurance	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$100,000	$100,000	$100,000	$100,000	$100,000
Ending Balance	**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**
Water Capital Reserve	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$679,429	($2,473,439)	($5,403,046)	($11,525,442)	($17,962,351)
Plus:					
Wholesale Water Efficiency Loan Proceeds	$5,075,000	$2,581,090	$0	$0	$0
Less:					
CIP	($8,227,868)	($5,510,697)	($6,122,396)	($6,436,909)	($7,354,597)
Subtotal Water Capital Reserve	($2,473,439)	($5,403,046)	($11,525,442)	($17,962,351)	($25,316,948)
Interest Earnings	$0	$0	$0	$0	$0
Ending Balance	**($2,473,439)**	**($5,403,046)**	**($11,525,442)**	**($17,962,351)**	**($25,316,948)**
Rate Stabilization Reserve	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$0	$0	$0	$0	$0
Ending Balance	**$0**	**$0**	**$0**	**$0**	**$0**
New Water Resources	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$1,322,262	$1,322,262	$1,322,262	$1,322,262	$1,322,262
Ending Balance	**$1,322,262**	**$1,322,262**	**$1,322,262**	**$1,322,262**	**$1,322,262**
Total Reserves - Ending Balance	**$3,834,816**	**$1,113,209**	**($5,605,187)**	**($13,494,096)**	**($23,214,693)**

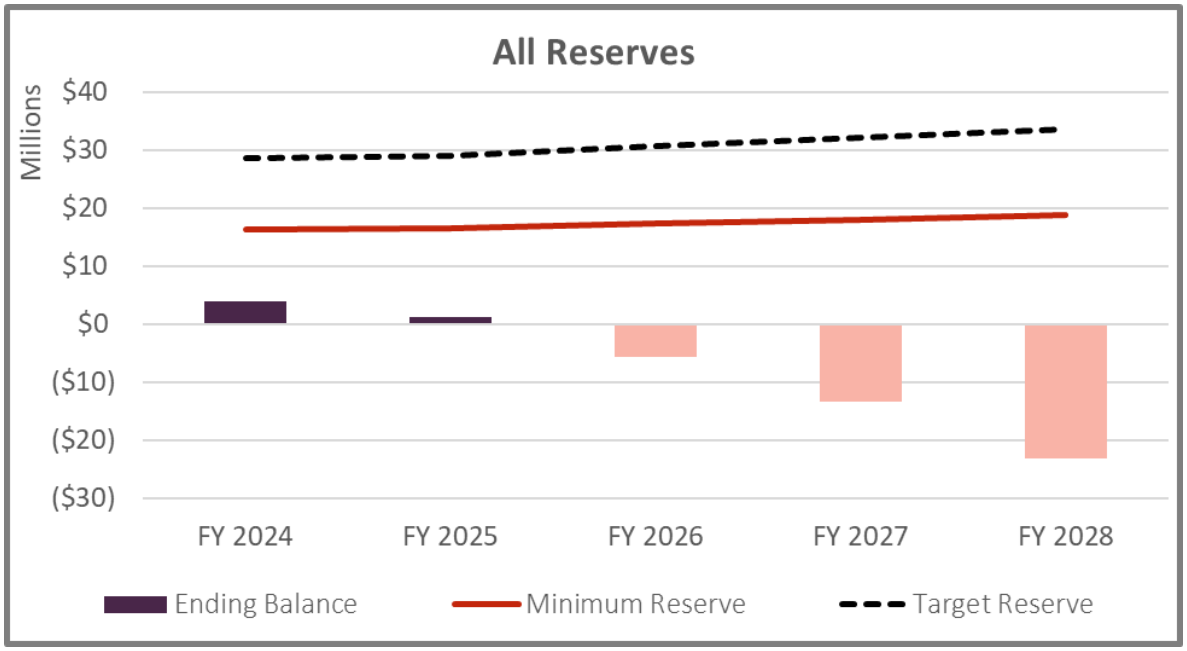
Figure 6 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent net operating income used to fund capital and build-up reserves.

Figure 6: Water – Current Operating Financial Position



With capital spending exceeding $33.6M over the Rate Setting Period, as shown in Figure 2, reserves would need to cover capital expenses to ensure capital projects continue to move forward as the District only has $7.6M in remaining loan proceeds. Figure 7 reflects the projected ending balances of reserves after operating and capital projects are funded. By the end of FY 2024, reserves are below the minimum reserve requirements and projected to be depleted by FY 2026.

Figure 7: Water – Projected Ending Reserves at Existing Rates



Proposed Financial Plan – Water Utility

From our review of the utility's financial outlook at existing rates, a proposed financial plan is developed to fund the multi-year revenue requirements. The proposed financial plan generates positive net operating income each year to go towards capital spending and satisfy reserve requirements. Table 20 forecasts projected revenues, ***with annual revenue adjustments***, and expenses through FY 2028.

Table 21 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer from Table 20, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

Table 20: Water – Proposed Financial Plan

Proposed Financial Plan						
Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Rate Revenues						
RMWD O&M Fixed Charge		$11,075,000	$11,075,000	$11,075,000	$11,075,000	$11,075,000
RMWD Variable Rate Revenue		$6,953,000	$6,953,000	$6,953,000	$6,953,000	$6,953,000
Pumping Revenue (Fixed + Variable)	Table 15	$565,000	$565,000	$565,000	$565,000	$565,000
SDCWA Fixed Charge		$5,125,000	$5,125,000	$5,125,000	$5,125,000	$5,125,000
SDCWA Variable Rate Revenue		$19,494,000	$19,494,000	$19,494,000	$19,494,000	$19,494,000
Total Rate Revenues		$43,212,000	$43,212,000	$43,212,000	$43,212,000	$43,212,000
Additional Revenue (from revenue adjustments):						
Fiscal Year / Revenue Adjustment						
FY 2024	9.0%	$3,889,000	$3,889,000	$3,889,000	$3,889,000	$3,889,000
FY 2025	9.0%		$4,239,000	$4,239,000	$4,239,000	$4,239,000
FY 2026	9.0%			$4,620,000	$4,620,000	$4,620,000
FY 2027	9.0%				$5,036,000	$5,036,000
FY 2028	9.0%					$5,489,000
Total Additional Revenue		$3,889,000	$8,128,000	$12,748,000	$17,784,000	$23,273,000
Subtotal Projected Rate Revenue		$47,101,000	$51,340,000	$55,960,000	$60,996,000	$66,485,000
Operating Revenues						
Readiness-To-Serve Revenue		$295,000	$295,000	$295,000	$295,000	$295,000
Unlock Fees		$5,000	$5,000	$5,000	$5,000	$5,000
RP Charges		$246,000	$246,000	$246,000	$246,000	$246,000
Inspections	Table 15	$20,000	$20,000	$20,000	$20,000	$20,000
Install-Hydrant		$2,000	$2,000	$2,000	$2,000	$2,000
Miscellaneous		$7,000	$7,000	$7,000	$7,000	$7,000
New Meter/Install Parts		$40,000	$40,000	$40,000	$40,000	$40,000
Notice Delivery Revenue		$5,000	$5,000	$5,000	$5,000	$5,000
Subtotal Operating Revenues		$620,000	$620,000	$620,000	$620,000	$620,000
Non-Operating Revenues						
NSF Fees		$3,000	$3,000	$3,000	$3,000	$3,000
Recycling Revenue		$8,000	$8,000	$8,000	$8,000	$8,000
Miscellaneous Revenue	Table 15	$95,000	$95,000	$95,000	$95,000	$95,000
Interest Revenues		$59,000	$103,000	$131,000	$154,000	$247,000
Property Tax Revenue		$650,000	$650,000	$650,000	$650,000	$650,000
Subtotal Non-Operating Revenues		$815,000	$859,000	$887,000	$910,000	$1,003,000
Other Revenues						
Penalty Charges		$405,000	$405,000	$405,000	$405,000	$405,000
Plan Check Rev.	Table 15	$81,000	$81,000	$81,000	$81,000	$81,000
Miscellaneous Revenue		$61,000	$61,000	$61,000	$61,000	$61,000
Misc. Revenue - Eng. Services		$4,000	$4,000	$4,000	$4,000	$4,000
Subtotal Other Revenues		$551,000	$551,000	$551,000	$551,000	$551,000
Total Revenues		**$49,087,000**	**$53,370,000**	**$58,018,000**	**$63,077,000**	**$68,659,000**

Proposed Financial Plan (continued)						
O&M Expenditures		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Purchased Water Costs						
Fixed Purchased Water Costs						
MWD Readiness-to-Serve Charge	Table 16	$457,000	$457,000	$457,000	$457,000	$457,000
MWD Capacity Charge		$327,000	$327,000	$327,000	$327,000	$327,000
Supply Reliability Charge		$1,041,000	$1,041,000	$1,041,000	$1,041,000	$1,041,000
Customer Service Charge		$1,040,000	$1,040,000	$1,040,000	$1,040,000	$1,040,000
Emergency Storage Charge		$1,517,000	$1,517,000	$1,517,000	$1,517,000	$1,517,000
Infrastructure Access Charge		$761,000	$761,000	$761,000	$761,000	$761,000
Subtotal Fixed Purchased Water Costs		$5,143,000	$5,143,000	$5,143,000	$5,143,000	$5,143,000
Variable Purchased Water Costs						
Purchased Water (Variable Costs)	Table 16	$20,467,000	$20,467,000	$20,467,000	$20,467,000	$20,467,000
PSAWR Credit/Discount		($659,000)	($659,000)	($659,000)	($659,000)	($659,000)
Subtotal Variable Purchased Water Costs		$19,808,000	$19,808,000	$19,808,000	$19,808,000	$19,808,000
Total Purchased Water Costs		$24,951,000	$24,951,000	$24,951,000	$24,951,000	$24,951,000
Operating Expenses						
Operating and Maintenance						
Administration	Table 16	$1,726,000	$1,832,000	$1,930,000	$2,033,000	$2,142,000
Board of Directors		$44,000	$46,000	$48,000	$50,000	$52,000
Customer Service		$511,000	$541,000	$567,000	$596,000	$625,000
Distribution / Capital Construction		$2,426,000	$2,579,000	$2,699,000	$2,825,000	$2,957,000
Engineering		$983,000	$1,039,000	$1,095,000	$1,155,000	$1,218,000
Finance		$1,001,000	$1,058,000	$1,112,000	$1,169,000	$1,230,000
Fleet/Garage		$544,000	$578,000	$605,000	$633,000	$663,000
General Fund Expense		$561,000	$604,000	$629,000	$654,000	$680,000
Human Resources		$384,000	$407,000	$428,000	$449,000	$472,000
Information Technology		$1,385,000	$1,476,000	$1,545,000	$1,618,000	$1,694,000
Meters		$1,091,000	$1,156,000	$1,211,000	$1,269,000	$1,331,000
Operations		$3,163,000	$3,369,000	$3,522,000	$3,681,000	$3,848,000
Risk Management		$817,000	$877,000	$914,000	$953,000	$994,000
Valve Maintenance		$389,000	$411,000	$432,000	$453,000	$476,000
Subtotal Operating and Maintenance		$15,025,000	$15,973,000	$16,737,000	$17,538,000	$18,382,000
Pumping Costs						
Pumping Operations	Table 16	$135,000	$145,000	$151,000	$158,000	$165,000
Pumping Energy		$830,000	$871,000	$915,000	$961,000	$1,009,000
Subtotal Pumping Costs		$965,000	$1,016,000	$1,066,000	$1,119,000	$1,174,000
Total Operating Expenses		$15,990,000	$16,989,000	$17,803,000	$18,657,000	$19,556,000
Debt Service						
Existing Debt	Table 16	$3,077,000	$3,077,000	$3,077,000	$3,076,000	$3,076,000
Subtotal Debt Service		$3,077,000	$3,077,000	$3,077,000	$3,076,000	$3,076,000
Total Expenses		**$44,018,000**	**$45,017,000**	**$45,831,000**	**$46,684,000**	**$47,583,000**
Net Cashflow (Revenue - Expenses)		**$5,069,000**	**$8,353,000**	**$12,187,000**	**$16,393,000**	**$21,076,000**

Table 21: Water – Reserves Activity through FY 2028

Water Reserve Activity					
Operating Fund	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$3,705,993	$7,235,836	$7,400,055	$7,544,917	$16,714,114
Transfers (Net Cashflow)	$5,069,000	$8,353,000	$12,187,000	$16,393,000	$21,076,000
Intermediate Balance	$8,774,993	$15,588,836	$19,587,055	$23,937,917	$37,790,114
Transfers to Water Capital Reserve	($1,539,157)	($8,188,781)	($9,244,138)	($6,972,003)	($7,870,731)
Transfers to Rate Stabilization Reserve	$0	$0	($2,798,000)	($251,800)	($274,450)
Ending Balance	**$7,235,836**	**$7,400,055**	**$7,544,917**	**$16,714,114**	**$29,644,934**
Liability Self-Insurance	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$100,000	$100,000	$100,000	$100,000	$100,000
Ending Balance	**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**
Water Capital Reserve	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$679,429	($934,282)	$4,350,322	$7,560,731	$8,213,249
Plus:					
Transfers from/(to) Operating Fund	$1,539,157	$8,188,781	$9,244,138	$6,972,003	$7,870,731
Wholesale Water Efficiency Loan Proceeds	$5,075,000	$2,581,090	$0	$0	$0
Less:					
CIP	($8,227,868)	($5,510,697)	($6,122,396)	($6,436,909)	($7,354,597)
Subtotal Water Capital Reserve	($934,282)	$4,324,892	$7,472,063	$8,095,825	$8,729,383
Interest Earnings	$0	$25,430	$88,668	$117,424	$127,070
Ending Balance	**($934,282)**	**$4,350,322**	**$7,560,731**	**$8,213,249**	**$8,856,453**
Rate Stabilization Reserve	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$0	$0	$0	$2,798,000	$3,049,800
Transfers from Operating Fund	$0	$0	$2,798,000	$251,800	$274,450
Ending Balance	**$0**	**$0**	**$2,798,000**	**$3,049,800**	**$3,324,250**
New Water Resources	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$1,322,262	$1,322,262	$1,322,262	$1,322,262	$1,322,262
Ending Balance	**$1,322,262**	**$1,322,262**	**$1,322,262**	**$1,322,262**	**$1,322,262**
Total Reserves - Ending Balance	**$7,723,816**	**$13,172,639**	**$19,325,910**	**$29,399,425**	**$43,247,898**

Figure 8 identifies the operating position based on the proposed financial plan and Figure 9 shows the capital plan with funding sources. Figure 10 identifies the ending reserve balances for reserves after funding capital. The proposed financial plan takes a measured approach and rebuilds reserves over the Rate Setting Period. It is recommended to meet or exceed the target reserve by FY 2028 to help mitigate uncertainty related to the potential disconnect from SDCWA, anticipated cutbacks in agriculture water usage, and future capital costs.

Figure 8: Water Proposed Operating Position

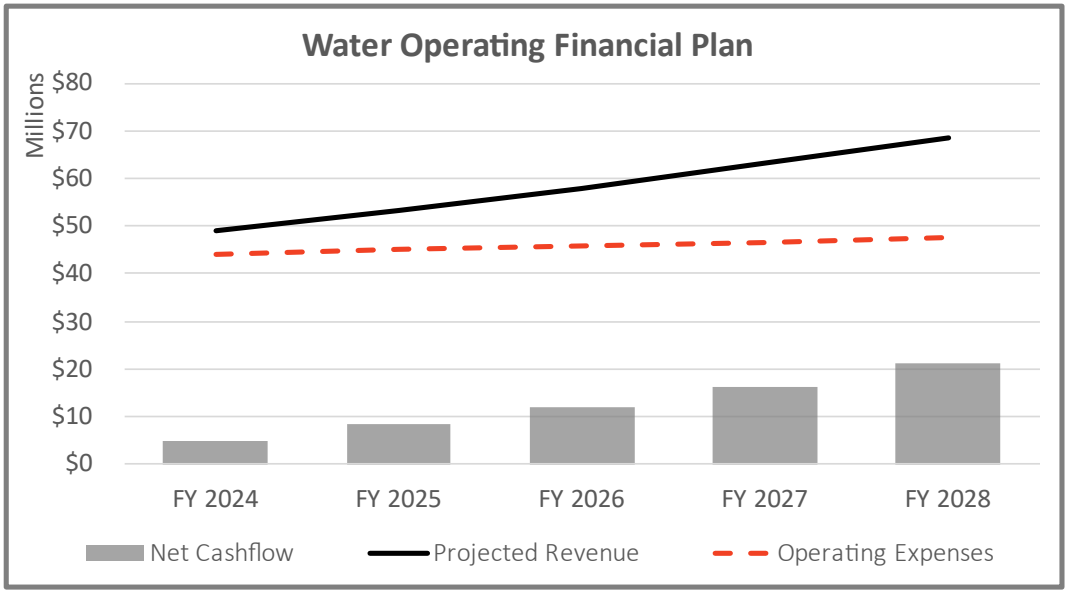


Figure 9: Water Capital Improvement Plan with Funding Sources

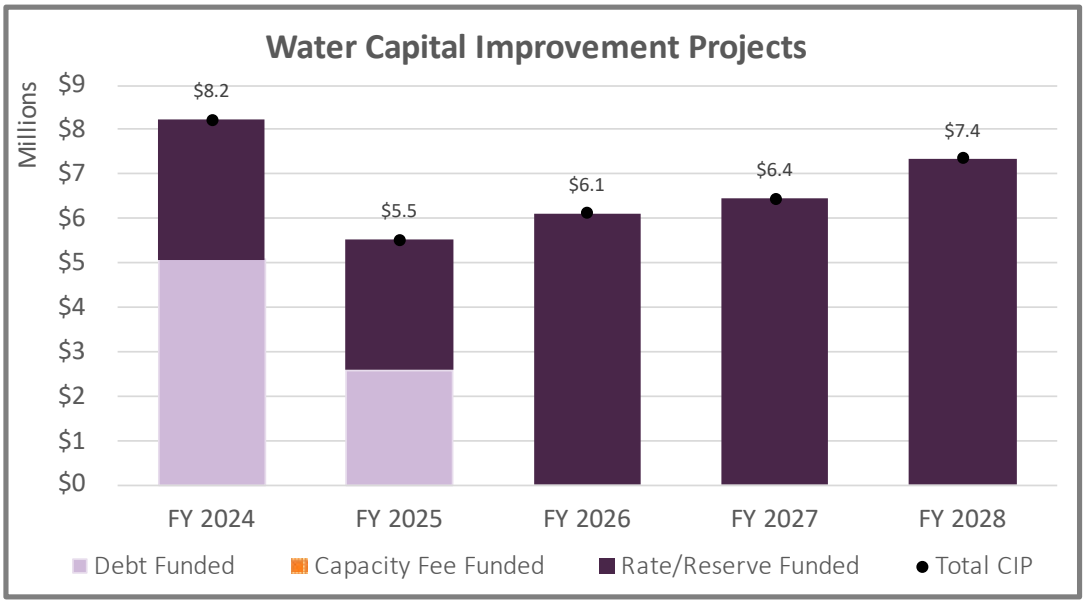
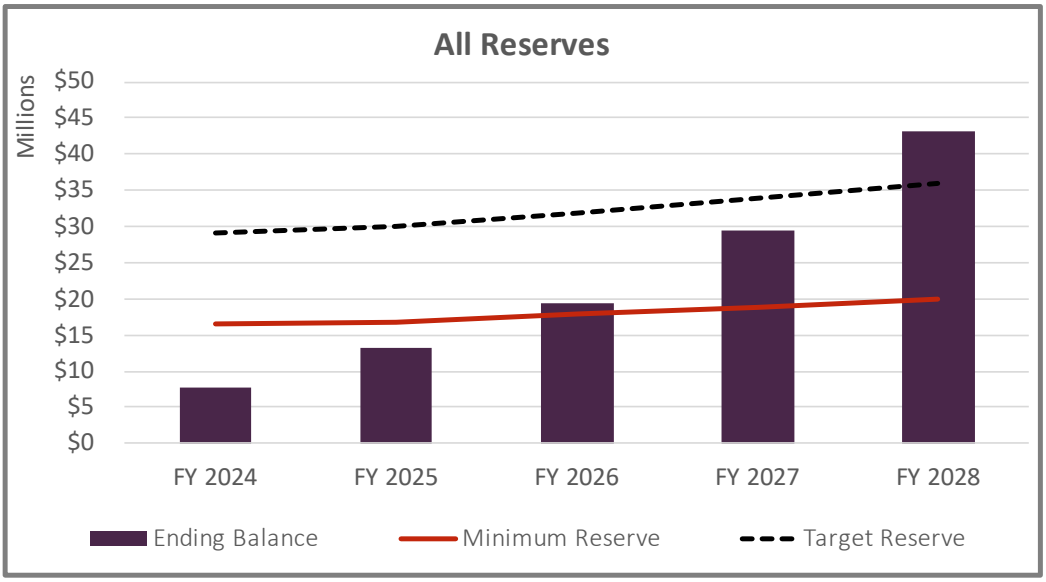


Figure 10: Water Proposed Ending Reserves



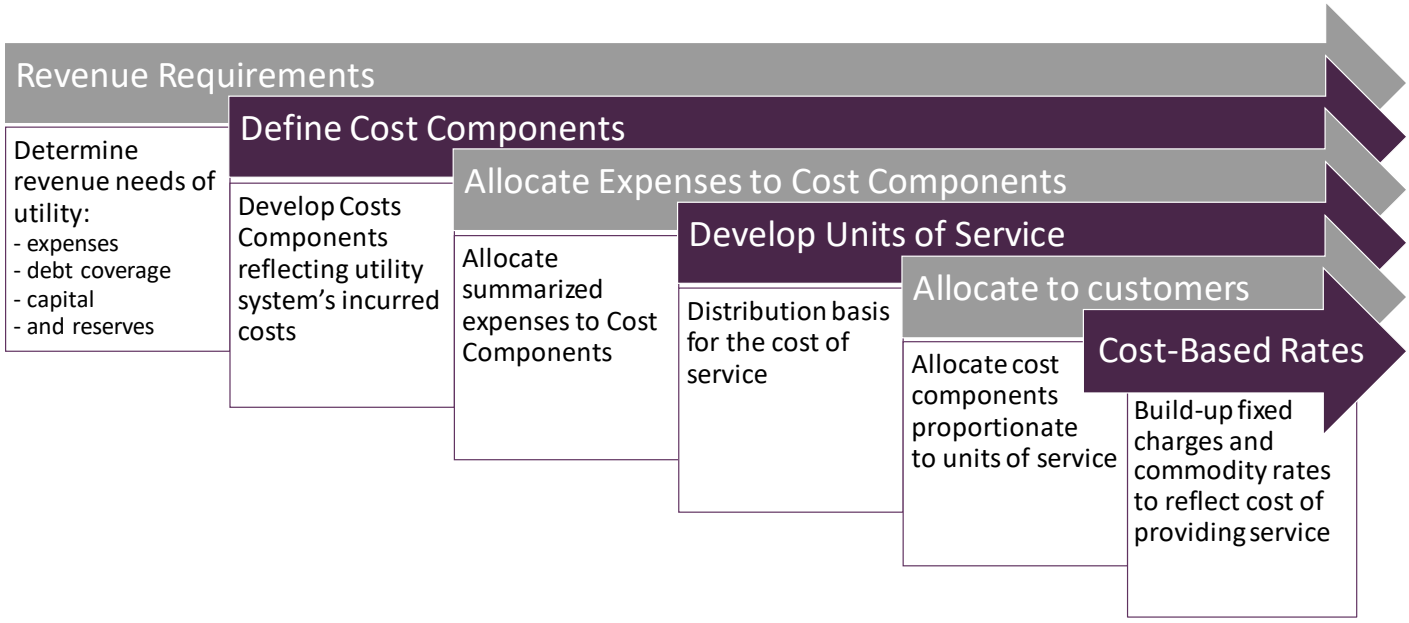
Cost of Service Analysis – Water Utility

Cost of Service Process

The next step in developing rates is to perform a cost-of-service analysis. This step develops proposed water rates that are cost-based and equitable. Meeting the requirements of Proposition 218 is of paramount importance in developing utility rates. Proposition 218 does not provide a particular methodology for establishing cost-based rates. This study and analysis herein allocates costs proportionately to each parcel served by the District and derives water rates that adhere to the cost-of-service provisions of Proposition 218.

It is important to understand **how** costs are incurred to determine the most appropriate way to recover them. The following graphic summarizes the cost-of-service process. This process allocates costs incurred to customer classes and tiers based on their proportional share. As a result, the proposed rates are cost-based and reflect the costs incurred to deliver water service to all customers.

Figure 11: Cost of Service Process



Revenue Requirements

With FY 2024 as the first year of the proposed rate schedule, revenue requirements are determined for FY 2024 and used for the cost-of-service. Revenue requirements include Purchased Water Costs, O&M expenses, available revenue offsets from other revenues, and reserve funding. Funding capital projects and replenishing reserves to meet or exceed the minimum reserve requirement is achieved over the Rate Setting Period. Purchased water rates from SDCWA are held constant during the Rate Setting Period. Any incremental increases in purchased water costs from SDCWA will be in addition to what is shown in the following table and captured through pass through adjustments. The results of the financial plan analysis are summarized in Table 22 and represent the revenue required from rates over the Rate Setting Period.

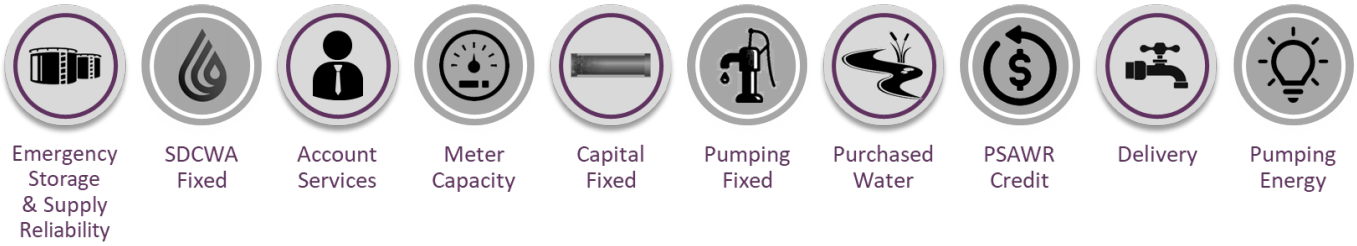
Table 22: Water Revenue Requirements

Revenue Requirements	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Purchased Water Costs					
Fixed Purchased Water Costs					
MWD Readiness-to-Serve Charge	$457,000	$457,000	$457,000	$457,000	$457,000
MWD Capacity Charge	$327,000	$327,000	$327,000	$327,000	$327,000
Supply Reliability Charge	$1,041,000	$1,041,000	$1,041,000	$1,041,000	$1,041,000
Customer Service Charge	$1,040,000	$1,040,000	$1,040,000	$1,040,000	$1,040,000
Emergency Storage Charge	$1,517,000	$1,517,000	$1,517,000	$1,517,000	$1,517,000
Infrastructure Access Charge	$761,000	$761,000	$761,000	$761,000	$761,000
Total Fixed Purchased Water Costs	$5,143,000	$5,143,000	$5,143,000	$5,143,000	$5,143,000
Variable Purchased Water Costs					
Purchased Water (Variable Costs)	$20,467,000	$20,467,000	$20,467,000	$20,467,000	$20,467,000
PSAWR Credit/Discount	($659,000)	($659,000)	($659,000)	($659,000)	($659,000)
Total Variable Purchased Water Costs	$19,808,000	$19,808,000	$19,808,000	$19,808,000	$19,808,000
Total Purchased Water Costs	$24,951,000	$24,951,000	$24,951,000	$24,951,000	$24,951,000
Operating and Maintenance					
Administration	$1,726,000	$1,832,000	$1,930,000	$2,033,000	$2,142,000
Board of Directors	$44,000	$46,000	$48,000	$50,000	$52,000
Customer Service	$511,000	$541,000	$567,000	$596,000	$625,000
Distribution / Capital Construction	$2,426,000	$2,579,000	$2,699,000	$2,825,000	$2,957,000
Engineering	$983,000	$1,039,000	$1,095,000	$1,155,000	$1,218,000
Finance	$1,001,000	$1,058,000	$1,112,000	$1,169,000	$1,230,000
Fleet/Garage	$544,000	$578,000	$605,000	$633,000	$663,000
General Fund Expense	$561,000	$604,000	$629,000	$654,000	$680,000
Human Resources	$384,000	$407,000	$428,000	$449,000	$472,000
Information Technology	$1,385,000	$1,476,000	$1,545,000	$1,618,000	$1,694,000
Meters	$1,091,000	$1,156,000	$1,211,000	$1,269,000	$1,331,000
Operations	$3,163,000	$3,369,000	$3,522,000	$3,681,000	$3,848,000
Risk Management	$817,000	$877,000	$914,000	$953,000	$994,000
Valve Maintenance	$389,000	$411,000	$432,000	$453,000	$476,000
Total Operating and Maintenance	$15,025,000	$15,973,000	$16,737,000	$17,538,000	$18,382,000
Pumping Costs					
Pumping Operations	$135,000	$145,000	$151,000	$158,000	$165,000
Pumping Energy	$830,000	$871,000	$915,000	$961,000	$1,009,000
Total Pumping Costs	$965,000	$1,016,000	$1,066,000	$1,119,000	$1,174,000
Debt Service					
Existing Debt	$3,077,000	$3,077,000	$3,077,000	$3,076,000	$3,076,000
Total Debt Service	$3,077,000	$3,077,000	$3,077,000	$3,076,000	$3,076,000
Other Funding					
Revenue Offsets					
Operating Revenues	($620,000)	($620,000)	($620,000)	($620,000)	($620,000)
Non-Operating Revenues	($815,000)	($859,000)	($887,000)	($910,000)	($1,003,000)
Other Revenues	($551,000)	($551,000)	($551,000)	($551,000)	($551,000)
Total Revenue Offsets	($1,986,000)	($2,030,000)	($2,058,000)	($2,081,000)	($2,174,000)
Adjustments					
Reserve Funding	$5,069,000	$8,353,000	$12,187,000	$16,393,000	$21,076,000
Total Adjustments	$5,069,000	$8,353,000	$12,187,000	$16,393,000	$21,076,000
Total Other Funding	$3,083,000	$6,323,000	$10,129,000	$14,312,000	$18,902,000
Revenue Required from Rates	**$47,101,000**	**$51,340,000**	**$55,960,000**	**$60,996,000**	**$66,485,000**

Define Cost Components

The utility incurs costs to accommodate total water demand throughout the year, including water supply costs, treatment, operating expenses, and pumping. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified to allocate expenses based on how they are incurred. The cost components shown in Figure 12 reflect the cost components used for this study.

Figure 12: Cost Components



Emergency Storage & Supply Reliability – Fixed monthly water supply costs associated with Emergency Storage and Supply Reliability that are incurred by the District from SDCWA. These two fixed components are separated out from other SDCWA fixed charges because PSAWR customers do not pay these fixed costs.
SDCWA Fixed – Fixed monthly water supply costs incurred by the District from SDCWA, including MWD Capacity, Customer Service, Infrastructure Access, and MWD Readiness-to-Serve.
Account Services – Fixed expenses that do not necessarily fluctuate based on usage or meter size.
Meter Capacity – Expenses associated with operating and maintaining the system, planning, customer services, support services, reserves, and overhead.
Capital Fixed – Expenses associated with debt and reserves related to system capital.
Pumping Fixed – Fixed expenses associated with the District Pumping division, including staffing, equipment & building maintenance, and supplies.
Purchased Water – Water supply costs from the purchase of treated water from SDCWA.
PSAWR Credit – Credits from SDCWA for usage associated with PSAWR customers.
Delivery – Expenses associated with distribution, engineering, fleet, operating, valves, safety, and reserve funding.
Pumping Energy – Energy costs incurred to pump water to higher elevations.

Allocate Expenses to Cost Components

When allocating expenses to the defined costs components, it is important to have a sound basis as to why an expense was allocated to a certain fixed cost component versus a variable cost component or split between both fixed and variable. The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**.

Table 23 summarizes the percent allocation of purchased water costs from SDCWA to the cost components, and Table 24 uses the percent allocations in Table 23 to allocate expenses in dollars to each cost component.

Table 23: SDCWA Expense Allocation to Cost Components (%)

Purchased Water Costs	Methodology / Allocation Basis	Emergency Storage & Supply Reliability	SDCWA Fixed	Purchased Water	PSAWR Credit	Total
Fixed Purchased Water Costs						
MWD Readiness-to-Serve Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
MWD Capacity Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Supply Reliability Charge	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Customer Service Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Emergency Storage Charge	Specific	100.0%	0.0%	0.0%	0.0%	100.0%
Infrastructure Access Charge	Specific	0.0%	100.0%	0.0%	0.0%	100.0%
Variable Purchased Water Costs						
Purchased Water (Variable Costs)	Specific	0.0%	0.0%	100.0%	0.0%	100.0%
PSAWR Credit/Discount	Specific	0.0%	0.0%	0.0%	100.0%	100.0%

Table 24: SDCWA Expense Allocation to Cost Components ($)

Purchased Water Costs	Methodology / Allocation Basis	Emergency Storage & Supply Reliability	SDCWA Fixed	Purchased Water	PSAWR Credit	Total
Fixed Purchased Water Costs						
MWD Readiness-to-Serve Charge	Specific	$0	$457,000	$0	$0	$457,000
MWD Capacity Charge	Specific	$0	$327,000	$0	$0	$327,000
Supply Reliability Charge	Specific	$1,041,000	$0	$0	$0	$1,041,000
Customer Service Charge	Specific	$0	$1,040,000	$0	$0	$1,040,000
Emergency Storage Charge	Specific	$1,517,000	$0	$0	$0	$1,517,000
Infrastructure Access Charge	Specific	$0	$761,000	$0	$0	$761,000
Variable Purchased Water Costs						
Purchased Water (Variable Costs)	Specific	$0	$0	$20,467,000	$0	$20,467,000
PSAWR Credit/Discount	Specific	$0	$0	$0	($659,000)	($659,000)
Total Allocation ($)		**$2,558,000**	**$2,585,000**	**$20,467,000**	**($659,000)**	**$24,951,000**

Table 25 summarizes the percent allocation of O&M Revenue Requirements to the cost components, and Table 26 uses the percent allocations in Table 25 to allocate O&M expenses in dollars to each cost component.

Table 25: Water O&M Expenses Allocation to Cost Components (%)

Operating and Maintenance	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Administration	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Board of Directors	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Customer Service	Fixed Demand	100.0%	0.0%	0.0%	0.0%	100.0%
Distribution / Capital Construction	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
Engineering	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
Finance	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Fleet/Garage	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
General Fund Expense	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Human Resources	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Information Technology	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Meters	Fixed Demand	0.0%	100.0%	0.0%	0.0%	100.0%
Operations	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
Risk Management	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%
Valve Maintenance	Average Demand	0.0%	0.0%	0.0%	100.0%	100.0%

Table 26: Water O&M Expenses Allocation to Cost Components ($)

Operating and Maintenance	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Administration	*Fixed Demand*	$0	$1,726,000	$0	$0	$1,726,000
Board of Directors	*Fixed Demand*	$0	$44,000	$0	$0	$44,000
Customer Service	*Fixed Demand*	$511,000	$0	$0	$0	$511,000
Distribution / Capital Construction	*Average Demand*	$0	$0	$0	$2,426,000	$2,426,000
Engineering	*Average Demand*	$0	$0	$0	$983,000	$983,000
Finance	*Fixed Demand*	$0	$1,001,000	$0	$0	$1,001,000
Fleet/Garage	*Average Demand*	$0	$0	$0	$544,000	$544,000
General Fund Expense	*Fixed Demand*	$0	$561,000	$0	$0	$561,000
Human Resources	*Fixed Demand*	$0	$384,000	$0	$0	$384,000
Information Technology	*Fixed Demand*	$0	$1,385,000	$0	$0	$1,385,000
Meters	*Fixed Demand*	$0	$1,091,000	$0	$0	$1,091,000
Operations	*Average Demand*	$0	$0	$0	$3,163,000	$3,163,000
Risk Management	*Average Demand*	$0	$0	$0	$817,000	$817,000
Valve Maintenance	*Average Demand*	$0	$0	$0	$389,000	$389,000
Total Allocation ($)		**$511,000**	**$6,192,000**	**$0**	**$8,322,000**	**$15,025,000**
Operating and Maintenance Allocation (%)		**3.4%**	**41.2%**	**0.0%**	**55.4%**	**100.0%**

Table 27 summarizes the percent allocation of Pumping expenses to the cost components, and Table 28 uses the percent allocations in Table 27 to allocate Pumping expenses in dollars to each cost component.

Table 27: Pumping Expense Allocation to Cost Components (%)

Pumping Costs	Methodology / Allocation Basis	Pumping Fixed	Pumping Energy	Total
Pumping Operations	**Specific**	100.0%	0.0%	100.0%
Pumping Energy	**Specific**	0.0%	100.0%	100.0%

Table 28: Pumping Expense Allocation to Cost Components ($)

Pumping Costs	Methodology / Allocation Basis	Pumping Fixed	Pumping Energy	Total
Pumping Operations	*Specific*	$135,000	$0	$135,000
Pumping Energy	*Specific*	$0	$830,000	$830,000
Total Allocation ($)		**$135,000**	**$830,000**	**$965,000**

Table 29 summarizes the percent allocation of Debt to the cost components, and Table 30 uses the percent allocations in Table 29 to allocate Debt in dollars to each cost component. Annual debt payments are allocated 100% to Capital Fixed since debt is a secured obligation of the District that must be paid and is typically used to finance capital projects.

Table 29: Water Debt Allocation to Cost Components (%)

Debt Service	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Existing Debt	**Specific**	0.0%	0.0%	100.0%	0.0%	100.0%

Table 30: Water Debt Allocation to Cost Components ($)

Debt Service	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Existing Debt	*Specific*	$0	$0	$3,077,000	$0	$3,077,000
Total Allocation ($)		**$0**	**$0**	**$3,077,000**	**$0**	**$3,077,000**

Other Funding includes other operating revenues, non-operating revenues, and reserve funding. Other Funding was allocated to the cost components based on O&M percentages derived in Table 26 to maintain proportionality in how expenses were allocated to each cost component. Table 31 summarizes the percent allocation of Other Funding to the cost components, and Table 32 uses the percent allocations in Table 31 to allocate revenue offsets and expenses in dollars to each cost component.

Table 31: Water Other Funding Allocation to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Revenue Offsets						
Operating Revenues	**O&M Allocation**	3.4%	41.2%	0.0%	55.4%	100.0%
Non-Operating Revenues	**O&M Allocation**	3.4%	41.2%	0.0%	55.4%	100.0%
Other Revenues	**O&M Allocation**	3.4%	41.2%	0.0%	55.4%	100.0%
Adjustments						
Reserve Funding	**O&M Allocation**	3.4%	41.2%	0.0%	55.4%	100.0%

Table 32: Water Other Funding Allocation to Cost Components ($)

Other Funding	Methodology / Allocation Basis	Account Services	Meter Capacity	Capital Fixed	Delivery	Total
Revenue Offsets						
Operating Revenues	*O&M Allocation*	($21,086)	($255,510)	$0	($343,404)	($620,000)
Non-Operating Revenues	*O&M Allocation*	($27,718)	($335,872)	$0	($451,410)	($815,000)
Other Revenues	*O&M Allocation*	($18,740)	($227,074)	$0	($305,186)	($551,000)
Adjustments						
Reserve Funding	*O&M Allocation*	$172,397	$2,089,002	$0	$2,807,602	$5,069,000
Total Allocation ($)		**$104,853**	**$1,270,545**	**$0**	**$1,707,602**	**$3,083,000**

Table 33 summarizes the FY 2024 total revenue requirement derived in Table 22 by cost component.

Table 33: FY 2024 Cost-of-Service Requirements by Cost Component

	Fixed Components						Variable Components				
Revenue Requirement	Emergency Storage & Supply Reliability	SDCWA Fixed	Account Services	Meter Capacity	Capital Fixed	Pumping Fixed	Purchased Water	PSAWR Credit	Delivery	Pumping Energy	Total
Purchased Water Costs	$2,558,000	$2,585,000	$0	$0	$0	$0	$20,467,000	($659,000)	$0	$0	$24,951,000
Operating and Maintenance	$0	$0	$511,000	$6,192,000	$0	$0	$0	$0	$8,322,000	$0	$15,025,000
Pumping Costs	$0	$0	$0	$0	$0	$135,000	$0	$0	$0	$830,000	$965,000
Debt Service	$0	$0	$0	$0	$3,077,000	$0	$0	$0	$0	$0	$3,077,000
Other Funding	$0	$0	$104,853	$1,270,545	$0	$0	$0	$0	$1,707,602	$0	$3,083,000
COS Requirements	**$2,558,000**	**$2,585,000**	**$615,853**	**$7,462,545**	**$3,077,000**	**$135,000**	**$20,467,000**	**($659,000)**	**$10,029,602**	**$830,000**	**$47,101,000**

Rate Design – Water Utility

Develop Units of Service

Unit rates for each cost component are derived by spreading the corresponding revenue requirements over appropriate units of service (distribution basis). This approach provides a clear connection between costs incurred and the proportionate share attributable to each customer class tier, and customer account. When designing rates, the most critical component is to connect costs to the proposed rates, resulting in a rate structure that is cost-based and in compliance with Proposition 218. The previous section summarized costs by expense category and then allocated to cost components based on how each cost is incurred. The next step in designing rates is to allocate each cost component to customers in relation to their use of the system and facilities. The method of apportionment considers each customer's share of system costs and is reflected by the units of service used to equitably distribute the cost components to each customer account. The distribution basis varies by cost component and includes total accounts, Meter Equivalents (MEs), which reflect demand placed on the system based on meter size, total water usage, and total usage within pumping zones. Table 34 identifies the number if accounts by customer class and meter size.

Table 34: FY 2024 Total Accounts

Water Accounts by Customer Class and Meter Size										
Line #	Meter Size	Single-Family	Multi-Family	Commercial	Institutional	Agriculture w/ Res	Agriculture	PSAWR Domestic	PSAWR Commercial	Total Accounts
1	5/8"	234	-	1	-	2	1	-	-	**238**
2	3/4"	3,202	39	33	3	170	44	16	4	**3,511**
3	1"	2,523	5	105	2	800	236	167	40	**3,878**
4	1 1/2"	169	31	56	4	147	104	61	33	**605**
5	2"	113	39	55	5	69	117	51	48	**497**
6	3"	5	3	6	1	3	16	4	5	**43**
7	4"	1	5	4	2	1	6	-	1	**20**
8	6"	-	-	-	-	-	1	-	-	**1**
9	Total	6,247	122	260	17	1,192	525	299	131	**8,793**
10	**Annual Units** *(line 9 x 12 bills)*	**74,964**	**1,464**	**3,120**	**204**	**14,304**	**6,300**	**3,588**	**1,572**	**105,516**

In Table 35 each meter size was assigned an equivalency factor using the flow characteristics of a 3/4" meter. Based on the District's meter inventory, the safe maximum operating flow capacity for these meter types, as identified in the AWWA M1 Manual, 6th Edition, Table B-2, were used for determining meter equivalencies. The safe maximum operating flow capacity for each meter was divided by the 3/4" meters' safe operating flow capacity of 30 gallons per minute (gpm) to determine the equivalent meter ratio. In other words, the calculations convert all larger sized meters to an equivalent number of 3/4" meters based on the safe operating flow capacity of 30 gpm. The Capacity Ratios provide an equivalency to the base 3/4" based on flow and correlates to the capacity that each meter bought into the system at point of connection. Total MEs are determined by multiplying the number of meters by the Capacity Ratio (rounded to a whole number), and then multiplying the result by the billing periods in a year (12 billing periods)[4]. Table 34 and Table 35 provides the number of accounts within each customer class by meter size and meter equivalents, respectively.

[4] The District bills customers on a monthly basis; therefore, there are 12 billing periods during the fiscal year.

Table 35: FY 2024 Total Meter Equivalents

Water Meter Equivalents by Customer Class and Meter Size												
Line #	Meter Size	AWWA Capacity	AWWA Capacity Ratio	Single-Family	Multi-Family	Commercial	Institutional	Agriculture w/ Res	Agriculture	PSAWR Domestic	PSAWR Commercial	Total Equivalent Units
1	5/8"	30	1.00	234	0	1	0	2	1	0	0	**238**
2	3/4"	30	1.00	3,202	39	33	3	170	44	16	4	**3,511**
3	1"	50	1.67	4,205	8	175	3	1,333	393	278	67	**6,462**
4	1 1/2"	100	3.33	563	103	187	13	490	347	203	110	**2,016**
5	2"	160	5.33	603	208	293	27	368	624	272	256	**2,651**
6	3"	350	11.67	58	35	70	12	35	187	47	58	**502**
7	4"	630	21.00	21	105	84	42	21	126	-	21	**420**
8	6"	1,300	43.33	-	-	-	-	-	43	-	-	**43**
9	Total			8,886	498	843	100	2,419	1,765	816	516	**15,843**
10	**Annual Units** *(line 9 x 12 bills)*			**106,632**	**5,976**	**10,116**	**1,200**	**29,028**	**21,180**	**9,792**	**6,192**	**190,116**

Table 36 summarizes the annual units of service related to All Accounts (line 10 of Table 34) and Total MEs (line 10 of Table 35). Table 36 also separately identifies the annual meter equivalents for Non-PSAWR and Agricultural and PSWAR accounts, which are needed for the allocation of certain cost-of-service components.

Table 36: FY 2024 Accounts and Meter Equivalents Summary

Annual Fixed Units of Service Summary					
Customer Class	All Account	Accounts less PSAWR	Total MEs	Non-PSAWR MEs	Agricultural & PSAWR MEs
Single-Family	74,964	74,964	106,632	106,632	0
Multi-Family	1,464	1,464	5,976	5,976	0
Commercial	3,120	3,120	10,116	10,116	0
Institutional	204	204	1,200	1,200	0
Agriculture w/ Res	14,304	14,304	29,028	29,028	29,028
Agriculture	6,300	6,300	21,180	21,180	21,180
PSAWR Domestic	3,588	0	9,792	0	9,792
PSAWR Commercial	1,572	0	6,192	0	6,192
Annual Fixed Units	**105,516**	**100,356**	**190,116**	**174,132**	**66,192**

Table 37 summarizes the FY 2024 projected usage broken out by customer class. PSAWR customers do not receive the commodity credit for domestic usage (22 HCF per month) as determined by SDCWA. Therefore, the table also summarizes the PSAWR Usage less Domestic. The annual number of PSAWR Domestic customers from Table 34 was multiplied by 22 HCF to determine the usage that would not receive the credit. This usage was subtracted from the PSAWR Domestic usage to arrive at the usage shown in the table. Table 38 summarizes the number of pumping accounts and usage within each pumping zone.

Table 37: FY 2024 Projected Usage

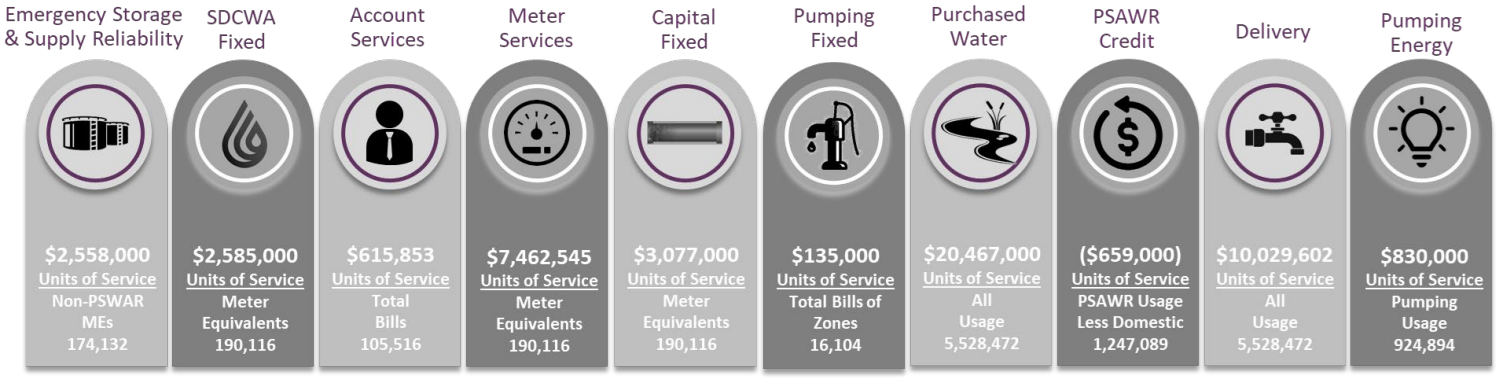
Projected Usage (HCF)		
Customer Class	All Usage (HCF)	PSAWR Usage less Domestic (HCF)
Single-Family	1,521,953	-
Multi-Family	130,046	-
Commercial	362,543	-
Institutional	26,318	-
Agriculture w/ Res	918,501	-
Agriculture	1,243,086	-
PSAWR Domestic	721,309	642,373
PSAWR Commercial	604,716	604,716
Total	**5,528,472**	**1,247,089**

Table 38: FY 2024 Projected Pumping Zone Accounts & Usage

Pumping Zone Summary				
Line #	Pump Zones	Zone Description	Pumping Accounts	Pumping Usage (HCF)
1	Pump Zone 1	*Rainbow Heights*	181	183,452
2	Pump Zone 2	*Improvement District U-1*	111	38,945
3	Pump Zone 3	*Vallecitos*	60	67,006
4	Pump Zone 4	*Northside*	430	363,390
5	Pump Zone 5	*Morro Tank*	349	128,436
6	Pump Zone 6	*Huntley*	152	131,538
7	Pump Zone 7	*Magee Tank*	59	12,127
8	**Total**		1,342	**924,894**
9	Annual Units (Line 8 x 12 bills)		**16,104**	

Using the units of service identified in Table 36 through Table 38, the distribution basis can be identified for each cost component. Figure 13 identifies the total revenue requirements by cost component from Table 33 and the corresponding units of service.

Figure 13: Water Distribution Basis and Units of Service by Cost Component



Using the FY 2024 revenue requirements, the cost of service allocates expenses to customers based on the service demands that each place on the system (cost causation). This cost causation approach ensures that each customer proportionately shares in the financial obligation of the utility. For each cost component's unit rate computations, unit rates were rounded up to the nearest penny.

Fixed Cost Recovery

Emergency Storage and Supply Reliability

SDCWA Fixed costs include six separate charges to its member agencies, including MWD Capacity, Customer Service, Infrastructure Access, Emergency Storage, Supply Reliability, and MWD Readiness-to-Serve. The SDCWA PSAWR program allows eligible agricultural customers to participate and receive a lower level of water service during water shortages or emergencies. In exchange, PSAWR customers are exempt from paying Emergency Storage and Supply Reliability fixed charges. Therefore, the SDCWA's Emergency Storage and Supply Reliability charges incurred by the District are only spread over meter equivalents of Non-PSAWR accounts. Table 39 apportions the revenue requirement for Emergency Storage and Supply Reliability based on meter size as represented by total Non-PSAWR MEs (from Table 36).

Table 39: FY 2024 Emergency and Reliability Monthly Unit Rate

Emergency Storage & Supply Reliability Component Unit Rate	
Revenue Requirement	$2,558,000
÷ Non-PSAWR MEs	174,132
Monthly Unit Rate	**$14.70**

Customer Class	Non-PSAWR MEs	% Allocation	Revenue Requirement
Single-Family	106,632	61.2%	$1,566,425
Multi-Family	5,976	3.4%	$87,787
Commercial	10,116	5.8%	$148,604
Institutional	1,200	0.7%	$17,628
Agriculture w/ Res	29,028	16.7%	$426,421
Agriculture	21,180	12.2%	$311,134
PSAWR Domestic	0	0.0%	$0
PSAWR Commercial	0	0.0%	$0
Total	**174,132**	**100.0%**	**$2,558,000**

SDCWA Fixed

The remaining SDCWA fixed charges of MWD Capacity, Customer Service, Infrastructure Access, and MWD Readiness-to-Serve (SDCWA Fixed) are incurred by the District based on the total number of accounts and meter equivalents regardless of the total amount of water used. Therefore, these fixed costs are spread to all customers based on meter size. The revenue requirement for SDCWA Fixed is apportioned based on meter size as represented by Total MEs as shown in Table 40.

Table 40: FY 2024 SDCWA Fixed Monthly Unit Rate

SDCWA Fixed Component Unit Rate	
Revenue Requirement	$2,585,000
÷ Total MEs	190,116
Monthly Unit Rate	**$13.60**

Customer Class	Total MEs	% Allocation	Revenue Requirement
Single-Family	106,632	56.1%	$1,449,871
Multi-Family	5,976	3.1%	$81,255
Commercial	10,116	5.3%	$137,547
Institutional	1,200	0.6%	$16,316
Agriculture w/ Res	29,028	15.3%	$394,693
Agriculture	21,180	11.1%	$287,984
PSAWR Domestic	9,792	5.2%	$133,141
PSAWR Commercial	6,192	3.3%	$84,192
Total	**190,116**	**100.0%**	**$2,585,000**

Account Services

Each customer incurs Account Services costs regardless of the type of land use, meter size, or total amount of water used. These costs should be spread equally across all accounts. This is achieved by multiplying the total accounts by the 12 billing periods over the fiscal year. Therefore, the revenue requirement for Account Services is apportioned based on the All Accounts to determine the monthly unit cost-of-service shown in Table 41.

Table 41: FY 2024 Account Services Monthly Unit Rate

Account Services Component Unit Rate	
Revenue Requirement	$615,853
÷ All Account	105,516
Monthly Unit Rate	**$5.84**

Customer Class	All Account	% Allocation	Revenue Requirement
Single-Family	74,964	71.0%	$437,534
Multi-Family	1,464	1.4%	$8,545
Commercial	3,120	3.0%	$18,210
Institutional	204	0.2%	$1,191
Agriculture w/ Res	14,304	13.6%	$83,486
Agriculture	6,300	6.0%	$36,770
PSAWR Domestic	3,588	3.4%	$20,942
PSAWR Commercial	1,572	1.5%	$9,175
Total	**105,516**	**100.0%**	**$615,853**

Meter Capacity

The Meter Capacity includes system-wide operating, system maintenance, planning, meter services, support services, reserves, and overhead. The revenue requirement for Meter Capacity is apportioned based on meter size. Larger-sized meters can generate a greater demand on the system from the amount of water flow that may pass through the meter in gpm. The revenue requirement for Meter Capacity is apportioned to meter size as represented by Total MEs as shown in Table 42.

Table 42: FY 2024 Meter Capacity Monthly Unit Rate

Meter Capacity Component Unit Rate	
Revenue Requirement	$7,462,545
÷ Total MEs	190,116
Monthly Unit Rate	**$39.26**

Customer Class	Total MEs	% Allocation	Revenue Requirement
Single-Family	106,632	56.1%	$4,185,582
Multi-Family	5,976	3.1%	$234,573
Commercial	10,116	5.3%	$397,079
Institutional	1,200	0.6%	$47,103
Agriculture w/ Res	29,028	15.3%	$1,139,424
Agriculture	21,180	11.1%	$831,370
PSAWR Domestic	9,792	5.2%	$384,361
PSAWR Commercial	6,192	3.3%	$243,052
Total	**190,116**	**100.0%**	**$7,462,545**

Capital Fixed

The Capital Fixed component includes expenses associated with debt. Debt payment obligations are secured by District rate revenues. Therefore, 100% of the annual debt is part of the total monthly fixed charge. The revenue requirement for Capital Fixed is apportioned based on meter size to reflect the system capacity taken by each connection. The District's system is configured to accommodate and serve all meter sizes and demands. Therefore, the revenue requirement for Capital Fixed is apportioned to meter size as represented by Total MEs as shown in Table 43.

Table 43: FY 2024 Capital Fixed Monthly Unit Rate

Capital Fixed Component Unit Rate	
Revenue Requirement	$3,077,000
÷ Total MEs	190,116
Monthly Unit Rate	**$16.19**

Customer Class	Total MEs	% Allocation	Revenue Requirement
Single-Family	106,632	56.1%	$1,725,824
Multi-Family	5,976	3.1%	$96,721
Commercial	10,116	5.3%	$163,726
Institutional	1,200	0.6%	$19,422
Agriculture w/ Res	29,028	15.3%	$469,814
Agriculture	21,180	11.1%	$342,795
PSAWR Domestic	9,792	5.2%	$158,482
PSAWR Commercial	6,192	3.3%	$100,217
Total	**190,116**	**100.0%**	**$3,077,000**

Pumping Fixed

The Pumping Fixed component includes expenses associated with the District Pumping division, including staffing, equipment & building maintenance, and supplies that do not vary by usage. Therefore, the revenue requirement for Pumping Fixed is apportioned to all accounts within the seven pumping zones as represented by Annual Pumping Accounts (Table 38, Line 9) as shown in Table 44.

Table 44: FY 2024 Pumping Fixed Monthly Unit Rate

Pumping Fixed Component Unit Rate	
Revenue Requirement	$135,000
÷ Pumping Accounts	16,104
Monthly Unit Rate	**$8.39**

Pumping Zone	Pumping Accounts	% Allocation	Revenue Requirement
Pump Zone 1	2,172	13.5%	$18,208
Pump Zone 2	1,332	8.3%	$11,166
Pump Zone 3	720	4.5%	$6,036
Pump Zone 4	5,160	32.0%	$43,256
Pump Zone 5	4,188	26.0%	$35,108
Pump Zone 6	1,824	11.3%	$15,291
Pump Zone 7	708	4.4%	$5,935
Total	**16,104**	**100.0%**	**$135,000**

Variable Cost Recovery

The remaining cost components of Purchased Water, PSAWR Credit, Delivery, and Pumping Energy make up the proposed variable rates. Proposed variable rates for each customer class are uniform.

Each customer classes variable rates are uniform and vary between non-agricultural accounts, agricultural accounts, and PSAWR accounts. Non-agricultural accounts include Single-Family, Multi-Family, Commercial, and Institutional. Agricultural and PSAWR customers' water usage may vary drastically from year-to-year based on weather, crop type, and total crop area. With agriculture's inherent usage volatility, the District is susceptible to revenue instability from their Agricultural and PSAWR customer classes. To combat this risk in revenue recovery, a portion of the variable costs allocated to these customer classes are shifted from variable recovery to fixed recovery and included as part of their monthly fixed charges. This shift in cost recovery causes higher monthly fixed charges and a lower variable rate for Agricultural and PSAWR customers. However, the total revenue requirements allocated to these customer classes do not change and maintains their proportionate cost of service. PSAWR customers also receive a variable credit from the SDCWA as part of the PSAWR program (PSAWR Credit). This PSAWR Credit is applied to their variable rates.

Purchased Water

Purchased Water is the treated water from SDCWA. Table 45 allocates the revenue requirement of Purchased Water to each customer class based on projected usage for FY 2024, identified in Table 37, which results in the same unit rate per HCF, where one HCF is equivalent to 748 gallons of water.

Table 45: FY 2024 Purchased Water Allocation to Customer Classes and Unit Rate

Purchased Water Component Unit Rate	
Revenue Requirement	$20,467,000
÷ All Usage	5,528,472
Unit Rate	**$3.71**

Customer Class	All Usage (HCF)	% Allocation	Revenue Requirement
Single-Family	1,521,953	27.5%	$5,634,434
Multi-Family	130,046	2.4%	$481,444
Commercial	362,543	6.6%	$1,342,173
Institutional	26,318	0.5%	$97,432
Agriculture w/ Res	918,501	16.6%	$3,400,390
Agriculture	1,243,086	22.5%	$4,602,039
PSAWR Domestic	721,309	13.0%	$2,670,364
PSAWR Commercial	604,716	10.9%	$2,238,724
Total	**5,528,472**	**100.0%**	**$20,467,000**

PSAWR Credit

PSAWR customers receive a credit from SCDWA based on total water usage from these customers. This credit is only applied to PSAWR non-domestic water usage, which correlates to usage over 22 HCF (Table 37). Table 46 derives the unit rate for the PSAWR Credit per HCF.

Table 46: FY 2024 PSAWR Credit Allocation to Customer Classes and Unit Rate

PSAWR Credit Component Unit Rate	
Revenue Requirement	($659,000)
÷ PSAWR Usage less Domestic	1,247,089
Unit Rate	**($0.53)**

Customer Class	PSAWR Usage less Domestic (HCF)	% Allocation	Revenue Requirement	Unit Rate (HCF)
Single-Family	0	0.0%	$0	**$0.00**
Multi-Family	0	0.0%	$0	**$0.00**
Commercial	0	0.0%	$0	**$0.00**
Institutional	0	0.0%	$0	**$0.00**
Agriculture w/ Res	0	0.0%	$0	**$0.00**
Agriculture	0	0.0%	$0	**$0.00**
PSAWR Domestic	642,373	51.5%	($339,450)	**($0.53)**
PSAWR Commercial	604,716	48.5%	($319,550)	**($0.53)**
Total	**1,247,089**	**100.0%**	**($659,000)**	

Delivery

Conveyance costs are incurred based on the total volume of water produced and delivered to customers throughout the year. Therefore, the revenue requirement for Delivery is apportioned based on projected total water usage. Table 47 shows the total cost allocated to each customer class and corresponding unit rate. Agricultural and PSAWR Delivery components are reapportioned between fixed and variable within the next section, *but the total revenue recovery from these customer classes does not change*.

Table 47: FY 2024 Delivery Allocation to Customer Classes and Unit Rate

Delivery Component Unit Rate	
Revenue Requirement	$10,029,602
÷ All Usage	5,528,472
Unit Rate	**$1.82**

Customer Class	All Usage (HCF)	% Allocation	Revenue Requirement	Unit Rate (HCF)
Single-Family	1,521,953	27.5%	$2,761,085	**$1.82**
Multi-Family	130,046	2.4%	$235,926	**$1.82**
Commercial	362,543	6.6%	$657,716	**$1.82**
Institutional	26,318	0.5%	$47,745	**$1.82**
Agriculture w/ Res	918,501	16.6%	$1,666,319	*Reapportioned*
Agriculture	1,243,086	22.5%	$2,255,173	*Reapportioned*
PSAWR Domestic	721,309	13.0%	$1,308,579	*Reapportioned*
PSAWR Commercial	604,716	10.9%	$1,097,059	*Reapportioned*
Total	**5,528,472**	**100.0%**	**$10,029,602**	

Pumping Energy

Pumping Energy costs are associated with pumping water to higher elevations within the District's service area. FY 2022 actual SDG&E costs for each pumping zone were used for allocating the projected FY 2024 revenue requirement. The revenue requirements for each pumping zone are then divided by the pumping zone's usage to derive updated unit rates. Table 48 derives the unit rate per HCF for each Pumping Zone.

Table 48: FY 2024 Power Allocation to Pumping Zones and Unit Rate

Pumping Energy Component Unit Rate	
Revenue Requirement	$830,000
÷ Pumping Usage	924,894
Unit Rate	**Futher Allocated**

Pumping Zone	Zone Description	Pumping Usage [A]	SDG&E FY 2022 Costs [B]	% Allocation [C] = B as %	Revenue Requirement [D] = RR x C	Unit Rate [E] = D ÷ A
Pump Zone 1	*Rainbow Heights*	183,452	$418,508	57.3%	$475,599	$2.60
Pump Zone 2	*Improvement District U-1*	38,945	$47,569	6.5%	$54,058	$1.39
Pump Zone 3	*Vallecitos*	67,006	$15,064	2.1%	$17,119	$0.26
Pump Zone 4	*Northside*	363,390	$40,968	5.6%	$46,557	$0.13
Pump Zone 5	*Morro Tank*	128,436	$38,801	5.3%	$44,094	$0.35
Pump Zone 6	*Huntley*	131,538	$161,891	22.2%	$183,975	$1.40
Pump Zone 7	*Magee Tank*	12,127	$7,567	1.0%	$8,599	$0.71
Total		**924,894**	**$730,367**	**100.0%**	**$830,000**	

Reapportionment of Agricultural Delivery Cost to Fixed

With all the revenue requirements fully allocated to customer classes and corresponding accounts, each customer class is recovering its proportionate share based on the cost of providing service. As such, reapportioning a percentage of Agricultural and PSAWR Delivery costs to those customer's fixed charges does not change the amount of total cost recovered from Agricultural customers. The reapportionment is driven by District policy to mitigate revenue volatility within its agricultural classes. Based on discussions with District staff, 55% of Delivery will be recovered as a fixed component and spread over Agricultural and PSAWR MEs (Table 36). Table 49 identifies the Delivery amount reapportioned to fixed and derives the net Delivery unit rate per HCF. Table 50 derives the Delivery fixed component that will be added to the fixed charges calculated within the Rate Design.

Table 49: Reapportionment of Delivery to Fixed and Delivery Unit Rate

Customer Class	Projected Usage [A]	Delivery Revenue Requirement [B] = Table 47	$ to Fixed Recovery [C] = B x 55%	Remaining Delivery Requirement [D] = B - C	Delivery Unit Rate [E] = D ÷ A
Agriculture w/ Res	918,501	$1,666,319	$916,476	$749,844	$0.82
Agriculture	1,243,086	$2,255,173	$1,240,345	$1,014,828	$0.82
PSAWR Domestic	721,309	$1,308,579	$719,718	$588,861	$0.82
PSAWR Commercial	604,716	$1,097,059	$603,383	$493,677	$0.82
Total	**3,487,612**	**$6,327,130**	**$3,479,922**	**$2,847,209**	

Table 50: FY 2024 Agricultural and PSAWR Delivery Fixed Unit Rate

Agriculture Delivery Fixed Component	
Revenue Requirement	$3,479,922
÷ Agriculture MEs	66,192
Monthly Unit Rate	**$52.58**

FY 2024 Water Cost-of-Service Rates

Proposed FY 2024 Monthly Fixed Charges

Table 51 reflects the combined charges of the District's proposed FY 2024 fixed charge by meter size for each customer class.

Table 51: FY 2024 Monthly Water Fixed Charges by Customer Class and Meter Size

Fixed Charges ($/Month)								
Meter Size	AWWA Capacity Ratio	Emergency Storage & Supply Reliability	SDCWA Fixed	Account Services	Meter Capacity	Capital Fixed	Agriculture Delivery Fixed Component	Proposed Fixed Charge
	[A]	[B] = A x $14.70	[C] = A x $13.60	[D] = $5.84	[E] = A x $39.26	[F] = A x $16.19	[G] = A x $52.58	[H] = A+B+C+D+E+F+G
Single-Family, Multi-Family, Commercial, Institutional								
≤ 3/4"	1.00	$14.70	$13.60	$5.84	$39.26	$16.19	N/A	**$89.59**
1"	1.67	$24.50	$22.67	$5.84	$65.43	$26.98	N/A	**$145.42**
1 1/2"	3.33	$49.00	$45.33	$5.84	$130.87	$53.97	N/A	**$285.01**
2"	5.33	$78.40	$72.53	$5.84	$209.39	$86.35	N/A	**$452.51**
3"	11.67	$171.50	$158.67	$5.84	$458.03	$188.88	N/A	**$982.92**
4"	21.00	$308.70	$285.60	$5.84	$824.46	$339.99	N/A	**$1,764.59**
6"	43.33	$637.00	$589.33	$5.84	$1,701.27	$701.57	N/A	**$3,635.01**
Agriculture w/ Residence, Agriculture								
≤ 3/4"	1.00	$14.70	$13.60	$5.84	$39.26	$16.19	$52.58	**$142.17**
1"	1.67	$24.50	$22.67	$5.84	$65.43	$26.98	$87.63	**$233.06**
1 1/2"	3.33	$49.00	$45.33	$5.84	$130.87	$53.97	$175.27	**$460.27**
2"	5.33	$78.40	$72.53	$5.84	$209.39	$86.35	$280.43	**$732.93**
3"	11.67	$171.50	$158.67	$5.84	$458.03	$188.88	$613.43	**$1,596.36**
4"	21.00	$308.70	$285.60	$5.84	$824.46	$339.99	$1,104.18	**$2,868.77**
6"	43.33	$637.00	$589.33	$5.84	$1,701.27	$701.57	$2,278.47	**$5,913.47**
PSAWR Domestic, PSAWR Commercial								
≤ 3/4"	1.00	N/A	$13.60	$5.84	$39.26	$16.19	$52.58	**$127.47**
1"	1.67	N/A	$22.67	$5.84	$65.43	$26.98	$87.63	**$208.56**
1 1/2"	3.33	N/A	$45.33	$5.84	$130.87	$53.97	$175.27	**$411.27**
2"	5.33	N/A	$72.53	$5.84	$209.39	$86.35	$280.43	**$654.53**
3"	11.67	N/A	$158.67	$5.84	$458.03	$188.88	$613.43	**$1,424.86**
4"	21.00	N/A	$285.60	$5.84	$824.46	$339.99	$1,104.18	**$2,560.07**
6"	43.33	N/A	$589.33	$5.84	$1,701.27	$701.57	$2,278.47	**$5,276.47**

Proposed FY 2024 Variable Rates

Table 52 provides the combined charges of the District's proposed FY 2024 variable rates for each customer class.

Table 52: FY 2024 Variable Water Rates by Customer Class per HCF

Variable Rates ($/HCF)				
Customer Class	Purchased Water [A]	PSAWR Credit [B]	Delivery [C]	Proposed Variable Rate [D] = A+B+C
Single-Family	$3.71	-	$1.82	**$5.53**
Multi-Family	$3.71	-	$1.82	**$5.53**
Commercial	$3.71	-	$1.82	**$5.53**
Institutional	$3.71	-	$1.82	**$5.53**
Agriculture w/ Res	$3.71	-	$0.82	**$4.53**
Agriculture	$3.71	-	$0.82	**$4.53**
PSAWR Domestic				
Tier 1	$3.71	-	$0.82	**$4.53**
Tier 2	$3.71	($0.53)	$0.82	**$4.00**
PSAWR Commercial	$3.71	($0.53)	$0.82	**$4.00**

Proposed FY 2024 Pumping Charges and Pumping Rates

Table 53 provides the FY 2024 pumping fixed charges and pumping rates.

Table 53: FY 2024 Proposed Water Pumping Charges and Pumping Rates

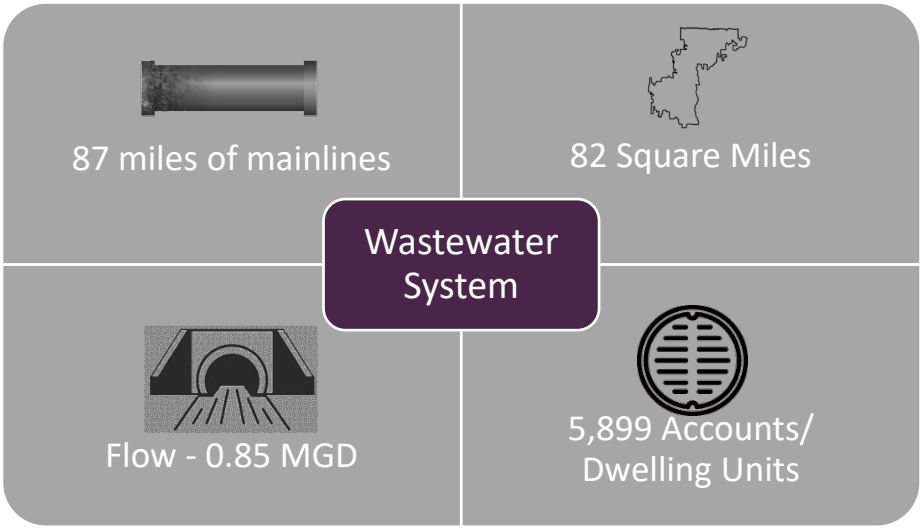
Pumping Zone Charges		
Pumping Zone	Zone Description	Proposed Pump Charges & Rates
Fixed ($/Month)		
All Zones		**$8.39**
Variable ($/HCF)		
Pump Zone 1	*Rainbow Heights*	**$2.60**
Pump Zone 2	*mprovement District*	**$1.39**
Pump Zone 3	*Vallecitos*	**$0.26**
Pump Zone 4	*Northside*	**$0.13**
Pump Zone 5	*Morro Tank*	**$0.35**
Pump Zone 6	*Huntley*	**$1.40**
Pump Zone 7	*Magee Tank*	**$0.71**

Wastewater Utility

Wastewater System

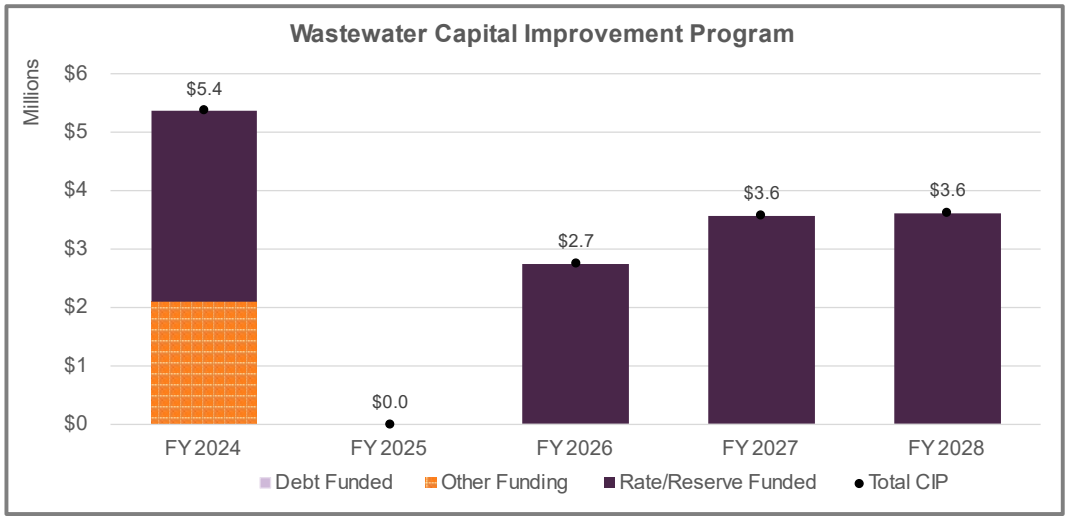
The District owns and operates a wastewater collection system and conveys its wastewater influent to Oceanside for treatment and discharge.

Figure 14: Wastewater System



The District has a significant amount of capital needs over the Rate Setting Period, including the completion of the Thoroughbred Lane Lift Station and Pipeline Repair project that started in FY 2023 for a total cost exceeding $16.5M. The remaining amount to complete the project in FY 2024 is estimated at $5M. In addition, the total amount of capital spending planned during the Rate Setting Period equals approximately $15.3M. Figure 15 shows the District's CIP through FY 2028 with current funding sources.

Figure 15: Wastewater Capital Improvement Plan



Customers

The District charges its wastewater user fees on an Equivalent Dwelling Unit (EDU) basis, where 1 EDU represents one single-family residential unit. EDUs are then assigned to other non-residential accounts based on the demand the account places on the system in relation to a single-family residence. At the start of FY 2023, the District had 5,899 active EDUs, which includes total residential dwelling units and commercial accounts. Table 54 provides a summary of billable units by customer class.

Table 54: Wastewater Accounts and EDUs by Customer Class

Account Information				
Customer Class	Accounts [A]	EDU's [B]	Annual Bills [C] = A x 12	Annual EDU's [D] = B x 12
Single-Family	3,109	3,554	37,308	42,648
Multi-Family	102	1,860	1,224	22,320
Res - WW Only	6	7	72	84
Commercial	24	175	288	2,100
Commercial w/ Irrigation	19	303	228	3,636
Total	**3,260**	**5,899**	**39,120**	**70,788**

The current wastewater rate structure consists of monthly fixed charges per EDU, which includes accounts and additional dwelling units. The rates are shown in Table 55.

Table 55: Existing Wastewater Monthly Fixed Charges

Wastewater Charges ($/Month/EDU)	
Customer Class	Existing Charges ($/EDU)
Single-Family	$55.07
Multi-Family	$40.51
Residential - WW Only	$54.40
Commercial	$40.51
Commercial w/ Irrigation	$40.51

Financial Plan Overview - Wastewater Utility

Financial Planning Assumptions

Developing a long-term financial plan requires understanding the utility's financial position by evaluating existing revenue streams, ongoing expenses, how those expenses will change over time, new strategic objectives, and reserve policies. These considerations require certain assumptions for projecting revenues, expenses, and expected ending fund balances. Table 56 identifies assumptions used for forecasting revenues and Table 57 identifies assumptions used for forecasting increases in expenses through the Rate Setting Period.

Table 56: Wastewater Assumptions for Forecasting Revenues

Revenue Forecasting					
Key Assumptions	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Revenue Escalation					
Non-Rate Revenues	2.0%	2.0%	2.0%	2.0%	2.0%
Reserve Interest	1.5%	1.5%	1.5%	1.5%	1.5%
Account Growth	0.0%	0.0%	0.0%	0.0%	0.0%
Customer EDU's	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Single-Family	3,554	3,554	3,554	3,554	3,554
Multi-Family	1,860	1,860	1,860	1,860	1,860
Res - WW Only	7	7	7	7	7
Commercial	175	175	175	175	175
Commercial w/ Irrigation	303	303	303	303	303
Total Customer EDU's	**5,899**	**5,899**	**5,899**	**5,899**	**5,899**

Table 57: Wastewater Assumptions for Forecasting Expense Requirements[5]

Expenditure Forecasting						
Key Assumptions	*Source:*	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Expenditure Escalation						
Benefits		3.00%	3.00%	3.00%	3.00%	3.00%
Capital	*ENR 20-City*	7.20%	7.20%	3.93%	3.93%	3.93%
Energy Costs		5.00%	5.00%	5.00%	5.00%	5.00%
General Costs	*CPI - SD (CA DIR)*	7.71%	7.71%	4.03%	4.03%	4.03%
Retirement		5.00%	5.00%	5.00%	5.00%	5.00%
Salaries		6.00%	6.00%	6.00%	6.00%	6.00%
Treatment		6.00%	6.00%	6.00%	6.00%	6.00%

[5] Capital Construction inflation and General Costs for FY 2024 and FY 2025 were increased to 7.20% and 7.71%, respectively to account for the most recent annual increase due to inflation. Outer years reduce to 3.93% and 4.03%, reflecting the 5-year average of the Engineer's News Record – CCI index and the SD Consumer Price Index, respectively.

Current Financial Position

Revenues

Based on the forecasting assumptions, revenues were calculated using EDUs (Table 56) and existing wastewater rates (Table 55). Table 58 shows the calculated revenues through the Rate Setting Period. Table 59 summarizes calculated rate revenues (rounded to thousands) and other non-rate revenues available through the Rate Setting Period.

Table 58: Wastewater Calculated Rate Revenues

Calculated Rate Revenue					
Fixed Revenues	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	$2,348,625	$2,348,625	$2,348,625	$2,348,625	$2,348,625
Multi-Family	$904,183	$904,183	$904,183	$904,183	$904,183
Res - WW Only	$4,570	$4,570	$4,570	$4,570	$4,570
Commercial	$85,071	$85,071	$85,071	$85,071	$85,071
Commercial w/ Irrigation	$147,294	$147,294	$147,294	$147,294	$147,294
Total Fixed Charges	**$3,489,744**	**$3,489,744**	**$3,489,744**	**$3,489,744**	**$3,489,744**

Table 59: Wastewater Projected Revenues

Projected Wastewater Revenues					
Revenue Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
District Rate Revenue					
Fixed Charges	$3,490,000	$3,490,000	$3,490,000	$3,490,000	$3,490,000
Subtotal District Rate Revenue	$3,490,000	$3,490,000	$3,490,000	$3,490,000	$3,490,000
Operating Revenues					
Sewer Letter Fee	$1,000	$1,000	$1,000	$1,000	$1,000
Plan Check/Inspection Fees	$5,000	$5,000	$5,000	$5,000	$5,000
Misc Revenue	$5,000	$5,000	$5,000	$5,000	$5,000
Subtotal Operating Revenues	$11,000	$11,000	$11,000	$11,000	$11,000
Other Revenues					
Property Tax	$56,000	$57,000	$58,000	$60,000	$61,000
Subtotal Other Revenues	$56,000	$57,000	$58,000	$60,000	$61,000
Total Revenues	**$3,557,000**	**$3,558,000**	**$3,559,000**	**$3,561,000**	**$3,562,000**

Expenses

The FY 2023 budget was used as the utility's baseline expenses and adjusted over the Rate Setting Period based on the escalation factors shown in Table 57. Table 60 provides projected O&M expenses through the Rate Setting Period (rounded to thousands). Each expense category includes detailed line-item expenditures that were discussed with staff to determine the appropriate escalation factor to use for forecasting how costs will increase over time.

Table 60: Wastewater Projected O&M Expenses

Projected Operating & Maintenance Expenses					
O&M Summary	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Treatment Expenses					
Treatment	$1,590,000	$1,686,000	$1,787,000	$1,894,000	$2,008,000
Subtotal Treatment Expenses	$1,590,000	$1,686,000	$1,787,000	$1,894,000	$2,008,000
District Operating Expenses					
Payroll Expense	$716,000	$754,000	$795,000	$837,000	$883,000
Maintenance & Supply	$570,000	$610,000	$635,000	$661,000	$689,000
Overhead	$1,375,000	$1,455,000	$1,540,000	$1,630,000	$1,725,000
Finance and Customer Service	$329,000	$349,000	$370,000	$392,000	$416,000
Placeholder	$0	$0	$0	$0	$0
District Operating Expenses	$2,990,000	$3,168,000	$3,340,000	$3,520,000	$3,713,000
Total Expenses	**$4,580,000**	**$4,854,000**	**$5,127,000**	**$5,414,000**	**$5,721,000**

Reserves

The wastewater utility reserves include Operating and Capital Projects. Similar to the water utility, these reserves help mitigate risks to the utility by ensuring sufficient cash is on hand for daily operations and to fund annual system improvements, including unforeseen system failures. Table 61 summarizes the minimum reserve requirements and the ideal funding targets of each reserve.

Table 61: Wastewater Reserve Requirements and Targets

Reserve	Minimum Requirement	Reserve Target
Operating	60 days of operating costs	90 days of operating costs
Capital Projects	1-year of CIP based on 5-year average	2-years of CIP based on 5-year average

The reserve balance as of July 1, 2022, equaled approximately $1.6M.

Financial Outlook at Existing Rates

Calculating revenue using existing rates and projecting expenses helps determine the current financial health of the utility. Revenue from current rates is not sufficient to cover operating expenses and is projected to generate an operating deficit of $1M for FY 2024, which is projected to increase to $2.1M by FY 2028. As such, there is currently no annual funding available for capital spending and the District would need to use reserves to cover the operating deficit. Table 62 forecasts existing revenues and expenses through the Rate Setting Period. Table 63 identifies reserve transfers and reserve activity, with projected FY 2024 starting reserve balances shown for each reserve.

Table 62: Wastewater Financial Plan at Existing Rates

Wastewater Financial Plan at Existing Rates						
Revenue		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
District Rate Revenue						
Fixed Charges	Table 58	$3,490,000	$3,490,000	$3,490,000	$3,490,000	$3,490,000
Total District Rate Revenue		$3,490,000	$3,490,000	$3,490,000	$3,490,000	$3,490,000
Operating Revenues						
Sewer Letter Fee	Table 58	$1,000	$1,000	$1,000	$1,000	$1,000
Plan Check/Inspection Fees		$5,000	$5,000	$5,000	$5,000	$5,000
Misc Revenue		$5,000	$5,000	$5,000	$5,000	$5,000
Subtotal Operating Revenues		$11,000	$11,000	$11,000	$11,000	$11,000
Other Revenues						
Property Tax	Table 58	$56,000	$57,000	$58,000	$60,000	$61,000
Subtotal Other Revenues		$56,000	$57,000	$58,000	$60,000	$61,000
Total Revenues		**$3,557,000**	**$3,558,000**	**$3,559,000**	**$3,561,000**	**$3,562,000**
O&M Expenses		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Treatment Expenses						
Treatment	Table 59	$1,590,000	$1,686,000	$1,787,000	$1,894,000	$2,008,000
Subtotal Treatment Expenses		$1,590,000	$1,686,000	$1,787,000	$1,894,000	$2,008,000
District Operating Expenses						
Payroll Expense	Table 59	$716,000	$754,000	$795,000	$837,000	$883,000
Maintenance & Supply		$570,000	$610,000	$635,000	$661,000	$689,000
Overhead		$1,375,000	$1,455,000	$1,540,000	$1,630,000	$1,725,000
Finance and Customer Servi		$329,000	$349,000	$370,000	$392,000	$416,000
District Operating Expenses		$2,990,000	$3,168,000	$3,340,000	$3,520,000	$3,713,000
Debt Service						
New/Proposed Debt		$0	$0	$0	$0	$0
Subtotal Debt Service		$0	$0	$0	$0	$0
Total Expenses		**$4,580,000**	**$4,854,000**	**$5,127,000**	**$5,414,000**	**$5,721,000**
Net Cashflow (Revenue - Expenses)		**($1,023,000)**	**($1,296,000)**	**($1,568,000)**	**($1,853,000)**	**($2,159,000)**

Table 63: Wastewater – Transfers and Reserve Activity at Existing Rates

Wastewater Reserve Activity					
Operating Fund	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$229,626	($793,374)	($2,089,374)	($3,657,374)	($5,510,374)
Transfers (Net Cashflow)	($1,023,000)	($1,296,000)	($1,568,000)	($1,853,000)	($2,159,000)
Ending Balance	**($793,374)**	**($2,089,374)**	**($3,657,374)**	**($5,510,374)**	**($7,669,374)**
Capital (R&R & Exp)	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$2,739,622	($2,620,553)	($2,620,553)	($5,367,822)	($8,936,985)
Less:					
CIP	($5,360,175)	$0	($2,747,268)	($3,569,164)	($3,612,784)
Subtotal Capital (R&R & Exp)	($2,620,553)	($2,620,553)	($5,367,822)	($8,936,985)	($12,549,770)
Interest Earnings	$0	$0	$0	$0	$0
Ending Balance	**($2,620,553)**	**($2,620,553)**	**($5,367,822)**	**($8,936,985)**	**($12,549,770)**
Total Reserves - Ending Balance	**($3,413,927)**	**($4,709,927)**	**($9,025,196)**	**($14,447,359)**	**($20,219,144)**

Figure 16 illustrates the operating position of the utility, where O&M expenses are identified with the dashed red trendline, and the horizontal black trendline shows total revenues at existing rates. The bars represent the amount of net operating income available. Figure 17 reflects the projected ending balances of reserves after funding operating and capital projects through the Rate Setting Period.

Figure 16: Wastewater Current Operating Financial Position

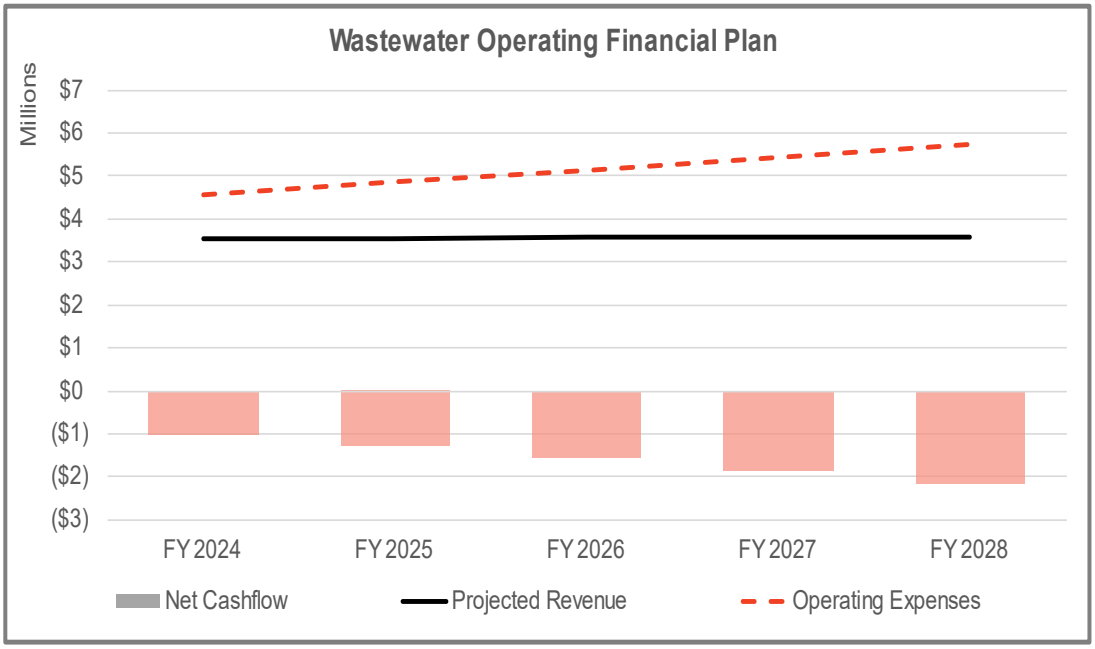
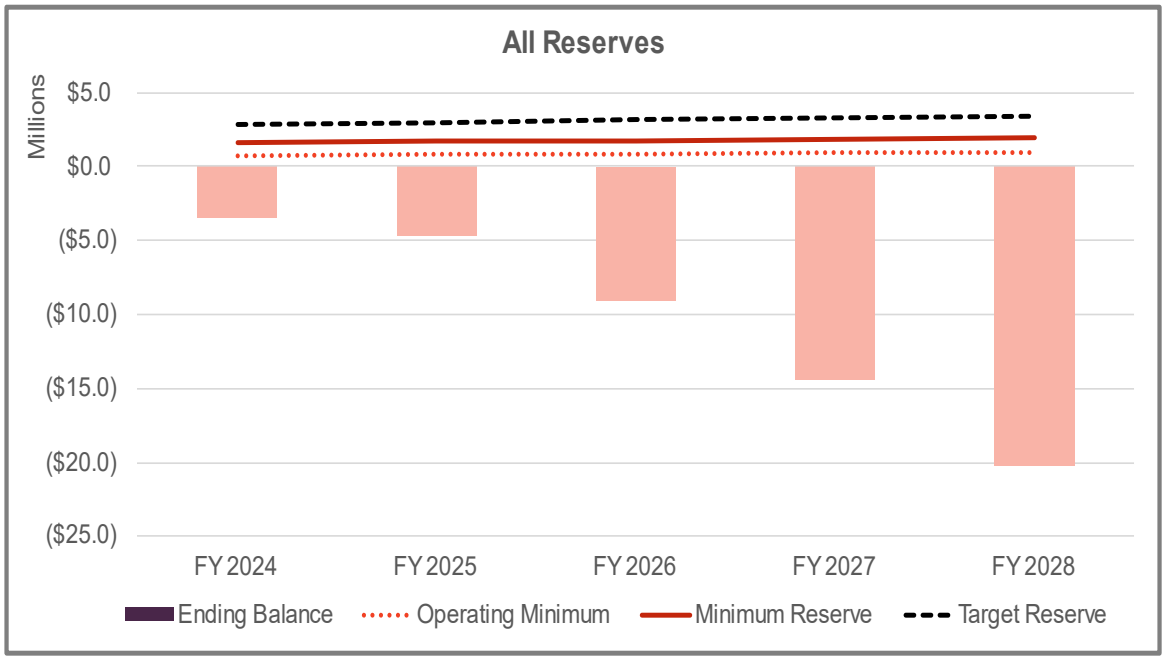


Figure 17: Wastewater Projected Ending Reserves at Existing Rates



Proposed Financial Plan – Wastewater Utility

From the financial outlook at existing rates, a proposed financial plan can be developed to adequately fund the multi-year revenue requirements, while meeting reserve requirements. The proposed financial plan generates approximately $13.1M in additional revenue over the Rate Setting Period. The additional revenue will consistently generate a positive net operating position commencing in FY 2027 to go towards capital spending and building up reserves. In the interim, the District expects to secure a $5M loan in FY 2024 to cover its capital needs as rate revenue increases are phased in over the next 5 years. In addition, a proposed debt issue of $9.5M is anticipated in FY 2026, which would be secured by the proposed rates. ***However, if the District does not secure the $5M loan, current planned capital projects could not be funded and the proposed rates, herein, would not be sufficient on their own to cover the CIP through PAYGO.***

Table 64 forecasts projected revenues, with annual revenue adjustments, and expenses through FY 2028. Table 65 identifies the projected FY 2024 total starting reserve balances, activity within each reserve (including net income transfer from Table 64, transfers between reserves, and annual CIP), and projected ending balances for each fiscal year of the Rate Setting Period.

Table 64: Proposed Wastewater Financial Plan

Wastewater Financial Plan at Existing Rates						
Revenue		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
District Rate Revenue						
Fixed Charges	Table 58	$3,490,000	$3,490,000	$3,490,000	$3,490,000	$3,490,000
Total District Rate Revenue		$3,490,000	$3,490,000	$3,490,000	$3,490,000	$3,490,000
Additional Revenue (from revenue adjustments):						
Fiscal Year / Revenue Adjustment						
FY 2024 / 35.0%		$1,221,000	$1,221,000	$1,221,000	$1,221,000	$1,221,000
FY 2025 / 13.0%			$612,000	$612,000	$612,000	$612,000
FY 2026 / 13.0%				$691,000	$691,000	$691,000
FY 2027 / 13.0%					$781,000	$781,000
FY 2028 / 13.0%						$883,000
Total Additional Revenue		$1,221,000	$1,833,000	$2,524,000	$3,305,000	$4,188,000
Total Projected Rate Revenues		$4,711,000	$5,323,000	$6,014,000	$6,795,000	$7,678,000
Operating Revenues						
Sewer-Oak Crest Service Charges		$0	$0	$0	$0	$0
Sewer Letter Fee	Table 58	$1,000	$1,000	$1,000	$1,000	$1,000
Plan Check/Inspection Fees		$5,000	$5,000	$5,000	$5,000	$5,000
Misc Revenue		$5,000	$5,000	$5,000	$5,000	$5,000
Subtotal Operating Revenues		$11,000	$11,000	$11,000	$11,000	$11,000
Other Revenues						
Property Tax	Table 58	$56,000	$57,000	$58,000	$60,000	$61,000
Subtotal Other Revenues		$56,000	$57,000	$58,000	$60,000	$61,000
Total Revenues		**$4,778,000**	**$5,391,000**	**$6,083,000**	**$6,866,000**	**$7,750,000**
O&M Expenses		**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Treatment Expenses						
Treatment	Table 59	$1,590,000	$1,686,000	$1,787,000	$1,894,000	$2,008,000
Subtotal Treatment Expenses		$1,590,000	$1,686,000	$1,787,000	$1,894,000	$2,008,000
District Operating Expenses						
Payroll Expense		$716,000	$754,000	$795,000	$837,000	$883,000
Maintenance & Supply	Table 59	$570,000	$610,000	$635,000	$661,000	$689,000
Overhead		$1,375,000	$1,455,000	$1,540,000	$1,630,000	$1,725,000
Finance and Customer Service		$329,000	$349,000	$370,000	$392,000	$416,000
District Operating Expenses		$2,990,000	$3,168,000	$3,340,000	$3,520,000	$3,713,000
Debt Service						
New/Proposed Debt		$369,610	$369,610	$1,071,870	$1,071,870	$1,071,870
Subtotal Debt Service		$369,610	$369,610	$1,071,870	$1,071,870	$1,071,870
Total Expenses		**$4,949,610**	**$5,223,610**	**$6,198,870**	**$6,485,870**	**$6,792,870**
Net Cashflow (Revenue - Expenses)		**($171,610)**	**$167,390**	**($115,870)**	**$380,130**	**$957,130**

Table 65: Wastewater – Reserves Activity through FY 2028

Wastewater Reserve Activity					
Operating Fund	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$229,626	$58,016	$225,405	$109,535	$489,665
Transfers (Net Cashflow)	($171,610)	$167,390	($115,870)	$380,130	$957,130
Transfers to Capital (R&R & Exp)	$0	$0	$0	$0	($330,158)
Ending Balance	**$58,016**	**$225,405**	**$109,535**	**$489,665**	**$1,116,636**
Capital (R&R & Exp)	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**
Beginning Balance	$2,739,622	$2,417,840	$2,454,108	$9,294,296	$5,837,778
Plus:					
Transfers from Operating Fund	$0	$0	$0	$0	$330,158
New Debt Proceeds	$5,000,000	$0	$9,500,000	$0	$0
Less:					
CIP	($5,360,175)	$0	($2,747,268)	($3,569,164)	($3,612,784)
Subtotal Capital (R&R & Exp)	$2,379,447	$2,417,840	$9,206,839	$5,725,132	$2,555,152
Interest Earnings	$38,393	$36,268	$87,457	$112,646	$62,947
Ending Balance	**$2,417,840**	**$2,454,108**	**$9,294,296**	**$5,837,778**	**$2,618,099**
Total Reserves - Ending Balance	**$2,475,855**	**$2,679,513**	**$9,403,831**	**$6,327,443**	**$3,734,735**

The operating position based on the proposed financial plan is identified in Figure 18. Figure 19 shows the capital plan with funding sources. Figure 20 identifies the ending reserve balances after funding capital expenses.

Figure 18: Wastewater Proposed Operating Position

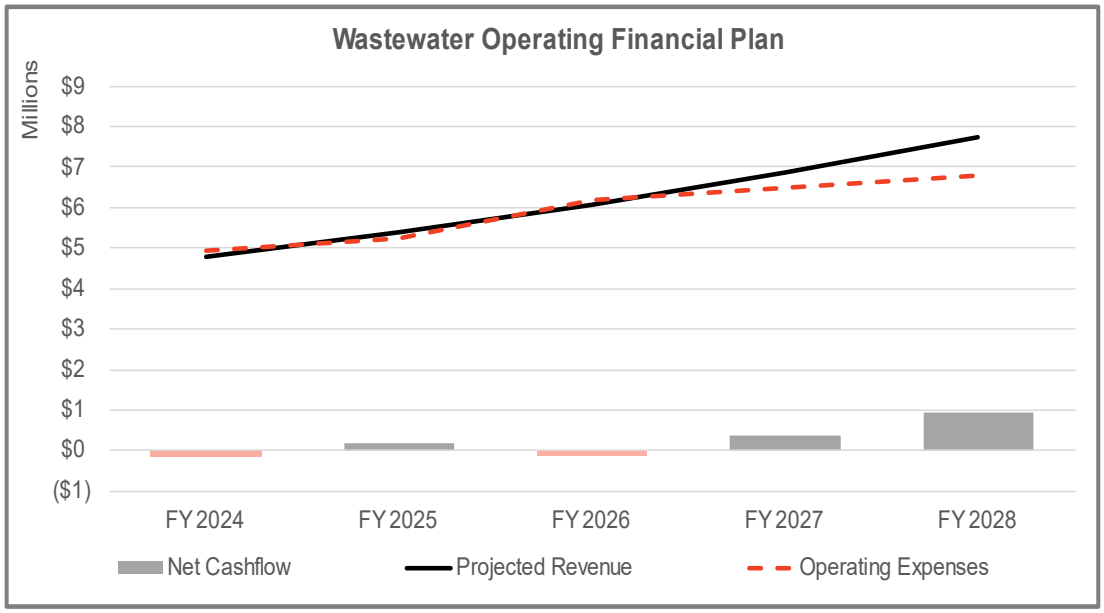


Figure 19: Wastewater Capital Improvement Plan with Funding Sources

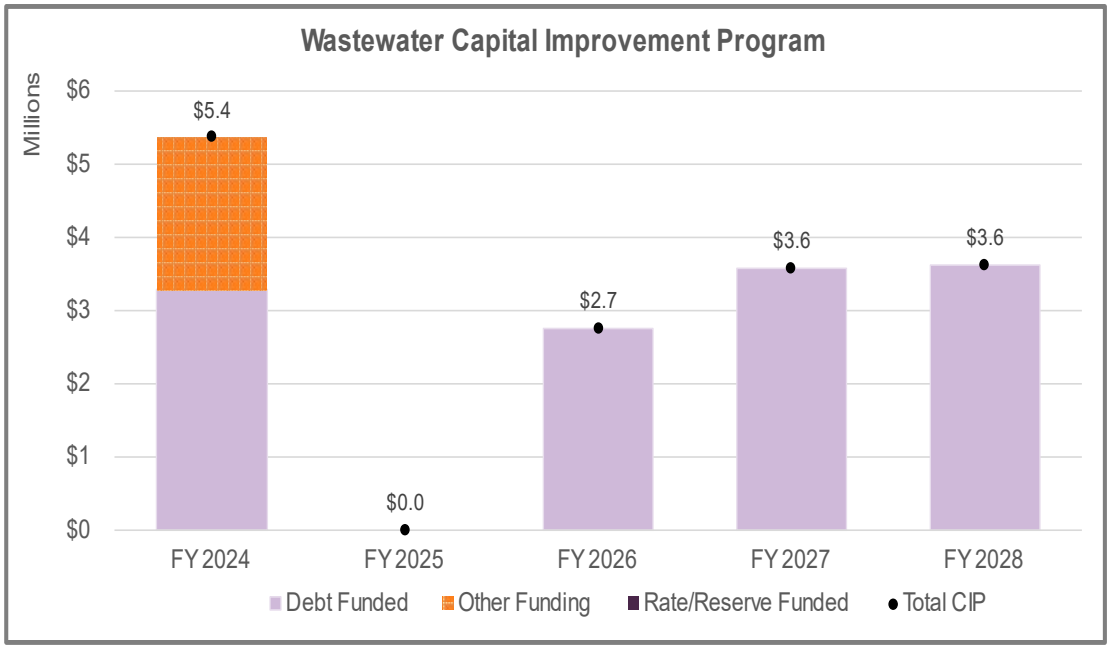
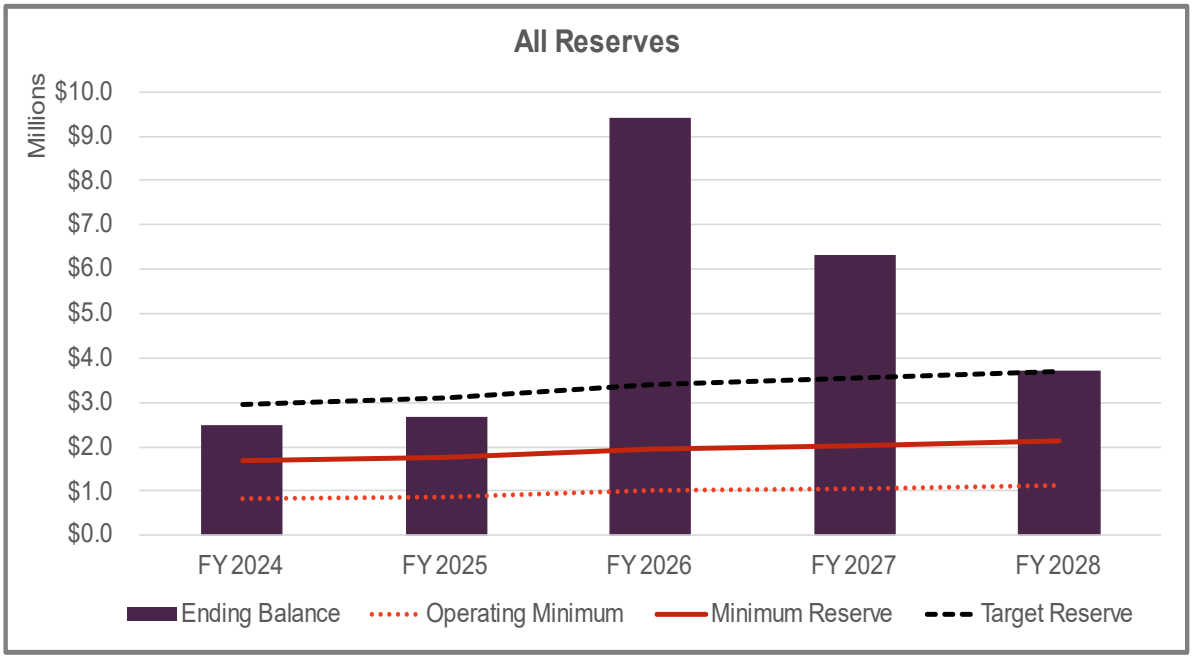


Figure 20: Wastewater Proposed Ending Reserves



Cost of Service Analysis – Wastewater Utility

Cost of Service Process

The next step in developing wastewater rates is to perform a cost-of-service analysis. Through this process, costs incurred are allocated to customer classes based on their proportional share. As a result, the proposed rates are cost-based and reflect the costs incurred to provide service to customers.

Revenue Requirements

FY 2024 revenue requirements were used for the cost-of-service analysis. Revenue requirements include O&M expenses, treatment expenses, available revenue offsets, non-rate revenues, and reserve funding. The proposed revenue adjustments and corresponding rates accumulate the necessary funding over the Rate Setting Period to fund O&M, capital projects, and meet minimum reserve requirements. The results of the financial plan analysis are summarized in Table 66 and represent the revenue required from rates over the Rate Setting Period.

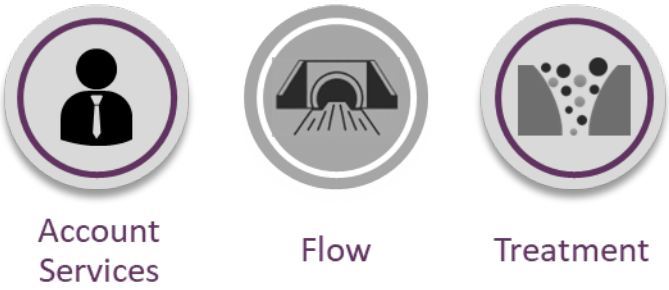
Table 66: Wastewater Revenue Requirements

Revenue Requirements	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Treatment Expenses					
Treatment	$1,590,000	$1,686,000	$1,787,000	$1,894,000	$2,008,000
Total Treatment Expenses	$1,590,000	$1,686,000	$1,787,000	$1,894,000	$2,008,000
District Operating Expenses					
Payroll Expense	$716,000	$754,000	$795,000	$837,000	$883,000
Maintenance & Supply	$570,000	$610,000	$635,000	$661,000	$689,000
Overhead	$1,375,000	$1,455,000	$1,540,000	$1,630,000	$1,725,000
Finance and Customer Service	$329,000	$349,000	$370,000	$392,000	$416,000
Total District Operating Expenses	$2,990,000	$3,168,000	$3,340,000	$3,520,000	$3,713,000
Debt Service					
New/Proposed Debt	$369,610	$369,610	$1,071,870	$1,071,870	$1,071,870
Total Debt Service	$369,610	$369,610	$1,071,870	$1,071,870	$1,071,870
Other Funding					
Revenue Offsets					
Sewer Letter Fee	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)
Plan Check/Inspection Fees	($5,000)	($5,000)	($5,000)	($5,000)	($5,000)
Misc Revenue	($5,000)	($5,000)	($5,000)	($5,000)	($5,000)
Other Revenues	($56,000)	($57,000)	($58,000)	($60,000)	($61,000)
Subtotal Revenue Offsets	($67,000)	($68,000)	($69,000)	($71,000)	($72,000)
Adjustments					
CIP / Reserve Funding	($171,610)	$167,390	($115,870)	$380,130	$957,130
Subtotal Adjustments	($171,610)	$167,390	($115,870)	$380,130	$957,130
Total Other Funding	($238,610)	$99,390	($184,870)	$309,130	$885,130
Revenue Required from Rates	**$4,711,000**	**$5,323,000**	**$6,014,000**	**$6,795,000**	**$7,678,000**

Define Cost Components

The District's wastewater cost-of-service requirements were allocated to cost components and then to customer classes to develop cost-based rates in compliance with Proposition 218. The utility incurs costs to collect total flow from its customer classes and conveys it to Oceanside for treatment and discharge. Therefore, to determine the most appropriate way to recover the utility's expenses, cost components are identified and used to allocate expenses based on how they are incurred. Using this allocation approach, revenue requirements are allocated to the three cost components of Account Services, Collection, and Treatment, as shown in Figure 21, to derive monthly unit rates per EDU and corresponding monthly fixed charges.

Figure 21: Wastewater Cost Components



Account Services – Fixed expenses related to the collection system that do not necessarily fluctuate based on flow. Administration, utility billing services, and overhead costs are incurred based on having an account. In addition, a portion of maintenance is recovered as part of Account Services.

Flow – Expenses associated with the collection system.

Treatment – Expenses incurred at the San Luis Rey Treatment Plant and billed to the District by the City of Oceanside.

Allocate Expenses to Cost Components

The distribution of expenses to the cost components should be straightforward to ensure the method of apportionment is **understandable** and easily **correlates to how expenses are incurred**.

Table 67 identifies the treatment expenses incurred by the District and how it is allocated to the cost components. Table 68 uses the percent allocations in Table 67 to allocate expenses in dollars to each cost component. Treatment expenses are referred to as direct pass-through charges because it has its own corresponding cost component, and they are not adjusted by revenue offsets or reserve funding. Any annual increases in treatment expenses will be captured through the pass-through provisions of Government Code section 53756.

Table 67: Wastewater Treatment Expense Allocation to Cost Components (%)

Treatment Expenses	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Treatment	**Treatment**	0.0%	0.0%	100.0%	100%

Table 68: Wastewater Treatment Expense Allocation to Cost Components ($)

Treatment Expenses	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Treatment	Treatment	$0	$0	$1,590,000	$1,590,000
Total Treatment Allocation ($)		**$0**	**$0**	**$1,590,000**	**$1,590,000**

Table 69 summarizes the percent allocation of Operating expenses to the cost components. Payroll Expenses and Maintenance & Supply are associated with the operating and maintaining the collection system and were allocated to the cost component of Collection. Overhead and Finance and Customer Service are services provided to every active account and allocated to Account Services. Table 70 uses the percent allocations in Table 69 to allocate expenses in dollars to each cost component.

Table 69: Wastewater O&M Expense Allocation to Cost Components (%)

District Operating Expenses	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Payroll Expense	**Collection**	0.0%	100.0%	0.0%	100%
Maintenance & Supply	**Collection**	0.0%	100.0%	0.0%	100%
Overhead	**Specific**	100.0%	0.0%	0.0%	100%
Finance and Customer Service	**Specific**	100.0%	0.0%	0.0%	100%

Table 70: Wastewater O&M Expense Allocation to Cost Components ($)

District Operating Expenses	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Payroll Expense	Collection	$0	$716,000	$0	$716,000
Maintenance & Supply	Collection	$0	$570,000	$0	$570,000
Overhead	Specific	$1,375,000	$0	$0	$1,375,000
Finance and Customer Service	Specific	$329,000	$0	$0	$329,000
Total O&M Allocation ($)		**$1,704,000**	**$1,286,000**	**$0**	**$2,990,000**
O&M Allocation (%)		**57.0%**	**43.0%**	**0.0%**	**100.0%**

The District's proposed debt is associated with funding improvements to the collection system. Therefore, 100% of the debt was allocated to the cost component of Collection. Table 71 identifies the percent allocation of the debt expense to the cost components, and Table 72 reflects the debt expense in dollars.

Table 71: Wastewater Debt Allocation to Cost Components (%)

Debt Service	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
New/Proposed Debt	**Collection**	0.0%	100.0%	0.0%	100%

Table 72: Wastewater Debt Allocation to Cost Components ($)

Debt Service	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
New/Proposed Debt	Collection	$0	$369,610	$0	$369,610
Total Debt Service Allocation ($)		**$0**	**$369,610**	**$0**	**$369,610**

Other Funding includes revenue offsets and reserve funding. All line items under "Other Funding" are allocated based on O&M percentages derived in Table 70 to allocate each line item to the cost components proportionately. Table 73 summarizes the percent allocation to the cost components, and Table 74 uses the percent allocations in Table 73 to Other Funding in dollars to each cost component. Table 75 summarizes the FY 2024 revenue requirement derived in Table 66 by cost component.

Table 73: Wastewater Other Funding to Cost Components (%)

Other Funding	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Revenue Offsets					
Sewer Letter Fee	**O&M Allocation**	57.0%	43.0%	0.0%	100%
Plan Check/Inspection Fees	**O&M Allocation**	57.0%	43.0%	0.0%	100%
Misc Revenue	**O&M Allocation**	57.0%	43.0%	0.0%	100%
Other Revenues	**O&M Allocation**	57.0%	43.0%	0.0%	100%
Adjustments					
CIP / Reserve Funding	**O&M Allocation**	57.0%	43.0%	0.0%	100%

Table 74: Wastewater Other Funding to Cost Components ($)

Other Funding	Methodology / Allocation Basis	Account Services	Collection	Treatment	Total
Revenue Offsets					
Sewer Letter Fee	O&M Allocation	($570)	($430)	$0	($1,000)
Plan Check/Inspection Fees	O&M Allocation	($2,849)	($2,151)	$0	($5,000)
Misc Revenue	O&M Allocation	($2,849)	($2,151)	$0	($5,000)
Other Revenues	O&M Allocation	($31,914)	($24,086)	$0	($56,000)
Adjustments					
CIP / Reserve Funding	O&M Allocation	($97,801)	($73,810)	$0	($171,610)
Total Other Funding Allocation ($)		**($135,984)**	**($102,626)**	**$0**	**($238,610)**

Table 75: FY 2024 Wastewater Cost-of-Service Requirements by Cost Component

Revenue Requirement	Account Services	Collection	Treatment	Total
Treatment Expenses	$0	$0	$1,590,000	$1,590,000
District Operating Expenses	$1,704,000	$1,286,000	$0	$2,990,000
Debt Service	$0	$369,610	$0	$369,610
Other Funding	($135,984)	($102,626)	$0	($238,610)
COS Requirement	$1,568,016	$1,552,984	$1,590,000	$4,711,000

Rate Design – Wastewater Utility

Develop Units of Service

Unit rates per EDU are derived by spreading the revenue requirements, by cost component, over total EDUs. This approach provides a clear connection between the costs incurred and the total customer demands served in EDUs, resulting in a cost-based rate structure in compliance with Proposition 218. The previous section summarized costs by expense category and then allocated to cost components based on how each cost is incurred. The next step is to derive rates in relation to their use of the system and facilities. The method of apportionment considers each customer's share of system costs and is reflected by the EDUs assigned to each account. Table 76 derives the proposed FY 2024 wastewater rates per EDU by dividing the revenue requirements in Table 75 by the annual EDUs (Table 56 times 12 billing periods).

Table 76: FY 2024 Wastewater Monthly Fixed Charge per EDU

FY 2024 Proposed Fixed Charge per EDU				
Revenue Requirement	Account Services [A]	Collection [B]	Treatment [C]	Total Monthly Charge [D] = A + B + C
Revenue Requirement	$1,568,016	$1,552,984	$1,590,000	
÷ Annual EDU's	70,788	70,788	70,788	
Unit Rate per EDU	**$22.16**	**$21.94**	**$22.47**	**$66.57**

Cost-Based Rates Summary

Cost-of-Service and Rate Summary

The comprehensive cost-of-service analysis and rate development meet the requirements of Proposition 218 and identify the cost components that make up the proposed water and wastewater charges. Proposition 218 requires the following conditions:

1. An agency cannot collect revenue beyond what is necessary to provide service.

   The long-term financial plan identifies the District's revenue requirements, including operating expenses, capital improvement program, debt, and reserves. Projected revenues do not exceed the cost of providing service.

2. Revenues derived by the charge shall not be used for any other purpose other than that for which the charge was imposed.

   The District's water and wastewater utilities are set up as a business enterprise to track revenues and expenses and do not fund other services outside of those necessary for the provision of water and wastewater.

3. The amount of the fee may not exceed the proportional cost of service for the parcel.

   The comprehensive cost-of-service analysis, updated water fixed charges and variable rates, and wastewater EDU charges reflect each customer's proportionate share of water and wastewater costs. Through this update, each account is paying its proportionate share of the cost providing service to the parcel.

4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of property.

   The proposed fixed charges and variable rates connect directly to the District's budget for each utility and projected future revenue requirements of the water and wastewater utilities, which are recovered equitably from all active accounts receiving service.

5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing.

   Notices were mailed to each affected parcel at least 45 days prior to the June 27, 2023, Public Hearing.

Rate Schedules – Water and Wastewater

Water

Table 77 through Table 79 provide the five-year water rate schedule over the Rate Setting Period for monthly fixed charges, variable rates, and fixed / variable pumping rates, respectively. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

Table 77: Proposed Monthly Water Fixed Charges (FY 2024 – FY 2028)

Proposed Revenue Adjustments					
	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Revenue Adjustment		9.0%	9.0%	9.0%	9.0%
Fixed Charges ($/Month)					
Single-Family, Multi-Family, Commercial, Institutional					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	$89.59	$97.66	$106.45	$116.04	$126.49
≤ 3/4"	$89.59	$97.66	$106.45	$116.04	$126.49
1"	$145.42	$158.52	$172.79	$188.35	$205.31
1 1/2"	$285.01	$310.66	$338.62	$369.10	$402.32
2"	$452.51	$493.24	$537.64	$586.03	$638.78
3"	$982.92	$1,071.39	$1,167.82	$1,272.93	$1,387.50
4"	$1,764.59	$1,923.41	$2,096.52	$2,285.21	$2,490.88
6"	$3,635.01	$3,962.16	$4,318.76	$4,707.45	$5,131.13
Agriculture w/ Residence, Agriculture					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	$142.17	$154.97	$168.92	$184.13	$200.71
≤ 3/4"	$142.17	$154.97	$168.92	$184.13	$200.71
1"	$233.06	$254.04	$276.91	$301.84	$329.01
1 1/2"	$460.27	$501.70	$546.86	$596.08	$649.73
2"	$732.93	$798.90	$870.81	$949.19	$1,034.62
3"	$1,596.36	$1,740.03	$1,896.64	$2,067.34	$2,253.41
4"	$2,868.77	$3,126.96	$3,408.39	$3,715.15	$4,049.52
6"	$5,913.47	$6,445.69	$7,025.81	$7,658.14	$8,347.38
PSAWR Domestic, PSAWR Commercial					
Meter Size	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8"	$127.47	$138.95	$151.46	$165.10	$179.96
≤ 3/4"	$127.47	$138.95	$151.46	$165.10	$179.96
1"	$208.56	$227.33	$247.79	$270.10	$294.41
1 1/2"	$411.27	$448.29	$488.64	$532.62	$580.56
2"	$654.53	$713.45	$777.67	$847.67	$923.97
3"	$1,424.86	$1,553.10	$1,692.88	$1,845.24	$2,011.32
4"	$2,560.07	$2,790.48	$3,041.63	$3,315.38	$3,613.77
6"	$5,276.47	$5,751.36	$6,268.99	$6,833.20	$7,448.19

Table 78: Proposed Variable Water Rates per HCF (FY 2024 – FY 2028)

Variable Rates ($/HCF)					
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	$5.53	$6.03	$6.58	$7.18	$7.83
Multi-Family	$5.53	$6.03	$6.58	$7.18	$7.83
Commercial	$5.53	$6.03	$6.58	$7.18	$7.83
Institutional	$5.53	$6.03	$6.58	$7.18	$7.83
Agriculture w/ Res	$4.53	$4.94	$5.39	$5.88	$6.41
Agriculture	$4.53	$4.94	$5.39	$5.88	$6.41
PSAWR Domestic					
Tier 1	$4.53	$4.94	$5.39	$5.88	$6.41
Tier 2	$4.00	$4.36	$4.76	$5.19	$5.66
PSAWR Commercial	$4.00	$4.36	$4.76	$5.19	$5.66

Table 79: Proposed Pumping Water Rates per HCF (FY 2024 – FY 2028)

Pumping						
Pumping Zone	Zone Description	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Fixed ($/Month)						
All Zones		$8.39	$9.15	$9.98	$10.88	$11.86
Variable ($/HCF)						
Pump Zone 1	*Rainbow Heights*	$2.60	$2.84	$3.10	$3.38	$3.69
Pump Zone 2	*Improvement District U-1*	$1.39	$1.52	$1.66	$1.81	$1.98
Pump Zone 3	*Vallecitos*	$0.26	$0.29	$0.32	$0.35	$0.39
Pump Zone 4	*Northside*	$0.13	$0.15	$0.17	$0.19	$0.21
Pump Zone 5	*Morro Tank*	$0.35	$0.39	$0.43	$0.47	$0.52
Pump Zone 6	*Huntley*	$1.40	$1.53	$1.67	$1.83	$2.00
Pump Zone 7	*Magee Tank*	$0.71	$0.78	$0.86	$0.94	$1.03

Wastewater

Table 80 provides the five-year wastewater rate schedule over the Rate Setting Period for monthly fixed charges per EDU. For FY 2025 through FY 2028, the revenue adjustments are applied across the board to the cost-of-service rates derived for FY 2024 as account growth and usage characteristics are projected to remain constant for financial planning.

Table 80: Proposed Monthly Wastewater Charges per EDU (FY 2024 – FY 2028)

Proposed Revenue Adjustments					
Revenue Adjustment		13.0%	13.0%	13.0%	13.0%
Customer Class	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Single-Family	$66.57	$75.23	$85.01	$96.07	$108.56
Multi-Family	$66.57	$75.23	$85.01	$96.07	$108.56
Residential - WW Only	$66.57	$75.23	$85.01	$96.07	$108.56
Commercial	$66.57	$75.23	$85.01	$96.07	$108.56
Commercial w/ Irrigation	$66.57	$75.23	$85.01	$96.07	$108.56

Appendix I – Notices of Plan Preparation

RAINBOW
MUNICIPAL WATER DISTRICT

3707 Old Highway 395, Fallbrook, CA 92028
760.728.1178 | RAINBOWMWD.CA.GOV

February 18, 2026

Ms. Ebony N. Shelton – Chief Administrative Officer
County of San Diego
County Administration Center
1600 Pacific Highway, Room 209
San Diego, CA 92101

Via Email:
cao_mail@sdcounty.ca.gov

Dear Ms. Shelton,

This notification is to inform you that Rainbow Municipal Water District (RMWD) is updating its Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP), pursuant to California Water Code §10621(b). The UWMP addresses water supply sustainability within the RMWD services area through 2050, and the WSCP addresses RMWD's monitoring of and response to potential water supply shortages.

Public drafts of the UWMP and WSCP will be made available for review prior to a public hearing anticipated to take place in April 2026. Information on where to review the plans and the time and date for the public hearings will be communicated in future notices.

Please feel free to contact the 2025 UWMP preparer, Anthony Herda PE, at (626) 660-4837 or aherda@erscinc.com if you have any questions or would like additional information.

Sincerely,

Jake Wiley, General Manager
Rainbow Municipal Water District

cc: Chad Williams, RMWD Engineering and CIP Program Manager
Anthony Herda, Engineering Resources of Southern California

RAINBOW
MUNICIPAL WATER DISTRICT

3707 Old Highway 395, Fallbrook, CA 92028
760.728.1178 | RAINBOWMWD.CA.GOV

February 18, 2026

Mr. Jonathan Borregos – City Manager
City of Oceanside
300 North Coast Hwy
Oceanside, CA 92054

Via Email:
CityManager@OceansideCa.org

Dear Mr. Borregos,

This notification is to inform you that Rainbow Municipal Water District (RMWD) is updating its Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP), pursuant to California Water Code §10621(b). The UWMP addresses water supply sustainability within the RMWD services area through 2050, and the WSCP addresses RMWD's monitoring of and response to potential water supply shortages.

Public drafts of the UWMP and WSCP will be made available for review prior to a public hearing anticipated to take place in April 2026. Information on where to review the plans and the time and date for the public hearings will be communicated in future notices.

Please feel free to contact the 2025 UWMP preparer, Anthony Herda PE, at (626) 660-4837 or aherda@erscinc.com if you have any questions or would like additional information.

Sincerely,

Jake Wiley, General Manager
Rainbow Municipal Water District

cc: Chad Williams, RMWD Engineering and CIP Program Manager
Anthony Herda, Engineering Resources of Southern California

RAINBOW
MUNICIPAL WATER DISTRICT

3707 Old Highway 395, Fallbrook, CA 92028
760.728.1178 | RAINBOWMWD.CA.GOV

February 18, 2026

Mr. Jack Bebee – General Manager
Fallbrook Public Utility District
990 E. Mission Rd
Fallbrook, CA 92028

Via Email:
jackb@fpud.com

Dear Mr. Bebee,

This notification is to inform you that Rainbow Municipal Water District (RMWD) is updating its Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP), pursuant to California Water Code §10621(b). The UWMP addresses water supply sustainability within the RMWD services area through 2050, and the WSCP addresses RMWD's monitoring of and response to potential water supply shortages.

Public drafts of the UWMP and WSCP will be made available for review prior to a public hearing anticipated to take place in April 2026. Information on where to review the plans and the time and date for the public hearings will be communicated in future notices.

Please feel free to contact the 2025 UWMP preparer, Anthony Herda PE, at (626) 660-4837 or aherda@erscinc.com if you have any questions or would like additional information.

Sincerely,

Jake Wiley, General Manager
Rainbow Municipal Water District

cc: Chad Williams, RMWD Engineering and CIP Program Manager
Anthony Herda, Engineering Resources of Southern California

RAINBOW
MUNICIPAL WATER DISTRICT

3707 Old Highway 395, Fallbrook, CA 92028
760.728.1178 | RAINBOWMWD.CA.GOV

February 18, 2026

Joe Mouawad, P.E. – General Manager
Eastern Municipal Water District
2270 Trumble Road
Perris, CA 92570

Via Email:
mouawadj@emwd.org

Dear Mr. Mouawad,

This notification is to inform you that Rainbow Municipal Water District (RMWD) is updating its Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP), pursuant to California Water Code §10621(b). The UWMP addresses water supply sustainability within the RMWD services area through 2050, and the WSCP addresses RMWD's monitoring of and response to potential water supply shortages.

Public drafts of the UWMP and WSCP will be made available for review prior to a public hearing anticipated to take place in April 2026. Information on where to review the plans and the time and date for the public hearings will be communicated in future notices.

Please feel free to contact the 2025 UWMP preparer, Anthony Herda PE, at (626) 660-4837 or aherda@erscinc.com if you have any questions or would like additional information.

Sincerely,

Jake Wiley, General Manager
Rainbow Municipal Water District

cc: Chad Williams, RMWD Engineering and CIP Program Manager
Anthony Herda, Engineering Resources of Southern California

Appendix J – Notices of Public Hearing

[insert copies of notice of hearing]

Appendix K – Resolutions of Adoption

[insert resolution of adoption]

Appendix L – Confirmation of Electronic Submittal

[insert confirmation of submittal

Appendix M – Confirmation of Transmittal

[insert confirmation of transmittal]

Appendix N – Water Shortage Contingency Plan

[insert WSCP]

Rainbow Municipal Water District

2025 Water Shortage Contingency Plan Public Draft

RAINBOW
MUNICIPAL WATER DISTRICT

Rainbow Municipal Water District

2025 Water Shortage Contingency Plan Public Draft

Prepared by

Engineering Resources of Southern California

Anthony Herda, P.E.

May 2026

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Executive Summary

Background

The Water Shortage Contingency Plan (WSCP) is an integral part of the Urban Water Management Plan (UWMP). These documents were prepared in accordance with the Urban Water Management Planning Act (Act) defined by the California Water Code (CWC), Division 6, Part 2.6, Sections 10610 through 10657.

The WSCP documents how Rainbow Municipal Water District (District) will respond in the event of a water shortage. A water shortage means that the available water supply cannot sufficiently meet the normally expected customer water use at a given point in time. The plan provides guidance for managing and mitigating a potential shortage of water supply in coordination with the District's emergency response plan.

Analysis

In 2022, issuance of an annual Water Supply and Demand Assessment was enacted as a new reporting requirement. This WSCP provides detailed information about the assessment process based on recent guidelines provided by the California Department of Water Resources (DWR).

The District's wholesaler has a robust supply portfolio that includes the State Water Project, the Colorado River Aqueduct, and extensive regional surface storage. The management of these resources, and subsequently the impact of a supply shortage at the wholesale level, is reduced at the retail level.

There are six water shortage levels. When a water shortage is declared, the District will implement water reduction actions appropriate for the water shortage level identified. In the event of a Level 1 Shortage, administrative and operational adjustment will be sufficient to mitigate the deficit without imposing water reduction constraints on customers. As higher shortage levels are declared, the District will communicate to customers, implement and enforce progressively stricter water reduction actions until the shortage declaration has been lifted.

Responding to a water shortage may impose financial consequences in terms of reduced revenue and increase costs of monitoring, implementing, and enforcing water use reduction actions. The District has a financial mitigation plan in place to avoid impacts on customers.

Recommendations

Implementation of the WSCP is recommended. In addition, the District should consider the following:

Ordinance No. 16-10

The WSCP references Ordinance No. 16-10 (An Ordinance of Rainbow Municipal Water District Adopting a Drought Response Conservation Program) concerning authority to implement and enforce water demand reduction actions in the event of a declared water shortage. Since adoption of the ordinance, several relevant changes have occurred:

- The District has changed wholesale water suppliers from the San Diego County Water Authority to Eastern Municipal Water District. This means new wholesaler programs and policies are in place.
- Retailer impact of a wholesale supply shortage is now tied to the Water Supply Allocation Plan (WSAP) of the Metropolitan Water District of Southern California (MWD). The WSAP outlines operational changes in management of wholesale deliveries to reduce the impact on retailers. Specifically, MWD will make up for supply shortages on the State Water Project and Colorado River Aqueduct by drawing down surface storage.
- The District has experienced a nearly 50 percent reduction in average annual demand, primarily in the agricultural sector. This means that a supply shortage will have a smaller impact and variation in demand is less volatile, reducing the likelihood and severity of a shortage.

The District may consider reviewing the impact of these changes on the Ordinance and making appropriate amendments in due course.

Seismic Mitigation

The plan identified seismic risk associated with the District's infrastructure and equipment. The District may consider reviewing and quantifying seismic risk and developing mitigation strategies for critical or vulnerable assets, as needed.

Adoption

Following public review of the Draft WSCP and following consideration and incorporation of any public comments received during the public hearing, adoption by resolution is recommended.

Chapter 1 – Introduction and Overview

> ***Water Code Section 10632.3***
>
> *It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.*

The Water Shortage Contingency Plan (WSCP) documents how Rainbow Municipal Water District (District) will respond in the event of a water shortage. A water shortage means that the available water supply cannot sufficiently meet the normally expected customer water use at a given point in time. This WSCP provides guidance for managing and mitigating a potential shortage of water supply. In the event of any water shortage emergencies, this WSCP should be followed in coordination with the District's emergency response plan.

The Eastern Municipal Water District (EMWD) is a wholesale water supplier that provides 100 percent of the supply to the District. EMWD has their own WSCP that guides their response to a water shortage in coordination with the Metropolitan Water District of Southern California (MWD).

The WSCP is an element of the District's Urban Water Management Plan (UWMP), both of which are updated every five years in accordance with the California Water Code (CWC) and submitted to the California Department of Water Resources (DWR). The WSCP must be able to be amended separately from the UWMP. As such there is the flexibility to be able to separate the WSCP from the UWMP for future needs.

1.1 – Report Organization

1.1.1 – Citation of Water Code

By convention, Water Code citations from the Guidebook are provided as shown below, italicized in a frame with a grey background.

> ***Water Code Section XXXXX***
>
> *(X) Direct excerpt from the Water Code as presented in the Guidebook.*

The intent of including relevant excerpts from the Water Code is to give the reader a perspective linking statute and regulations to the content of the plan.

1.1.2 – Description of Chapters

The WSCP is structured as recommended by DWR in the 2025 Urban Water Management Plan Guidebook. The WSCP consists of the following chapters:

Chapter 1 – Introduction and Overview

This chapter is used to provide a discussion on the fundamentals of the WSCP.

Chapter 2 – Water Supply Reliability Analysis

This chapter provides information on coordination between the UWMP and the WSCP.

Chapter 3 – Annual Assessment Procedures

This chapter describes the methods, tables, and submittal process for the preparation of an annual water supply and demand assessment.

Chapter 4 – Six Standard Water Shortage Levels

This chapter delineates the shortage levels and describes the impact of a wholesaler supply shortage on the retailers.

Chapter 5 – Shortage Response Actions

This chapter details the various methods to reduce demand in response to a shortage.

Chapter 6 – Emergency Response Plan

In this chapter, the District's emergency response plan is presented.

Chapter 7 – Communication Protocols

This chapter summarizes methods for communicating water supply shortage and responses with the public and other government bodies.

Chapter 8 – Compliance and Enforcement

This chapter delineates aspects of Ordinance No. 16-10 related to compliance and enforcement of water use reduction policy.

Chapter 9 – Legal Authority

This chapter cites aspects of Ordinance No. 16-10 that authorize the District to enforce and compel compliance with water use reduction policy.

Chapter 10 – Financial Consequences

This chapter observes potential financial consequences of WSCP implementation including loss of revenue and costs associated with monitoring, communication, conservation program execution, and enforcement.

Chapter 11 – Monitoring and Reporting

This chapter describes collecting, tracking, and analyzing appropriate data under the various shortage levels.

Chapter 12 – WSCP Refinements and Procedures

This chapter delineates the procedures required for submitting an amended WSCP.

Appendices

Additional information and documentation are provided to support and further clarify content included in the main chapters. Providing additional information strengthens the plan and offers a complete and well-supported planning document for use by the public and stakeholders.

1.2 – Urban Water Management Planning and the California Water Code

The WSCP is an integral component of the UWMP. The UWMP was prepared in accordance with the Urban Water Management Planning Act (Act) defined by CWC, Division 6, Part 2.6, and Sections 10610 through 10657. The Act became part of the CWC with the passage of Assembly Bill 797 during the 1983-1984 regular session of the California legislature. The Act requires every urban water supplier providing water for municipal purposes to more than 3,000 connections or supplying more than 3,000 acre-feet (AF) of water annually to adopt and submit an UWMP every five years to DWR.

1.3 – Updated Guidance for 2025 Urban Water Management Plans

The Urban Water Management Plan Guidebook was made available by DWR in January 2026. The Guidebook presents applicable legislation, legislative interpretation of minimum requirements, examples and methods for preparing contents, preferences for regulatory review, and supporting research.

1.4 – Annual Water Supply and Demand Assessment Guidance

The 2022 Annual Water Supply and Demand Assessment Guidance presents applicable legislation, minimum requirements, examples and methods for preparing annual assessments. See Chapter 3 for additional details.

1.5 – Submittal Tables

> ***Water Code Section 10644***
>
> *(a)(2) The plan, or amendments to the plan, submitted to the department … shall include any standardized forms, tables, or displays specified by the department.*

The Water Use Efficiency (WUE) Tables were uploaded via the portal. Copies of the WUE Tables specific to the WSCP are provided in Appendix A.

1.6 – Relation to Other Efforts

The District's 2025 WSCP integrates with related planning efforts of MWD, EMWD, the County of San Diego, and others. Key related planning efforts are listed below:

- RMWD Emergency Response Plan
- Eastern Municipal Water District 2025 WSCP
- Metropolitan Water District of Southern California WSCP
- Metropolitan Water District of Southern California Water Supply Allocation Plan (WSAP)
- San Diego County Multi-Jurisdictional Hazard Mitigation Plan

1.7 – Department of Water Resources Review Process

Upon submittal, DWR will review the WSCP to ensure that it addresses Water Code requirements. Following the review, the District will be notified of the results via a formal review letter.

1.8 – Grant or Loan Eligibility

The WSCP is an integral component of the UWMP submittal. By virtue of submitting a compliant UWMP, the District is eligible for State grants and low interest loans.

Water Code Section 10608.56

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

(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

Water Code Section 10656

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

23 CCR Section 596.1

(b)(2) "disadvantaged community" means a community with a median household income that is less than 80 percent of the statewide annual median household income.

1.9 – Units of Measurement

The WSCP uses acre-feet for calculations in the WUE Tables.

1.10 – Acronyms and Abbreviations

Common acronyms and abbreviations are used throughout the plan. By convention, the first appearance is written out followed by the acronym or abbreviation in parentheses, and subsequent appearances use only the acronym or abbreviation.

Act	Urban Water Management Planning Act
AD	Domestic Agriculture
ADD	average day demand
AF	acre-feet
AFY	acre-feet per year
AG	Agriculture
CIMIS	California Irrigation Management Information System
CM	Commercial Family
CN	Construction
CWC	California Water Code
District	Rainbow Municipal Water District
DWR	California Department of Water Resources
EMWD	Eastern Municipal Water District
EOC	Emergency Operations Center
ERP	Emergency Response Plan
MF	Multi-Family Residential
MG	million-gallon
MWD	Metropolitan Water District of Southern California
RMWD	Rainbow Municipal Water District
SCADA	supervisory control and data acquisition system
SDG&E	San Diego Gas & Electric
SF	Single Family Residential
UWMP	Urban Water Management Plan
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan
WUE	Water Use Efficiency

1.11 – Acknowledgements

The District appreciates the participation of the following individuals in preparing, reviewing, and contributing to the UWMP:

Rainbow Municipal Water District

- Jake Wiley, P.E. – General Manager
- Chad Williams – Engineering & CIP Program Manager
- Konstantin Shilkov, CPA – Chief Financial Officer/Treasure
- Esther Lan – Management Analyst
- Terese Quintanar – District Secretary

Engineering Resources of Southern California

- Anthony Herda, P.E. – Senior Principal Engineer
- Trent Brudin, P.E. – Engineering Manager
- Braniah Washington – Engineering Aide

Eastern Municipal Water District

- Kylee Wideman – Water Resources Specialist Associate

Chapter 2 – Water Supply Reliability Analysis

Water Code Section 10632(a)(1)

The analysis of water supply reliability conducted pursuant to Section 10635.

Water Code Section 10632.5.(a)

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

The water supply reliability analysis is documented in Chapter 7 of the UWMP. To comply with the Water Code, the analysis is summarized in this section. The reliability of supplies and the key issues that may create shortage conditions relative to the District's water supply portfolio are summarized below.

2.1 – Water System Reliability

The water system reliability analysis to meet demands in normal year, single dry year, and five consecutive dry years is described narratively and in tabulated format in Chapter 7 of the UWMP. Historically, EMWD supply has been very reliable with only occasional supply reductions during droughts impacting the State Water Project or the Colorado River Watershed. The District anticipates there will be no supply shortages under normal year, single dry year, or five consecutive dry years condition through 2050.

2.2 – Key Risks for a Potential Shortage Condition

Though the District's supply is highly reliable, there are scenarios that could result in the declaration of water shortage stage conditions. For example, water shortage stages may be declared if the California Governor enacts an Executive Order calling for water demand reductions. Below is a list of the key risks to the District's supply that could potentially result in a shortage condition.

- Statewide or regional drought circumstances that lead to water supply allocations or cutbacks
- Regulatory restrictions enacted upon imported supplies
- Earthquakes or other hazards that may cause catastrophic failure of conveyances for water supplies from the State Water Project or the Colorado River Aqueduct

Chapter 3 – Annual Assessment Procedures

The annual water supply and demand assessment (Annual Assessment) is conducted and submitted to DWR on or before July 1 of each year. The following sections delineate reporting requirements from the DWR 2022 Annual Water Supply and Demand Assessment Guidance[1]. Referenced assessment tables are provided in Appendix B.

3.1 – Decision Making Process to Determine Water Supply Reliability

> ***Water Code Section 10632(a)(2)***
>
> *The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:*
>
> *(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.*

In the **Annual Assessment Information** table, the District provides the following:

- **Start and end month for the Annual Assessment planning cycle:** 12-month period prior to assessment development, typically May of the previous year through April of the current year.
- **Data reporting interval:** monthly, as preferred by DWR.
- **Volume Unit for Reported Supply and Demand:** acre-feet (AF), as used in the District's internal Patrol Reports and the Water Usage Reports.
- **Water Supplier's Contact Information:** information identifying the District.
- **Preparer's Contact Information:** contact information for the assessment preparer, whether internal or outsourced.
- **WSCP Title:** Rainbow Municipal Water District 2025 Water Shortage Contingency Plan.
- **WSCP Adoption Date:** to be updated following adoption.
- **Other Annual Assessment Related Activities:** any changes to assessment procedures.

[1] California Department of Water Resources. (April 2022). *Annual Water Supply and Demand Assessment Guidance.* https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency/Annual-Water-Supply-and-Demand-Assessment/AWSDA-Final-Guidance-4-2022.pdf

3.2 – Key Data Inputs to Evaluate Water Supply Reliability

Water Code Section 10632(a)(2)

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

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

(v) A description and quantification of each source of water supply.

The District will provide a description of the data used to evaluate water supply reliability, per the following subsections.

3.2.1 – Current Year Unconstrained Demand

Water Code Section 10632(a)(2)

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

In the **Key Data Inputs – Demands** table, the District will review unconstrained demand for the current year and provide an estimate of projected dry year demand for the next year. Projections have been calculated based on data information presented in the UWMP, analysis of historical billing data, and the influence of weather variation on irrigation requirements. (See Appendix C). The preparer may adjust the projections as needed based on interpretation of the current year's unconstrained demand.

3.2.2 – Current Year Available Supply

> ***Water Code Section 10632(a)(2)***
>
> *(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:*
>
> *(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.*
>
> *(iii) Existing infrastructure capabilities and plausible constraints.*
>
> *(v) A description and quantification of each source of water supply.*

In the **Key Data Inputs – Supplies** table, the District will enter input provided by EMWD on projected supply availability. Unless a shortage has been declared by MWD, supply is anticipated to be available commensurate with projected demands.

3.2.3 – Existing Infrastructure Capabilities and Plausible Constraints

> ***Water Code Section 10632(a)(2)***
>
> *(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:*
>
> *(iii) Existing infrastructure capabilities and plausible constraints.*

The District receives supply via two MWD transmission pipelines through multiple interties. District will enter input provided by EMWD on projected changes to MWD infrastructure that would constitute a constraint or reduction in capacity.

3.2.4 – Assessment Methodology: Locally Applicable Evaluation Criteria

> ***Water Code Section 10632(a)(2)***
>
> *(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:*
>
> *(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.*

The following assumptions are applied to unconstrained demand projections:

- Annual demands by sector are calculated by linear interpolation from 2025 demands in UWMP WUE Table 4-1 (Total Uses for Potable and Non-Potable Water - Actual) and 2030 demands in UWMP WUE Table 4-2 (Total Uses for Potable and Non-Potable Water - Projected), then scaled by a factor 1.3 to produce dry year characteristics. Note that the 2030 demands account for anticipated growth and impacts due to local economics.
- CN (Construction) and Calculated Losses are calculated as the annual demand divided by 12 months
- AD (Domestic Agriculture), (AG Agriculture), and CM (Commercial Family) are calculated as the annual demand divided by 12 months and scaled per variation of the Evapotranspiration Index presented in UWMP Table 3.1 (CIMIS Climate Data)
- IS (Institutional) are calculated as the annual demand divided by 12 months with outdoor water use estimated at 77.1% and scaled per variation of the Evapotranspiration Index
- MF (Multi-Family Residential) are calculated as the annual demand divided by 12 months with outdoor water use estimated at 41.4% and scaled per variation of the Evapotranspiration Index
- SF (Single Family Residential) are calculated as the annual demand divided by 12 months with outdoor water use estimated at 71.5% and scaled per variation of the Evapotranspiration Index

3.2.5 – Description and Quantification of Each Water Supply Source

Water Code Section 10632(a)(2)

(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:

(v) A description and quantification of each source of water supply.

Supply is provided by MWD and delivered via EMWD. The vast majority of water supplied to the District comes from the Skinner Water Treatment Plant; however, MWD has a diverse supply portfolio augmented by regional storage. In the event a shortage has been declared by MWD, EMWD will provide the District with details on supply availability from associated MWD sources.

3.3 – Supply and Demand Analysis

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

In the **Potable Water Shortage Assessment** table, the District enters the Anticipated Unconstrained Demand and Anticipated Total Water Supply. Under normal conditions, surpluses will be zero, since EMWD will deliver as much supply as necessary to meet demands. In the event MWD has declared a shortage, the corresponding shortfall will be calculated and used to implement appropriate Shortage Response Actions.

3.4 – Planned Shortage Response Actions

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

In the **Planned Water Shortage Response Actions** table, the District will identify appropriate Demand Reduction Actions for Table 5.1 and estimate the associated volume saved.

3.5 – Compiling and Submitting Annual Water Shortage Assessment Report

Water Code Section 10631.2

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

Under normal conditions, EMWD will deliver as much supply as necessary to meet demands. In this case, the District will submit the following tables electronically via the WUE Data Portal:

- Completed Table 1: Annual Assessment Information
- Completed Table 2: Water Demands
- Completed Table 3: Water Supplies
- Completed Table 4: Tables 4(P) – Potable Water Shortage Assessment
- Completed Table 5: Planned Water Shortage Response Actions

Under an MWD declared water shortage or other wholesaler conditions resulting and supply constraints, EMWD will reduce supply deliveries according to the MWD Water Shortage Allocation Plan. In this case, the District will also prepare and submit the following report electronically via the WUE Data Portal:

- Optional written report on the Annual Assessment and Annual Shortage Report

Chapter 4 – Six Standard Water Shortage Levels

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 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

The District has developed a six-stage WSCP that defines the shortage levels based upon the percent of water supply shortage in comparison to unconstrained demand, as shown in Table 4.1.

Table 4.1 – WSCP Levels

Standard Shortage Levels	Percent Shortage Range	Wholesaler Shortage Level	Retailer Shortage Condition
1	Up to 10%	Up to 90% of WSA	96.7% to 100% of unconstrainted demand
2	Up to 20%	Up to 80% of WSA	93.3% to 96.7% of unconstrained demand
3	Up to 30%	Up to 70% of WSA	90% to 93.3% to of unconstrained demand
4	Up to 40%	Up to 60% of WSA	86.7% to 90% of unconstrained demand
5	Up to 50%	Up to 50% of WSA	83.3% to 86.7% of unconstrained demand
6	>50%	Less than 50% of WSA	Less than 83.3% of unconstrained demand

The six standard water shortage levels correspond to progressively increasing estimated supply shortage conditions and align with the response action the District would implement to meet the severity of the impending supply shortages.

As described in §2.2 (Key Risks for a Potential Shortage Condition), MWD has studied potential impacts in detail and developed a water supply allocation calculation to quantify the availability of wholesaler supply to dependent retailers in the event of a shortage. A copy of relevant portions of the MWD 2014 Water Supply Allocation Plan[2] (WSAP) is provided in Appendix D.

[2] Metropolitan Water District of Southern California. (December 2014). *Water Supply Allocation Plan*. https://bda.mwdh2o.com/Member%20Agency%20Materials%20%20Secure/0_Reference/Water%20Supply%20Allocation%20Plan%20(2014).pdf

Chapter 5 – Shortage Response Actions

Water Code Section 10632 (a)(4)

Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

Water Code Section 10632.2

An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

Shortage response actions are aligned with the defined shortage levels presented in Table 4.1. Shortage response actions include locally appropriate supply augmentation actions and locally appropriate demand reduction actions such as operational changes, mandatory prohibitions against specific water use practices, and state mandated prohibitions. Each shortage response action is intended to reduce a portion of the gap between supplies and demand. The percent of water demand reduction for each action is estimated in Section 5.1.

5.1 – Supply Augmentation

The District is wholly dependent on supply from MWD delivered via EMWD; therefore, supply augmentation options are limited.

The District maintains emergency interconnections with the City of Oceanside and Fallbrook Public Utilities District. In the event of a supply shortage, the District will contact its local partners about the opportunity for supply augmentation; however, access to emergency supply from these sources is subject to availability and is considered unavailable for a sustained supply shortage.

5.2 – Special Water Feature Distinction

> ***Water Code Section 10632 (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.*

Water features that are not pools or spas are analyzed and defined separately from pools and spas in the WSCP. Non-pool or non-spa water features including ponds, lakes, waterfalls, and fountains that do not require the use of potable water for health and safety considerations, are defined as decorative water features and recreational water features and are included as such in the response actions and are enforced and monitored as part of the WSCP process.

Under all conditions and stages, the WSCP prohibits using potable water in an ornamental fountain or other decorative water feature, except where the water is part of a recirculating system.

5.3 – Demand Reduction

Prioritized use of available potable water during shortages is based on the difference between basic needs (i.e., drinking, toilet flushing) and discretionary uses (i.e., landscape irrigation), and legal requirements set forth in the California Water Code (CWC), Sections 350-358. Water reduction actions implemented during shortages will not affect the following water use types:

- Minimum health and safety allocations for interior residential needs (includes single family, multifamily, hospitals and convalescent facilities, retirement and mobile home communities, student housing, firefighting, and public safety)
- Commercial, industrial, institutional/governmental operations, where water is used for manufacturing, to meet minimum health and safety allocations for employees and visitors, or to maintain jobs and economic base of the community, but not for landscape uses
- Commercial growers or nurseries

Locally appropriate demand reduction actions to adequately respond to shortages are specified in Table 5.1

Table 5.1 – Demand Reduction Actions

Shortage Level	Demand Reduction Action	Estimated Reduction (AFY)	Description (Calculation)
1 through 5	Offer Water Use Surveys	124	In coordination with EMWD, extend program to customers. (1% of ADD)
1 through 5	Provide Rebates on Plumbing Fixtures and Devices	83	In coordination with EMWD, offer rebates and devices to customers. (1% of non-AG)
1 through 5	Provide Rebates for Landscape Irrigation Efficiency	83	In coordination with EMWD, offer rebates and devices to customers. (1% of non-AG)
1 through 5	Provide Rebates for Turf Replacement	167	In coordination with EMWD, offer rebates. (2% of non-AG)
1 through 5	Reduce System Water Loss	124	Accelerate implementation of leak detection and repair program. (1% of ADD)
2 through 5	Landscape - Restrict or prohibit runoff from landscape irrigation	42	Enforce normal runoff prohibition. (0.5% of non-AG)
2 through 5	Customers repair leaks, breaks, and malfunctions	62	Repair all leaks within seventy-two (72) hours of notification by the District unless other arrangements are made with the General Manager. (0.5% of ADD)
2 through 5	Landscape - Prohibit certain types of landscape irrigation	6	Prohibit the irrigation with potable water of ornamental turf on public street medians. (10% of Institutional)
2 through 5	Landscape - Limit landscape irrigation to specific days	457	Limit residential and commercial landscape irrigation to no more than three (3) assigned days per week on a schedule established by the General Manager and posted by the District. (10% of Residential and Commercial)

Shortage Level	Demand Reduction Action	Estimated Reduction (AFY)	Description (Calculation)
3 through 5	Landscape - Prohibit certain types of landscape irrigation	137	Limit irrigation of landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation. (3% of Residential and Commercial)
4 through 5	Landscape - Limit landscape irrigation to specific times	417	Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to weather-based controllers, drip/micro-irrigation systems and stream rotor sprinklers. (5% of non-AG)
5	Water Features - Restrict water use for decorative water features, such as fountains	17	Prohibit the use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system. (0.2% of non-AG)
5	CII - Restaurants may only serve water upon request	4	Prohibit the serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased. (0.5% of Commercial Family)
5	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	37	Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems. (0.3% of ADD)
5	Other - Prohibit use of potable water for washing hard surfaces	83	Prohibit the application of potable water to driveways and sidewalks. (1% of non-AG)
5	Moratorium or Net Zero Demand Increase on New Connections	26	No new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) shall be issued, unless (1) a valid, unexpired building permit has already been issued for the project; (2) In the opinion of the District Board of Directors the project is necessary to protect the public's health, safety, and welfare; or (3) The applicant provides substantial evidence of an enforceable binding commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District. (40% of Construction)
5	Landscape - Limit landscape irrigation to specific days	229	Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the District. (5% of Residential and Commercial)
6	Other	2,471	The District may establish up to a 20% reduction in water allocation for any property served by the District. (20% of ADD)

5.4 – Locally Appropriate Operational Changes

The following demand reduction actions listed in Table 5.1 are operational or administrative in nature and do not impose constraints on customers to reduce water usage:

Wholesaler Coordination

EMWD offers numerous educational and rebate programs aimed at water conservation. The District will work in coordination with EMWD on outreach and implementation to expand the coverage of those programs.

Leak Detection and Repair

The District plans to prepare a leak detection and repair pilot study for long-term water loss reduction. Once implemented, this program can be accelerated to increase loss reduction, as needed.

Moratorium on New Connections

The District may hold or curtail applications for new service until drought conditions have passed.

5.5 – Additional Mandatory Prohibitions

The following additional mandatory prohibitions are cited in Ordnance No. 16-10 with respect to a water use reduction goal of 40 percent.

- *Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries. This restriction shall not apply to the following categories of use unless the RMWD has determined that recycled water is available and may be lawfully applied to the use:*
    - *Maintenance of trees and shrubs by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation*
    - *Maintenance of existing landscaping necessary for fire protection as specified by the Fire Marshal of the local fire protection agency having jurisdiction over the property to be irrigated*
    - *Maintenance of existing landscaping for erosion control*
    - *Maintenance of plant materials identified to be rare or essential to the well being of rare animals*
    - *Maintenance of landscaping within active public facilities, including parks and playing fields, day care centers, school grounds, cemeteries, and golf course greens, provided that such irrigation does not exceed two (2) days per week*
    - *Watering of livestock*
    - *Public works projects and actively irrigated environmental mitigation projects*
- *Repair all water leaks within twenty-four (24) hours of notification by the RMWD*

unless other arrangements are made with the General Manager.

5.6 – Shortage Response Action Effectiveness

The purpose of implementing demand reduction and supply augmentation actions is to reduce water demand and increase other sources of supply to make up for the water shortage gaps. If implemented, the demand reduction outlined in Table 5.1 will allow the District to sufficiently meet the water shortage gaps at each shortage level. Table 5.2 presents the WSCP shortage gap reduction goals and compares them to the total shortage gap reduction possible if all demand reduction and supply augmentation actions are implemented for the associated shortage level.

Table 5.2 – Shortage Gap Reduction

Standard Shortage Levels	Supply Shortage	Shortage Gap Reduction Goal	Shortage Reduction
1	10%	3.3%	4.8%
2	20%	6.7%	9.4%
3	30%	10.0%	10.5%
4	40%	13.3%	13.9%
5	50%	16.7%	17.0%
6	>50%	20.0%	20.0%

The Standard Shortage Levels and Supply Shortage are taken from Table 4.1.

The Shortage Gap Reduction Goal is the maximum retailer impact due to a wholesale shortage per the MWD Water Shortage Allocation Plan (WSAP). (See Appendix D)

The Shortage Reduction represents application of the of the Demand Reduction Actions from Table 5.1. Percentages are calculated as the cumulative estimate reduction estimate with respect to 2025 demands.

Chapter 6 – Emergency Response Plan

A catastrophic water shortage could occur when a natural disaster such as an earthquake results in damage to water supply conveyances, other state water infrastructure, or District water facilities.

This could possibly result in deficient water supplies for the region and/or the District. In response to potential natural disasters and other emergencies, the District prepared an Emergency Response Plan (ERP) in 2018. The ERP includes standardized response and recovery procedures to minimize customer water service interruptions and to prevent, minimize, and mitigate human injury and infrastructure damage resulting from emergencies or disasters of human-made or natural origin. The information contained in the ERP is intended to prepare and guide staff and inform local emergency response agencies. The ERP includes plans, procedures, lists, and identification of equipment that may be useful during an emergency. The ERP includes the following sections:

- Section 1: Introduction
- Section 2: Emergency Planning Process
- Section 3: Mutual Aid System
- Section 4: Water System Information and Hazard Identification
- Section 5: Preparedness Phase Operations
- Section 6: Response Phase Overview
- Section 7: EOC Staff Assignments and Responsibility
- Section 8: Restoration and Recovery Phase
- Section 9: Mitigation Phase

Additionally, the ERP provides specific guidelines for the four items listed below. These guidelines give District emergency responders support when determining the necessary response actions to manage an incident in a timely manner.

- Establishing an Emergency Operations Center (EOC) including the location and resources required, as well as a secondary EOC if the primary EOC is compromised.
- Organization and responsibilities of the EOC personnel to evaluate and direct the overall response to the emergency.
- Strategies for emergency response, repair, and restoration of the water system.
- Responsibilities of District personnel during the emergency response.

6.1 – Seismic Risk Assessment and Mitigation Plan

Water Code Section 10632.5.(a)

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

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

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

A detailed seismic risk assessment of critical water infrastructure was conducted in 2021, and updates to that assessment are provided in the following sections. The original seismic assessment is included as an appendix in the RMWD 2020 WSCP available via the DWR WUE Data Portal[3].

6.1.1 – Supply

The District is fully reliant upon purchased imported potable water from Eastern Municipal Water District (EMWD), which relies upon two aqueducts to convey water to southern California. An earthquake may impact the source water supply if the aqueducts experience structural failure. Seismic assessment of the aqueducts and source water supply are covered under the EMWD and MWD seismic assessment components of their Water Shortage Contingency Plans.

The purchased water is delivered to the District through five interties and two emergency connections. An earthquake may cause structural failure at the interties and emergency connections, potentially causing water loss from pipe breakage or cracking.

[3] Rainbow Municipal Water District. (May 2020). *2020 Water Shortage Contingency Plan*. https://wuedata.water.ca.gov/public/uwmp_attachments/2768216788/Rainbow%202020%20WSCP%2Epdf

6.1.2 – Pipelines

The District's system includes 342 miles of distribution pipeline, ranging in diameter from 4-inch to 42-inches in diameter. Table 6.1 summarizes pipeline lengths by diameter. Ground shaking and liquefaction from earthquakes can cause pipes to crack at brittle joints and sink into the liquefied ground potentially causing significant sudden water loss, flood damage to nearby structures, and the inability to deliver water to some customers.

Table 6.1 – Pipeline Summary

Diameter (inches)	Length (miles)
4	4.8
6	66.0
8	125.6
10	18.5
12	48.7
14	20.6
16	24.8
18	13.9
20	10.7
22	0.6
24	5.8
27	0.3
30	0.8
36	0.4
42	0.5
Total	**342**

6.1.3 – Storage

The District has 4 reservoirs, three of which are operational, and 13 tanks, twelve of which are operational.

The three operational reservoirs are either concrete or asphalt lined. Reservoir failure from an earthquake can cause loss of control of water storage and downstream flooding of nearby structures.

There is one pre-stressed concrete tank, and the other 12 storage tanks are cylindrical above-ground steel tanks. Some common earthquakes effects on above ground tanks are structural stability failure, water sloshing inside the tank causing structural failure to the shell or roof, sliding off the foundation, cracking or shearing of walls for the concrete tank, and elephant foot buckling for steel tanks due to the overturning moment.

Table 6.2 lists the reservoirs and tanks by storage capacity. For security purposes, the designations and locations of storage infrastructure are considered sensitive and are therefore not disclosed in this plan.

Table 6.2 – Storage Summary

Tank or Reservoir	Capacity (MG)
Tank 1	0.6
Tank 2	1.5
Tank 3	3.0
Tank 4	3.5
Tank 5	4.0
Tank 6	4.0
Tank 7	4.0
Tank 8	4.0
Tank 9	4.0
Tank 10	4.0
Tank 11	4.0
Tank 12	6.0
Reservoir 1	22.8
Reservoir 2	151.5
Reservoir 3	203.7
Total	**420.6**

6.1.4 – Pump Stations

There are 14 booster pump station facilities, each with between one and four pumps. The pump station buildings are susceptible to structural damage from earthquakes, and pump operations may be impacted by earthquake associated power outages. Liquefaction of the soil underlying the structures may occur, causing the entire facility and its assets to lose bearing strength and collapse.

6.1.5 – Pressure Reducing Stations

There are 48 pressure reducing stations, each with one or more hydraulically controlled valves. In the event of an earthquake, these valves could fail causing transmission failure and localized flooding.

6.1.6 – Telemetry

The District has a centralized Supervisory Control and Data Acquisition (SCADA) system to monitor and control the distribution system facilities. Earthquakes commonly cause power outages due to damage to power lines, transformers, and generators which could disrupt SCADA functionality.

6.1.7 – Power

The District receives its power supply from San Diego Gas & Electric (SDG&E). The District is subject to any associated earthquake impacts to SDG&E's facilities serving the District.

6.2 – Mitigation and Resilience Measures

6.2.1 – Mitigation and Resilience for Water System Assets

To mitigate the threat of earthquakes to District interties, reservoirs, storage tanks, distribution pipelines, booster pumps, emergency pumps, emergency connections, and other District buildings, the District may first consider conducting a complete structural assessment of the assets. This evaluation can identify the high-risk assets that should take priority for replacement or retrofits in the future. Assets associated with source water resilience, such as aqueducts, shall be addressed by EMWD and MWD independently.

6.2.2 – Operational Strategies to Improve Water System Resilience

Given the District's dependence on a wholesaler, improving reliability and redundancy may help strengthen preparedness and reduce response times in case of earthquake impacts to EMWD or MWD systems.

The District may consider identifying additional interconnectivity strategies between nearby systems, such as City of Oceanside, Carlsbad Municipal Water District, Vista Irrigation District, and Fallbrook Public Utilities District to maximize reliability and resiliency. Although EMWD supplies are considered reliable, improved interconnection with other systems could help address an earthquake event that may impact some or all of the District's facilities.

The District may consider identifying and updating lists of priority water customers (e.g., hospitals, dialysis clinics, schools) to develop a plan to restore water service to those customers first. Back-up supplies of water (bulk water delivery or bottled water supplies) should also be identified and documented in the ERP.

Because earthquakes may impact multiple utilities simultaneously, it is recommended that the District establish coordination with SDG&E to foster better communication and response times immediately after an earthquake. Sharing information with the power utility regarding critical asset locations could help facilitate faster power recovery to high-priority assets. Locations of back-up generators and fuel reserves should be updated regularly and included with the ERP.

6.2.3 – Emergency Response Planning

The District should review and update its ERP to ensure all earthquake procedures, equipment lists, and emergency contacts are current. The ERP specifically addresses earthquakes and procedures. To supplement this, the EPA's Earthquake Incident Action Checklist can serve as a helpful guide for emergency planning and response (see Appendix E).

Finally, it is recommended that all District staff review the ERP, understand where the emergency operations center (EOC) is located, how it will be activated, and what their role is during an earthquake emergency. Desktop training and exercises for seismic scenarios are suggested.

Chapter 7 – Communication Protocols

Water Code Section 10632

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

(5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications

Timely and effective communication is a key element of water shortage contingency planning implementation. The District's communication protocols and procedures in the event of a water shortage are intended for activation only with District Board authorization. Under a water shortage condition, the District would assess the actual water supply and demand information and conditions to determine whether activating the WSCP is warranted. If activation is warranted, the General Manager will call for an emergency Board meeting to request District Board authorization, if needed. The District would recommend activation of the appropriate stage and request District Board authorization to initiate the measures necessary to achieve the appropriate demand reduction target. The public would be encouraged to understand and be involved in the decision-making process and provide feedback to the District Board on such an action.

The list below outlines the specific communication methods to inform customers, the public, interested parties, and local, regional, and state government of any current or anticipated water shortage stage and the associated water demand reduction actions:

- Customers, the public, and other interested parties:
    - Announcements on District website homepage
    - Press releases via the River Village News
    - Public information and awareness program with workshops, park signage, water bill inserts, and educational programs at schools
- Local, regional, and state government
    - Email officials at cities and counties impacted by the water shortage
    - Email or place phone call to designated officials at regional and state level (DWR)

Chapter 8 – Compliance and Enforcement

> ***Water Code Section 10632 (a)(6)***
>
> *For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.*

The District adopted Ordinance No 16-10: *An Ordinance of Rainbow Municipal Water District Adopting a Drought Response Conservation Program* in June 2016 which provides a description of penalties and the District's authority to fine or terminate water service. The ordinance will be revised in accordance with the water shortage stages, demand reduction actions, and other measures outlined in this WSCP. The ordinance will go before the District's Board for approval after the WSCP has been revised and adopted.

8.1 – Ensuring Ordinance Compliance

When water shortage stages are enacted, the District will ensure compliance with the ordinance by launching education and communication programs with District customers. If violations are identified, the fines described in Section 8.2 may apply if the offender has already been issued a warning.

8.2 – Enforcement of Demand Reduction Actions

Any person who uses, causes to be used, or permits the use of water in violation of the ordinance is guilty of an offense punishable as outlined below. Each day that a violation of the ordinance occurs is a separate offense.

Similarly, the District will ensure compliance with and enforce provisions of the WSCP reduction actions taken at each shortage level as noted in Table 5.1 by the following means:

- Prior to issuing administrative fines for violations, the District will first conduct public outreach and issue a warning to customers not in compliance. The District will provide the customer with a fact sheet about water shortage demand reduction actions to explain why the measures are in place.
- Administrative fines may be levied for each subsequent violation, with increasing fees as follows:
    - $100 for a first violation.
    - $200 for a second violation within one year from occurrence of the first violation.
    - $500 for each additional violation within one year of the first violation.
- Installation of a flow-restricting device in the meter.
- Violations may be prosecuted as a misdemeanor punishable by imprisonment in the

county jail for not more than 30 days or by a fine not exceeding $1,000, or by both as provided in CWC section 377.

- Willful violations of the mandatory conservation measures and water use restrictions applicable during a Level 6 Drought Emergency condition may be enforced by discontinuing service to the property at which the violation occurs, as provided by CWC section 356.

All remedies provided for herein shall be cumulative and not exclusive.

8.3 – Exemptions and Appeals

If, due to unique circumstances, a specific requirement of this WSCP would result in undue hardship and disproportionate impact to a District customer, then an exemption may be granted or conditionally granted by following the procedures detailed below.

1. Request an Exemption or Appeal. The customer shall submit a letter to the District requesting an exemption or appeal.
2. Provide supporting documentation. The exemption application shall be accompanied by photographs, maps, drawings, and other information, including a written statement of the applicant.
3. Basis is found to support exemption. An exemption shall be granted only if the District finds, based on the information provided in the application, supporting documents, any additionally requested information, and the District's records of water use information for the property, all of the following:
    a. The exemption does not grant special privilege inconsistent with those available to all other District customers.
    b. Unique circumstances specific to the applicant are found to have a disproportionate impact on the property or use that exceeds the impacts to customers generally.
    c. The granted exemption will not cause harm to adjacent properties and will not impede the District's ability to fulfill the purpose of the WSCP.

The rationale and reason for the exemption request is not common, recurrent, or general in nature.

Approval Authority. The General Manager shall exercise approval authority and act upon any completed application no later than 30 days after submittal and may approve, conditionally approve, or deny the exemption. The applicant requesting the exemption shall be promptly notified in writing of any action taken. Unless specified otherwise at the time an exemption is approved, the variance applies to the subject property during the term of the mandatory shortage response.

Appeals to the District Board of Directors. An applicant may appeal a decision or condition of the General Manager on a variance application. The appeal must be in the form of a written request for a hearing and shall state the grounds for the appeal. At a public meeting, the District Board of Directors shall act as the approval authority and review the appeal. The decision of the District Board of Directors is final.

Chapter 9 – Legal Authorities

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, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

Water Code Section Division 1, Section 350

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

The District's legal authority to enforce demand reduction measures during water shortages is codified by local ordinance, Rainbow Drought Ordinance 16-10: An Ordinance of Rainbow Municipal Water District Adopting a Drought Response Conservation Program.

The District shall declare a water shortage emergency condition in accordance with CWC Chapter 3 (commencing with Section 350) of Division 1 as stated below:

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

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

Chapter 10 – Financial Consequences

Water Code Section 10632(a)(8)

A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

10.1 – Financial Impacts

Upon implementation of a shortage stage and the associated reduction actions, the District anticipates that revenues generated from the quantity charge component of customers' bills would be reduced proportionately to the water shortage percentage. In addition to reduced revenues, the District may also experience increased expenses due to the need for staff to carry out monitoring and enforcement actions identified by each shortage stage.

10.2 – Mitigation Action

Throughout extended water shortage periods, the District would attempt to avoid rate adjustments. Potential mitigation actions include:

- Use of financial reserves - The District has financial reserves to address decreased water sales during a water shortage. See Appendix F for the District's Cash Reserves Policy.
- Postponement of capital improvements - The District could delay work on non-essential capital improvements until water sales become more sustainable.

10.3 – Reporting Cost of Compliance

Water Code Section 10632(a)(8)

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

Water Code Section 366

(a) During periods described in subdivision (a) of Section 367, excessive water use is prohibited by a residential customer in a single-family residence or by a customer in a multiunit housing complex in which each unit is individually metered or submetered by the urban retail water supplier.

(b) Each urban retail water supplier shall establish a method to identify and discourage excessive water use, through one of the following options:

(1) Establishing a rate structure, subject to applicable constitutional and statutory limitations, that includes block tiers, water budgets, or rate surcharges over and above base rates for excessive water use by a residential water customer.

(2)(A) Establishing an excessive water use ordinance, rule, or tariff condition, or amending an existing ordinance, rule, or tariff condition, that includes a definition of or a procedure to identify and address excessive water use by metered single-family residential customers and customers in multiunit housing complexes in which each unit is individually metered or submetered and may include a process to issue written warnings to a customer and perform a site audit of customer water usage prior to deeming the customer in violation.

(2)(B) For the purposes of subparagraph (A), excessive water use shall be measured in terms of either gallons or hundreds of cubic feet of water used during the urban retail water supplier's regular billing cycle. In establishing the definition of excessive use, the urban retail water supplier may consider factors that include, but are not limited to, all of the following:

(i) Average daily use.

(ii) Full-time occupancy of households.

(iii) Amount of landscaped land on a property.

(iv) Rate of evapotranspiration.

(v) Seasonal weather changes.

(C)(i) A violation of an excessive use ordinance, rule, or tariff condition established pursuant to subparagraph (A) shall result in an infraction or administrative civil penalty. The penalty for a violation may be based on

conditions identified by the urban retail water supplier and may include, but is not limited to, a fine of up to five hundred dollars ($500) for each hundred cubic feet of water, or 748 gallons, used above the excessive water use threshold established by the urban retail water supplier in a billing cycle.

(C)(ii) Any fine imposed pursuant to this subparagraph shall be added to the customer's water bill and is due and payable with that water bill.

(C)(iii) Each urban retail water supplier shall have a process for nonpayment of the fine, which shall be consistent with due process and reasonably similar to the water supplier's existing process for nonpayment of a water bill.

(D)(i) Consistent with due process, an urban retail water supplier shall establish a process and conditions for the appeal of a fine imposed pursuant to subparagraph (C) whereby the customer may contest the imposition of the fine for excessive water use.

(D) (ii) As part of the appeal process, the customer shall be provided with an opportunity to provide evidence that there was no excessive water use or of a bona fide reason for the excessive water use, including evidence of a water leak, a medical reason, or any other reasonable justification for the water use, as determined by the urban retail water supplier.

(D) (iii) As part of the appeal process, the urban retail water supplier shall provide documentation demonstrating the excessive water use.

(c)(1) The provisions of subdivision (b) do not apply to an urban retail water supplier that is not fully metered in accordance with Section 527. An urban retail water supplier shall comply with the provisions of subdivision (b) when all of the water supplier's residential water service connections are being billed based on metered water usage.

(2) An urban retail water supplier that is not fully metered shall prohibit water use practices by an ordinance, resolution, rule, or tariff condition that imposes penalties for prohibited uses of water supplied by the water supplier. The urban retail water supplier may include a process to issue written warnings prior to imposing penalties as well as increased penalty amounts for successive violations.

Water Code Section 367

(1) During a period for which the Governor has issued a proclamation of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on statewide drought conditions to an urban retail water supplier that has moved to a stage of action in response to a local water supply shortage condition under the

water supplier's contingency plan pursuant to paragraph (1) of subdivision (a) of Section 10632 that requires mandatory water use reductions.

(2) To an urban retail water supplier during a period in which the water supplier has moved to a stage of action in response to a local water supply shortage condition under the water supplier's contingency plan pursuant to paragraph (1) of subdivision (a) of Section 10632 that requires mandatory water use reductions.

(3) To an urban retail water supplier affected during a period for which the Governor has issued a proclamation of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on local drought conditions.

For the District to ensure its customers comply with the ordinance and CWC Chapter 3.3 (Excessive Residential Water Use During Drought) additional costs will be incurred. These costs are associated with the increased costs for monitoring and enforcement of water use reduction measures.

Chapter 11 – Monitoring and Reporting

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 customer compliance and to meet state reporting requirements.

The District will monitor and report implementation of the WSCP by collecting, tracking, and analyzing appropriate data for the purposes of monitoring reduction in customer water demands, customer compliance, and meeting state reporting requirements. Potable water use figures are recorded daily by District staff. The District operates its water system on a computerized supervisory control and data acquisition (SCADA) system, which allows instantaneous and continuous viewing of water system conditions and facility responses.

During a Shortage Level 1 or 2, District staff would compare the daily and monthly water distribution totals to the target distribution totals to verify that the appropriate reduction goal is being met. The District's Engineering and CIP Program Manager would then review the monthly distribution reports and determine if further action is required to meet demand reduction goals. Monthly distribution reports shall be sent to the District Board. If reduction goals are not met, the District's Engineering and CIP Program Manager would notify the District Board so that corrective action is considered and/or taken.

During a Shortage Level 3 and higher, the procedure described above would be followed, with the addition of issuing a weekly distribution report to the General Manager.

Chapter 12 – WSCP Refinement Procedures

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.

As part of the District's commitment to ensuring reliable supplies, the WSCP will be adopted by the District Board and made available to the public.

12.1 – Refinement Procedures

The WSCP is routinely updated to ensure water demand reduction actions and supply augmentation measures continue to accurately reflect the District's planned response to water shortage outages.

Experience with recent drought conditions and recommendations from EMWD for regional consistency in water shortage contingency planning also played a role in the revisions to this WSCP.

Review and update of the WSCP shall occur in parallel with the update of the UWMP, at a minimum of every five years. However, the WSCP may also be updated independently of the UWMP and with greater frequency, at the District's discretion.

12.2 – Adoption, Submittal, Availability, and Amendment Procedures

Water Code Section 10632 (c)

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

Water Code Section 10642.

…Prior to adopting either [UWMP and WSCP], the urban water supplier shall make both the plan [UWMP] and water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon…After the hearing or hearings, the plan [UWMP] or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

Water Code Section 10640.

(b) …The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article [Article 3 Sections 10640 -10645]

Water Code Section 10644(a)(2)(b)

If an urban water supplier revises its water shortage contingency plan the supplier shall submit to the department a copy of it water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 [required elements of a WSCP] no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

The updated WSCP shall be adopted, submitted, and made available as part of the same process for the 2025 UWMP per the CWC requirements. During each WSCP review and update process, the revised WSCP will go through internal review prior to adoption by the District's Board. The WSCP must be reviewed and adopted prior to or in conjunction with the UWMP review and adoption process. The WSCP may also be periodically amended independently of the UWMP, as needed. In either instance, the public review period and adoption process follows that which is defined in Government Code 6066. The associated notifications for the public hearing process and the Board adoption resolution for the WSCP are provided as appendices to the UWMP.

The updated WSCP shall be made available on the District's website no later than 30 days after it is adopted. The WSCP shall also be available as an appendix to the UWMP document, which will be posted to the District's website and DWR's public Water Use Efficiency data portal website. The UWMP and its WSCP appendix will also be submitted to the California State Library and be available for review in hardcopy format in the District's offices during normal working hours.

Chapter 13 – Submittal Tables

Electronic data and information related to the content of this chapter are included in the following WUE Tables.

- Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels Water Code Section 10632(a)(3)(B)
- Submittal Table 8-2 Retail: Supply Augmentation and Other Actions | Water Code Section 10632(a)(4)(A),(C) and (E)
- Submittal Table 8-3 Retail: Demand Reduction Actions | Water Code Section 10632(a)(4)(B) and (E)

Copies of these tables may be found in Appendix A.

List of Appendices

Appendix A – Water Use Efficiency (WUE) Tables

Appendix B – Annual Assessment Tables

Appendix C – Projected Dry Year Demands

Appendix D – MWD 2014 Water Supply Allocation Plan (WSAP)

Appendix E – EPA's Earthquake Incident Action Checklist

Appendix F – Section 5.03.220 | Cash Reserves Policy

Appendix A – Water Use Efficiency (WUE) Tables

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

Submittal Table 8-3 Retail: Demand Reduction Actions, Water Code Section 10632(a)(4)(B),(D), and (E)

Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels **Water Code Section 10632(a)(3)(B)**			
☐	Check the box if the Supplier uses the Standard six levels of water shortage. Proceed to the next table.		
Standard Shortage Levels	**Percent Shortage Range**	**Suppliers Shortage Levels**	**Percent Shortage Range**
1	Up to 10%	Up to 90% of WSA	96.7% to 100% of unconstrainted demand
2	Up to 20%	Up to 80% of WSA	93.3% to 96.7% of unconstrained demand
3	Up to 30%	Up to 70% of WSA	90% to 93.3% to of unconstrained demand
4	Up to 40%	Up to 60% of WSA	86.7% to 90% of unconstrained demand
5	Up to 50%	Up to 50% of WSA	83.3% to 86.7% of unconstrained demand
6	>50%	Less than 50% of WSA	Less than 83.3% of unconstrained demand
NOTES: Impact to RMWD is the maximum retail adjustment per Table 1 (Shortage Allocation Index) of the MWD 2014 Water Supply Allocation Plan (WSAP).			

Submittal Table 8-3 Retail: Demand Reduction Actions **Water Code Section 10632(a)(4)(B),(D), and (E)**					
	Is the Supplier completing this table using the standard six levels? (yes/no)				
Shortage Level	Demand Reduction Actions **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)	Penalty, Charge, or Other Enforcement? **For Retail Suppliers Only** Drop Down List
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)		
Add additional rows as needed					
1 through 5	Offer Water Use Surveys	Volume	124	In coordination with EMWD, extent program to customers. (1% of ADD)	No
1 through 5	Provide Rebates on Plumbing Fixtures and Devices	Volume	83	In coordination with EMWD, offer rebates and devices to customers. (1% of non-AG)	No
1 through 5	Provide Rebates for Landscape Irrigation Efficiency	Volume	83	In coordination with EMWD, offer rebates and devices to customers. (1% of non-AG)	No
1 through 5	Provide Rebates for Turf Replacement	Volume	167	In coordination with EMWD, offer rebates. (2% of non-AG)	No
1 through 5	Reduce System Water Loss	Volume	124	Accelerate implementation of leak detection and repair program. (1% of ADD)	No
1 through 5	Water Features - Restrict water use for decorative water features, such as fountains	Volume	17	Prohibit the use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system. (0.2% of non-AG)	Yes
2 through 5	Landscape - Restrict or prohibit runoff from landscape irrigation	Volume	42	Enforce normal runoff prohibition. (0.5% of non-AG)	Yes
2 through 5	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Volume	62	Repair all leaks within seventy-two (72) hours of notification by the District unless other arrangements are made with the General Manager. (0.5% of ADD)	Yes
2 through 5	Landscape - Prohibit certain types of landscape irrigation	Volume	6	Prohibit the irrigation with potable water of ornamental turf on public street medians. (10% of Institutional)	
2 through 5	Landscape - Limit landscape irrigation to specific days	Volume	457	Limit residential and commercial landscape irrigation to no more than three (3) assigned days per week on a schedule established by the General Manager and posted by the District. (10% of Residential and Commercial)	Yes
3 through 5	Landscape - Prohibit certain types of landscape irrigation	Volume	137	Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by section 5 (b) (1), on the same schedule set forth in section 5 (b) (1) by using a bucket, hand-heldhose with positive shut-off nozzle, or low-volume non-spray irrigation. (3% of Residential and Commercial)	Yes
4 through 5	Landscape - Limit landscape irrigation to specific times	Volume	417	Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per assigned day. This provision does not apply to landscape irrigation systems using water efficient devices, including but not limited to weather-based controllers, drip/micro-irrigation systems and stream rotor sprinklers. (5% of non-AG)	Yes
5	CII - Restaurants may only serve water upon request	Volume	4	Prohibit the serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased. (0.5% of Commercial Family)	Yes
5	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Volume	37	Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems. (0.3% of ADD)	Yes
5	Other - Prohibit use of potable water for washing hard surfaces	Volume	83	Prohibit the application of potable water to driveways and sidewalks. (1% of non-AG)	Yes
5	Moratorium or Net Zero Demand Increase on New Connections	Volume	26	No new potable water service shall be provided, no new temporary meters or permanent meters shall be provided, and no statements of immediate ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability) shall be issued, unless (1) a valid, unexpired building permit has already been issued for the project; (2) In the opinion of the District Board of Directors the project is necessary to protect the public's health, safety, and welfare; or (3) The applicant provides substantial evidence of an enforceable binding commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District. (40% of Construction)	Yes
5	Landscape - Limit landscape irrigation to specific days	Volume	229	Limit residential and commercial landscape irrigation to no more than two (2) assigned days per week on a schedule established by the General Manager and posted by the District. (5% of Residential and Commercial)	Yes
6	Other	Volume	2,471	The District may establish up to a 20% reduction in water allocation for any property served by the District. (20% of ADD)	Yes
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES: As a reduction target for Level 5, 16.7% of a normal year is appoximately 2,063 AF.					

Appendix B – Annual Assessment Tables

Table 1. Annual Assessment Information	
Type of Supplier (Required to check one or two)	
Supplier is a Wholesaler	
Supplier is a Retailer	
If you are both a wholesaler and retailer, will you be submitting two separate reports or a combined report?	Number of Reports
Year Covered By This Shortage Report (Required)	
Start: July 1,	YYYY
End: June 30,	YYYY+1
Volume Unit for Reported Supply and Demand: *(Must use the same unit throughout)*	MG
Supplier's Annual Assessment Planning Cycle (Required)	
Start Month:	
End Month:	
Data Interval:	
Water Supplier's Contact Information (Required)	
Water Supplier's Name:	Water_Supplier_Name
Contact Name:	
Contact Title:	
Street Address:	
ZIP Code:	
Phone Number:	(XXX)XXX-XXXX
Email Address:	
Report Preparer's Contact Information *(if different from above)*	
Preparer's Organization Name:	
Preparer's Contact Name:	
Phone Number:	(XXX)XXX-XXXX
Email Address:	
Supplier's Water Shortage Contingency Plan	
WSCP Title	
WSCP Adoption Date	MM/DD/YYYY
Other Annual Assessment Related Activities	
Activity	**Timeline/Outcomes/Links/Notes**
Annual Assessment/ Shortage Report Title:	Optional
Annual Assessment / Shortage Report Approval Date:	MM/DD/YYYY
Other Annual Assessment Related Activities:	Optional
(Add rows as needed)	

= From prior tables
= Auto calculated

Table 2: Water Demands[1]

Use Type			Start Year: YYYY						Volumetric Unit Used[2]: MG						
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 (Add additional rows as needed)	Additional Description (as needed)	Level of Treatment for Non-Potable Supplies **Drop-down list**	Projected Water Demands - Volume[3]												
			Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Total by Water Demand Type**
Demands Served by Potable Supplies															
															0
															0
															0
															0
															0
															0
															0
															0
															0
															0
Total by Month (Potable)			0	0	0	0	0	0	0	0	0	0	0	0	0
Demands Served by Non-Potable Supplies															
															0
															0
															0
															0
															0
Total by Month (Non-Potable)			0	0	0	0	0	0	0	0	0	0	0	0	0

Notes: List considered factors impacting demands

[1]Projections are based on best available data at time of submitting the report and actual demand volumes could be different due to many factors.
[2]Units of measure (AF, CCF, MG) must remain consistent.
[3]When opting to provide other than monthly volumes (bi-monthly, quarterly, or annual), please see directions on entering data for

Optional (for comparison purposes)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Last year's total demand													0
Two years ago total demand													0
Three years ago total demand													0
Four years ago total demand													0

	= From prior tables
	= Auto calculated

Table 3: Water Supplies[1]

Water Supply	Start Year: YYYY	Volumetric Unit Used[2]: MG													
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 (Add additional rows as needed)	Additional Detail on Water Supply	Projected Water Supplies - Volume[3]												Water Quality **Drop-down List**	Total Right or Safe Yield* (optional)
		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Water Supply Type	
Potable Supplies															
														0	
														0	
														0	
														0	
														0	
														0	
														0	
														0	
														0	
														0	
Total by Month (Potable)		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Potable Supplies															
														0	
														0	
														0	
														0	
														0	
Total by Month (Non-Potable)		0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes: List hydrological and regulatory conditions, infrastructure capabilities, and plausible constraints which may impact the water supplies

[1]Projections are based on best available data at time of submitting the report and actual supply volumes could be different due to many factors.
[2]Units of measure (AF, CCF, MG) must remain consistent.
[3]When opting to provide other than monthly volumes (bi-monthly, quarterly, or annual), please see directions on entering data for Projected Water Supplies in the Table Instructions.

Optional (for comparison purposes)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
eAR Reported Total Water Supplies													**0**

	= Auto calculated
	= From prior tables
	= For manual input

Table 4(P): Potable Water Shortage Assessment[1]	**Start Year:** YYYY						**Volumetric Unit Used[2]:** MG						
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun[3]**	**Total**
Anticipated Unconstrained Demand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Anticipated Total Water Supply	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Surplus/Shortage w/o WSCP Action	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Surplus/Shortage w/o WSCP Action													
State Standard Shortage Level	0	0	0	0	0	0	0	0	0	0	0	0	0
Planned WSCP Actions[4]													
Benefit from WSCP: Supply Augmentation													0.0
Benefit from WSCP: Demand Reduction													0.0
Revised Surplus/Shortage with WSCP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Revised Surplus/Shortage with WSCP													

[1]Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.
[2]Units of measure (AF, CCF, MG) must remain consistent.
[3]When optional monthly volumes aren't provided, verify Tables 2 and 3 use the same columns for data entry and are reflected properly in Table 4 and make sure to use those same columns to enter the benefits from Planned WSCP Actions. Please see directions on the shortage balancing exercise in the Table Instructions. If a shortage is projected, the supplier is highly recommended to perform a monthly analysis to more accurately identify the time of

	= Auto calculated
	= From prior tables
	= For manual input

Table 4(NP): Non-Potable Water Shortage Assessment[1]	**Start Year:** YYYY						**Volumetric Unit Used[2]:** MG						
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun[3]**	**Total**
Anticipated Unconstrained Demand: Non-Potable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Anticipated Total Water Supply: Non-Potable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Surplus/Shortage w/o WSCP Action: Non-Potable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Surplus/Shortage w/o WSCP Action: Non-Potable													
Planned WSCP Actions[4]													
Benefit from WSCP: Supply Augmentation													0.0
Benefit from WSCP: Demand Reduction													0.0
Revised Surplus/Shortage with WSCP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Revised Surplus/Shortage with WSCP													

[1]Assessments are based on best available data at time of submitting the report and actual volumes could be different due to many factors.
[2]Units of measure (AF, CCF, MG) must remain consistent.
[3]When optional monthly volumes aren't provided, verify Tables 2 and 3 use the same columns for data entry and are reflected properly in Table 4 and make sure to use those same columns to enter the benefits from Planned WSCP Actions. Please see directions on the shortage balancing exercise in the Table Instructions. If a shortage is projected, the supplier is highly recommended to perform a monthly analysis to more accurately identify the time of

Table 5: Planned Water Shortage Response Actions			July 1, YYYY		to June 30, YYYY+1	
Anticipated Shortage Level Drop-down List of **State Standard Levels** (1 - 6) and Level 0 (No Shortage)	**ACTIONS[1]: Demand Reduction, Supply Augmentation, and Other Actions. (Drop-down List)** These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	Is action already being implemented? **(Y/N)**	How much is action going to reduce the shortage gap? **(Optional)**		When is shortage response action anticipated to be implemented[2]?	
			Enter Amount	*(Drop-down List) Select % or Volume Unit*	*Start Month*	*End Month*
Add additional rows as needed						
NOTES: Notes Section to be used only for clarifying details, and not for listing specific actions. Actions must be entred into table rows						

[1]If you plan Supply Augmentation Actions then you must enter WSCP Benefits from Supply Augmentation Actions into Table 4. If you plan Demand Reduction Actions then you must enter WSCP Benefits from Demand Reduction Actions into Table 4.

[2]If an Action is planned to be implemented in multiple non-contiguous periods of the year, please make separate entries on multiple rows for the same action spanning the different implementation periods.

Appendix C – Projected Dry Year Demands

Description	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Total
AD (Domestic Ag)	570.8	536.8	400.9	332.9	231.0	163.0	176.7	217.5	292.2	394.2	428.1	509.6	4,253.7
AG (Agriculture)	632.2	594.5	444.1	368.8	255.8	180.6	195.7	240.9	323.6	436.5	474.1	564.5	4,711.2
CM (Commercial)	124.2	116.9	87.2	72.4	50.3	35.5	38.5	47.3	63.6	85.8	93.2	110.9	925.7
CN (Construction)	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	95.2
IS (Institutional)	9.1	8.6	6.8	5.9	4.6	3.6	3.8	4.3	5.3	6.8	7.2	8.3	74.1
MF (Multi-Family)	52.1	50.4	43.8	40.6	35.6	32.2	33.0	35.0	38.6	43.6	45.2	49.1	499.3
SF (Single Family)	545.4	519.4	415.2	363.2	285.2	233.1	243.5	274.7	332.0	410.0	436.2	498.6	4,556.4
Calculated losses	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	82.9	995.3
Total	2,024.6	1,917.4	1,488.9	1,274.7	953.4	738.9	782.0	910.5	1,146.2	1,467.7	1,574.8	1,831.8	16,110.9

Description	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Total
AD (Domestic Ag)	563.7	530.0	395.9	328.8	228.2	161.1	174.5	214.8	288.5	389.2	422.8	503.2	4,200.4
AG (Agriculture)	627.8	590.5	441.0	366.2	254.2	179.4	194.4	239.2	321.4	433.6	470.9	560.6	4,678.8
CM (Commercial)	123.6	116.4	86.8	72.2	50.1	35.4	38.2	47.1	63.3	85.4	92.8	110.4	921.6
CN (Construction)	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	104.5
IS (Institutional)	9.0	8.5	6.6	5.7	4.4	3.5	3.8	4.3	5.2	6.6	7.0	8.1	72.7
MF (Multi-Family)	52.0	50.3	43.7	40.4	35.5	32.2	32.9	34.8	38.5	43.4	45.1	49.0	497.9
SF (Single Family)	550.4	524.2	419.1	366.6	287.8	235.3	245.7	277.3	335.0	413.8	440.1	503.1	4,598.4
Calculated losses	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	1,082.6
Total	2,025.4	1,918.7	1,492.0	1,278.8	959.0	745.8	788.3	916.4	1,150.8	1,471.0	1,577.6	1,833.3	16,156.9

Description	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Total
AD (Domestic Ag)	556.7	523.5	390.9	324.7	225.3	159.0	172.3	212.0	285.0	384.4	417.4	497.0	4,148.2
AG (Agriculture)	623.6	586.6	438.0	363.7	252.5	178.2	193.1	237.5	319.3	430.6	467.7	556.8	4,647.5
CM (Commercial)	123.4	116.0	86.6	71.9	49.9	35.2	38.2	46.9	63.2	85.2	92.6	110.1	919.1
CN (Construction)	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	112.3
IS (Institutional)	9.0	8.5	6.6	5.7	4.4	3.5	3.8	4.3	5.2	6.6	7.0	8.1	72.7
MF (Multi-Family)	51.9	50.2	43.7	40.3	35.4	32.1	32.8	34.7	38.4	43.3	45.0	48.9	496.5
SF (Single Family)	555.2	528.7	422.8	369.7	290.3	237.3	247.9	279.6	338.0	417.4	444.0	507.5	4,638.4
Calculated losses	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	1,170.0
Total	2,026.6	1,920.2	1,495.4	1,283.0	964.6	752.2	794.8	922.0	1,155.8	1,474.3	1,580.5	1,835.2	16,204.6

Description	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29	Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Total
AD (Domestic Ag)	549.5	516.8	386.0	320.6	222.4	157.0	170.0	209.3	281.3	379.5	412.1	490.6	4,095.1
AG (Agriculture)	619.3	582.4	435.0	361.3	250.6	176.9	191.6	236.0	316.9	427.6	464.5	552.9	4,615.0
CM (Commercial)	122.9	115.4	86.3	71.6	49.7	35.1	38.0	46.8	62.9	84.8	92.0	109.6	915.1
CN (Construction)	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	121.7
IS (Institutional)	8.7	8.3	6.5	5.7	4.4	3.5	3.6	4.2	5.2	6.5	6.9	7.9	71.5
MF (Multi-Family)	51.7	50.1	43.6	40.3	35.4	32.1	32.8	34.7	38.2	43.2	44.9	48.8	495.6
SF (Single Family)	560.2	533.4	426.5	373.1	292.9	239.5	250.1	282.2	341.0	421.2	447.9	512.1	4,680.0
Calculated losses	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	104.9	1,258.9
Total	2,027.4	1,921.4	1,498.9	1,287.7	970.5	759.2	801.2	928.2	1,160.6	1,477.7	1,583.3	1,836.9	16,252.9

Description	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Total
AD (Domestic Ag)	542.4	510.0	380.9	316.4	219.6	155.0	167.8	206.6	277.7	374.5	406.8	484.3	4,041.8
AG (Agriculture)	615.0	578.5	432.0	358.8	249.0	175.8	190.3	234.3	314.9	424.7	461.4	549.1	4,583.7
CM (Commercial)	122.3	115.1	85.9	71.4	49.5	35.0	37.8	46.5	62.7	84.4	91.7	109.2	911.4
CN (Construction)	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	129.5
IS (Institutional)	8.7	8.3	6.5	5.7	4.4	3.5	3.6	4.2	5.2	6.5	6.9	7.9	71.5
MF (Multi-Family)	51.6	49.9	43.4	40.2	35.2	32.0	32.6	34.6	38.2	43.0	44.7	48.6	494.1
SF (Single Family)	565.1	538.2	430.3	376.4	295.5	241.5	252.3	284.7	344.0	425.0	451.9	516.6	4,721.5
Calculated losses	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	112.2	1,346.3
Total	2,028.1	1,923.0	1,502.0	1,291.8	976.2	765.7	807.6	933.8	1,165.6	1,481.1	1,586.3	1,838.7	16,299.8

Appendix D – MWD 2014 Water Supply Allocation Plan (WSAP)

Section 4: Water Supply Allocation Formula

Based on the guiding principle and considerations described in the WSDM Plan, Metropolitan staff and the member agencies developed a specific formula for allocating water supplies in times of shortage. The formula seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level, and takes into account growth, local investments, changes in supply conditions and the demand hardening[11] aspects of non-potable recycled water use and the implementation of conservation savings programs. The formula, described below, is calculated in three steps: base period calculations, allocation year calculations, and supply allocation calculations.[12] The first two steps involve standard computations, while the third section contains specific methodology developed for this WSAP.

Base Period Calculations

The first step in calculating a water supply allocation is to estimate water supply and demand using a historical base period with established water supply and delivery data. The base period for each of the different categories of demand and supply is calculated using data from the fiscal years (July through June) ending 2013 and 2014.[13]

[11] Demand hardening is the effect that occurs when all low-cost methods of decreasing overall water demand have been applied (e.g., low-flow toilets, water recycling) and the remaining options to further decrease demand become increasingly expensive and difficult to implement.

[12] Detailed operational elements of these objectives and a numerical example are discussed in Appendix G: Water Supply Allocation Formula Example.

[13] Exceptions to this methodology are noted in the descriptions of base period calculations.

Base Period Local Supplies: Local supplies for the base period are calculated using a two-year average of groundwater production, groundwater recovery, Los Angeles Aqueduct supply, surface water production, and other imported supplies. Non-potable recycling production is not included in this calculation due to its demand hardening effect.

Base Period Wholesale Demands: Demands on Metropolitan for the base period are calculated using a two-year average of firm purchases and in-lieu deliveries to long-term groundwater replenishment, conjunctive use, cyclic, and supplemental storage programs.

Base Period Retail Demands: Total retail-level municipal and industrial (M&I) demands for the base period are calculated by adding the Base Period Wholesale Demands and the Base Period Local Supplies. This estimates an average total demand for water from each agency.

Base Period Mandatory Conservation Credit: Metropolitan allows a consultation process that enables member agencies to describe mandatory water use restrictions and/or rationing restrictions that were in place within their service areas during the Base Period. Restrictions may vary among agencies but include restricted water uses, fines, and water budget or penalty based rate structures that are enacted by the governing body of the member agency or retail agency. Following the consultation process, Metropolitan staff will recommend adjustments based on evidence of reduced GPCD. To qualify for an adjustment, GPCD reductions would have to be observed that are beyond those expected from the agency's ongoing conservation efforts and trends.

Allocation Year Calculations

The next step in calculating the water supply allocation is estimating water needs in the allocation year. This is done by adjusting the base period estimates of retail demand for population or economic growth and changes in local supplies.

Allocation Year Retail Demands: Total retail M&I demands for the allocation year are calculated by adjusting the Base Period Retail Demands for baseline inflation and growth.

Baseline Inflation Adjustment: Baseline inflation occurs when non-potable recycling or conservation is developed after the Base Period. The development of these supplies reduces actual demands for water in the Allocation Year. Because non-potable-recycling and conservation are excluded from the WSAP formula, the actual need for water in the Allocation year is overestimated. The Baseline Inflation Adjustment removes increases in non-potable recycling and conservation annually from the Base Period forward to better reflect the true need for water in the Allocation Year.

Growth Adjustment: The growth adjustment is calculated using the estimated actual annual rate of population growth at the county level, as generated by the California Department of Finance, whenever possible. For years without complete data, the growth rate is calculated using an average of the three most recent years available. Growth will be allocated based on historical per capita water use during the Base Period, with a cap equal to Metropolitan's IRP Target for Water Use Efficiency. For

allocation years up to and including 2014, the cap will be 163 GPCD, and for allocation years 2015-2020 the cap will reduce linearly from 163 to 145 GPCD. On an appeals basis, member agencies may request that their adjustment be calculated using member agency level population growth. A weighted combination of actual population and actual employment growth rates may also be requested.

Allocation Year Local Supplies: Allocation Year Local Supplies include groundwater production, groundwater recovery, Los Angeles Aqueduct supply, surface water production, seawater desalination, and other imported supplies. Estimates of Allocation Year Local Supplies are provided by the member agencies upon implementation of a WSAP. If estimates are not provided, Metropolitan will use the sum of the Base Period Local Supplies and Base Period In-Lieu Deliveries as a default. Agencies may provide updated estimates at any time during the Allocation Year to more accurately reflect their demand for Metropolitan supplies.

Extraordinary Supplies: Under the WSAP formula, local supply production in the Allocation Year can either be designated as a "planned" supply, or as an "extraordinary" supply.[14] This is an important designation for a member agency because the two types of supplies are accounted for differently in the WSAP formula. Local supplies classified at Extraordinary Supply are only partially included (scaled depending on the WSAP Level) as local supplies. This has the effect of providing significantly more benefit to the member agency in terms of total water supply that is available to the retail customer.[15]

Allocation Year Wholesale Demands: Demands on Metropolitan for the allocation year are calculated by subtracting the Allocation Year Local Supplies from the Allocation Year Retail Demands.

Water Supply Allocation Calculations

The final step is calculating the water supply allocation for each member agency based on the allocation year water needs identified in Step 2. The following table displays the elements that form the basis for calculating the supply allocation. Each element and its application in the allocation formula are discussed below.

Table 1: Shortage Allocation Index

(a) Regional Shortage Level	(b) Wholesale Minimum Percentage	(c) Maximum Retail Impact Adjustment Percentage
1	92.5%	2.5%
2	85.0%	5.0%
3	77.5%	7.5%
4	70.0%	10.0%

[14] Appendix H: Board Policy Principles on Determining the Status of Extraordinary Supply lists the key Board principles used in determining if a supply qualifies as an Extraordinary Supply.

[15] See Appendix G: Water Supply Allocation Formula Example for specific allocation formulae.

5	62.5%	12.5%
6	55.0%	15.0%
7	47.5%	17.5%
8	40.0%	20.0%
9	32.5%	22.5%
10	25.0%	25.0%

Regional Shortage Level: The WSAP formula allocates shortages of Metropolitan supplies over ten levels.

Wholesale Minimum Allocation: The Wholesale Minimum Allocation ensures a minimum level of Metropolitan supplied wholesale water service to each member agency.

Maximum Retail Impact Adjustment: The purpose of this adjustment is to ensure that agencies with a high level of dependence on Metropolitan do not experience disparate shortages at the retail level compared to other agencies when faced with a reduction in wholesale water supplies. The Maximum Retail Impact Percentage is prorated on a linear scale based on each member agency's dependence on Metropolitan at the retail level. This percentage is then multiplied by the agency's Allocation Year Wholesale Demand to determine an additional allocation.

Conservation Demand Hardening Credit: The Conservation Demand Hardening Credit addresses the increased difficulty in achieving additional water savings at the retail level that comes as a result of successful implementation of water conserving devices and conservation savings programs. To estimate conservation savings, each member agency will establish a historical baseline Gallons Per Person Per Day (GPCD) calculated in a manner consistent with California Senate Bill SBx7-7.[16] Reductions from the baseline GPCD to the Allocation Year are used to calculate the equivalent conservation savings in acre-feet. The Conservation Demand Hardening Credit is based on an initial 10 percent of the GPCD-based Conservation savings plus an additional 5 percent for each level of Regional Shortage set by the Board during implementation of the WSAP. The credit will also be adjusted for:

- The overall percentage reduction in retail water demand
- The member agency's dependence on Metropolitan

The credit is calculated using the following formula:

Conservation Demand Harding Credit = Conservation Savings x (10% + Regional Shortage Level Percentage) x (1 +((Baseline GPCD – Allocation Year GPCD)/Baseline GCPD)) x Dependence on MWD Percentage

[16] California Department of Water Resources, February 2011, "Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use. Available at: http://www.water.ca.gov/wateruseefficiency/sb7/docs/MethodologiesCalculatingBaseline_Final_03_01_2011.pdf

This provides a base demand hardening credit equal to 10 percent of conservation savings and increases the credit as deeper shortages occur, which is when conservation demand hardening has a bigger impact on the retail consumer. The credit also increases based on the percentage of an agency's demand that was reduced through conservation. This accounts for increased hardening that occurs as increasing amounts of conservation are implemented. Lastly, the credit is scaled to the member agency's dependence on Metropolitan to ensure that credits are being applied to the proportion of water demand that is being affected by reductions in Metropolitan supply.

Minimum Per-Capita Water Use Credit: This adjustment creates a minimum per capita water use threshold. Member agencies' retail-level water use is compared to two different thresholds. The proposed minimum thresholds are based upon compliance guidelines established under Senate Bill X7-7.

- 100 GPCD total water use
- 55 GPCD residential water use

Agencies that fall below either threshold under the WSAP will receive additional allocation from Metropolitan to bring them up to the minimum GPCD water use level. If an agency qualifies under both thresholds, the one resulting in the maximum allocation adjustment will be given.[17] To qualify for this credit, member agencies must provide documentation of the total agency level population and the percent of retail level demands that are residential; no appeal is necessary.

Total WSAP Allocation: The allocation to an agency for its M&I retail demand is the sum of the Wholesale Minimum Allocation, the Retail Impact Adjustment, the Conservation Demand Hardening Credit, and the Minimum Per-Capita Water Use Credit.[18]

Total Metropolitan Supply Allocations: In addition to the WSAP Allocation described above, agencies may also receive separate allocations of supplies for and seawater barrier and groundwater replenishment demands. Allocations of supplies to meet seawater barrier demands are to be determined by the Board of Directors independently but in conjunction with the WSAP. Separating the seawater barrier allocation from the WSAP allocation allows the Board to consider actual barrier requirements in the Allocation Year and address the demand hardening issues associated with cutting seawater barrier deliveries. According to the principles outlined for allocating seawater barrier demands, allocations should be no deeper than the WSAP Wholesale Minimum Percentage implemented at that time.

The WSAP also provides a limited allocation for drought-impacted groundwater basins based on the following framework:[19]

[17] See Appendix J: Per Capita Water Use Minimum Example for specific minimum per-capita water use credit formulae and example.
[18] See Appendix G: Water Supply Allocation Formula Example for specific allocation formulae.
[19] See Appendix L: Groundwater Replenishment Allocation for more information.

1. Metropolitan staff will hold a consultation with the requesting member agency and the appropriate groundwater basin manager to document whether the basin is in one of the following conditions:
    a. Groundwater basin overdraft conditions that will result in water levels being outside normal operating ranges during the WSAP allocation period; or
    b. Violations of groundwater basin water quality and/or regulatory parameters that would occur without imported deliveries
2. An allocation is provided based on the verified need for groundwater replenishment. The allocation would start with a member agency's ten-year average purchases of imported groundwater replenishment supplies (excluding years in which deliveries were curtailed). The amount would then be reduced by the declared WSAP Regional Shortage Level.

Appendix E – EPA's Earthquake Incident Action Checklist

Incident Action Checklist – Earthquake

The actions in this checklist are divided up into three "rip & run" sections and are examples of activities that water and wastewater utilities can take to: prepare for, respond to and recover from an earthquake. For on-the-go convenience, you can also populate the "My Contacts" section with critical information that your utility may need during an incident.

Earthquake Impacts on Water and Wastewater Utilities

An earthquake is caused by the shifting of tectonic plates beneath the Earth's surface. Ground shaking from moving geologic plates collapses buildings and bridges, and sometimes triggers landslides, avalanches, flash floods, fires and tsunamis. The strong ground motion of earthquakes has the potential to cause a great deal of damage to drinking water and wastewater utilities, particularly since most utility components are constructed from inflexible materials (e.g., concrete, metal pipes). Earthquakes create many cascading and secondary impacts that may include, but are not limited to:

- Structural damage to facility infrastructure and equipment
- Water tank damage or collapse
- Water source transmission line realignment or damage
- Damage to distribution lines due to shifting ground and soil liquefaction, resulting in potential water loss, water service interruptions, low pressure, contamination and sinkholes and/or large pools of water throughout the service area
- Loss of power and communication infrastructure
- Restricted access to facilities due to debris and damage to roadways

FEMA

The following sections outline actions water and wastewater utilities can take to prepare for, respond to and recover from an earthquake.

Example of Water Sector Impacts and Response to an Earthquake

East Bay Municipal Utility District Mitigates Earthquake Impacts

Following the 1989 Loma Prieta earthquake, the East Bay Municipal Utility District (EBMUD) in Oakland, California, began developing a comprehensive seismic program to increase their ability to recover from earthquake impacts and reduce water and wastewater service interruptions. Taking a proactive approach, EBMUD was the first US water utility to comprehensively retrofit its service area facilities to address seismic weaknesses.

The utility began by assessing its entire water distribution network to determine areas of improvement. Upgrades included installation of flexible joints and hoses to minimize pipe ruptures and to facilitate rerouting of water around broken pipes. The utility also created alternative transmission routes for pipes that cross fault zones.

EBMUD did a great deal of work to reinforce aqueducts to make them more resilient to earthquake impacts, including strengthening levees at aqueduct crossings and pipe foundations at river crossings, reinforcing pipe joints on buried portions of pipe, and strengthening pipe support structures on elevated portions of the aqueduct. The utility is also designing aqueduct interconnections to create bypasses around damaged segments after a levee failure or earthquake. These bypasses allow the utility to continue providing service to customers while permanent repairs are being made.

Since 1989, EBMUD has invested more than $350 million in their seismic program, which has been primarily funded by bonds that are being repaid through a seismic surcharge on customers' water bill of just over one dollar per month for single-family residential homes.

Source: EBMUD's 2011 "Earthquake Readiness: Protecting Life Safety and Public Health"

Actions to Prepare for an Earthquake

Planning

- [ ] Review and update your utility's emergency response plan (ERP) and ensure all emergency contacts are current.
- [ ] Conduct briefings, training and exercises to ensure utility staff is aware of all preparedness, response and recovery procedures.
- [ ] Identify priority water customers (e.g., hospitals), obtain their contact information, map their locations and develop a plan to restore those customers first.
- [ ] Develop an emergency drinking water supply plan and establish contacts (potentially through your local emergency management agency [EMA] or mutual aid network) to discuss procedures, which may include bulk water hauling, mobile treatment units or temporary supply lines, as well as storage and distribution.
- [ ] Conduct a hazard vulnerability analysis in which you review historical records to understand the past frequency and intensity of earthquakes and how your utility may have been impacted. Consider taking actions to mitigate seismic impacts to the utility, including those provided in the "Actions to Recover from an Earthquake: Mitigation" section.
- [ ] Complete pre-disaster activities to help apply for federal disaster funding (e.g., contact state/local officials with connections to funding, set up a system to document damage and costs, take photographs of the facility for comparison to post-damage photographs).

Coordination

- [ ] Join your state's Water/Wastewater Agency Response Network (WARN) or other local mutual aid network.
- [ ] Coordinate with WARN members and other neighboring utilities to discuss:
  - Outlining response activities, roles and responsibilities and mutual aid procedures (e.g., how to request and offer assistance)
  - Conducting joint tabletop or full-scale exercises
  - Obtaining resources and assistance, such as equipment, personnel, technical support or water
  - Establishing interconnections between systems and agreements with necessary approvals to activate this alternate source. Equipment, pumping rates and demand on the water sources need to be considered and addressed in the design and operations
  - Establishing communication protocols and equipment to reduce misunderstandings during the incident
- [ ] Coordinate with other key response partners, such as your local EMA, to discuss:
  - How restoring system operations may have higher priority than establishing an alternative water source
  - Potential points of distribution for the delivery of emergency water supply (e.g., bottled water) to the public, as well as who is responsible for distributing the water
- [ ] Understand how the local and utility emergency operations center (EOC) will be activated and what your utility may be called on to do, as well as how local emergency responders and the local EOC can support your utility during a response. If your utility has assets outside of the county EMA's jurisdiction, consider coordination or preparedness efforts that should be done in those areas.
- [ ] Ensure credentials to allow access will be valid during an incident by checking with local law enforcement.

Actions to Prepare for an Earthquake *(continued)*

Communication with Customers

- [ ] Develop outreach materials to provide your customers with information they will need after an earthquake (e.g., clarification about water advisories, instructions for private well and septic system maintenance and information about earthquake mitigation).
- [ ] Review public information protocols with local EMA and public health/primacy agencies. These protocols should include developing water advisory messages (e.g., boil water) and distributing them to customers using appropriate mechanisms, such as reverse 911.

Facility and Service Area

- [ ] Inventory and order extra equipment and supplies, as needed:
  - Motors
  - Fuses
  - Chemicals (ensure at least a two week supply)
  - Cellular phones or other wireless communications device
  - Emergency Supplies
    - Tarps/tape/rope
    - Cots/blankets
    - First aid kits
    - Foul weather gear
    - Plywood
    - Flashlights/flares
    - Sandbags (often, sand must be ordered as well)
    - Bottled water
    - Batteries
    - Non-perishable food
- [ ] Ensure communication equipment (e.g., radios, satellite phones) works and is fully charged.
- [ ] Develop a GIS map of all system components and prepare a list of coordinates for each facility.
- [ ] Document pumping requirements and storage capabilities, as well as critical treatment components and parameters.
- [ ] Establish a seismically hardened or offsite facility to store essential records and equipment.
- [ ] Inspect utility for structural stability and consider implementing actions to improve the utility's ability to withstand damage from earthquakes, such as:
  - Secure fixtures, shelves and equipment
  - Anchor or stabilize utility equipment to withstand earthquake forces and movements
  - Reinforce, secure or improve utility transmission lines and connections to withstand earthquake forces, soil movements and differential settlements
  - Anchor or improve tank structures to withstand earthquake forces and movements

Personnel

- [ ] Identify essential personnel and ensure they are trained to perform critical duties in an emergency (and possibly without communication), including the shut down and start up of the system.
- [ ] Establish communication procedures with essential and non-essential personnel. Ensure all personnel are familiar with emergency evacuation and shelter in place procedures.
- [ ] Pre-identify emergency operations and clean-up crews. Establish alternative transportation strategies if roads are impassable.

Actions to Prepare for an Earthquake *(continued)*

- [ ] Consider how evacuations or limited staffing due to transportation issues (potentially all utility personnel) will impact your response procedures.
- [ ] Identify possible staging areas for mutual aid crews if needed in the response, and the availability of local facilities to house the crews.
- [ ] Encourage personnel, especially those that may be on duty for extended periods of time, to develop family emergency plans.

Power, Energy and Fuel

- [ ] Evaluate condition of electrical panels to accept generators; inspect connections and switches.
- [ ] Document power requirements of the facility.
- [ ] Confirm and document generator connection type, capacity load and fuel consumption. Test regularly, exercise under load and service backup generators.
- [ ] Contact fuel vendors and inform them of estimated fuel volumes needed if utility is impacted. Determine your ability to establish emergency contract provisions with vendors and your ability to transport fuel if re-fueling contractors are not available. Develop a backup fueling plan and a prioritization list of which generators to fuel in case of a fuel shortage.
- [ ] Collaborate with your local power provider and EOC to ensure that your water utility is on the critical facilities list for priority electrical power restoration, generators and emergency fuel.

FEMA

Notes:

Actions to Respond to an Earthquake

Planning

- [ ] For coastal communities with an increased risk for tsunami activity following an earthquake; review the Tsunami Incident Action Checklist for more information.

Coordination

- [ ] Notify your local EMA and state regulatory/primacy agency of system status.
- [ ] If needed, request or offer assistance (e.g., water buffalos, water sampling teams, generators) through mutual aid networks, such as WARN.
- [ ] Assign a representative of the utility to the incident command post or the community's EOC.

Communication with Customers

- [ ] Notify customers of any water advisories and consider collaborating with local media (television, radio, newspaper, etc.) to distribute the message. If emergency water is being supplied, provide information on the distribution locations.

Facility and Service Area

Overall

- [ ] Conduct damage assessments of the utility to prioritize repairs and other actions.
- [ ] Check that back-up equipment and facility systems, such as controls and pumps, are in working order, and ensure that chemical containers and feeders are intact.

Drinking Water Utilities

- [ ] Inspect the utility and service area for damage. Identify facility components (e.g., valve boxes) and fire hydrants that have been buried, are inaccessible or have been destroyed.
- [ ] Investigate drinking water wells for damage caused by liquefaction. This could result in the loss of storage for groundwater or ground subsidence.
- [ ] Ensure pressure is maintained throughout the system and isolate those sections where it is not.
- [ ] Isolate and control leaks in water transmission and distribution piping.
- [ ] Turn off water meters at destroyed homes and buildings.
- [ ] Monitor water quality, develop a sampling plan and adjust treatment as necessary.
- [ ] Notify regulatory/primacy agency if operations and/or water quality or quantity are affected.
- [ ] Utilize pre-established emergency connections or setup temporary connections to nearby communities, as needed. Alternatively, implement plans to draw emergency water from pre-determined tanks or hydrants. Notify employees of the activated sites.

Notes:

Actions to Respond to an Earthquake *(continued)*

Wastewater Utilities

- [ ] Inspect the utility and service area, including lift stations, for damage, downed trees, and power availability. Inspect the sewer system for debris and assess the operational status of the mechanical bar screen. If necessary, run system in manual operation.
- [ ] Notify regulatory/primacy agency of any changes to the operations or required testing parameters.

Documentation and Reporting

- [ ] Document all damage assessments, mutual aid requests, emergency repair work, equipment used, purchases made, staff hours worked and contractors used during the response to assist in requesting reimbursement and applying for federal disaster funds. When possible, take photographs of damage at each work site (with time and date stamp). Proper documentation is critical to requesting reimbursement.
- [ ] Work with your local EMA on the required paperwork for public assistance requests.

Personnel

- [ ] Account for all personnel and provide emergency care, if needed. Caution personnel about known hazards resulting from earthquakes.
- [ ] Deploy emergency operations and clean-up crews (e.g., securing heavy equipment). Identify key access points and roads for employees to enter the utility and critical infrastructure; coordinate the need for debris clearance with local emergency management or prioritize it for employee operations.

Power, Energy and Fuel

- [ ] Use backup generators, as needed, to supply power to system components.
- [ ] Monitor and plan for additional fuel needs in advance; coordinate fuel deliveries to the generators.
- [ ] Maintain contact with electric provider for power outage duration estimates.

Notes:

Actions to Recover from an Earthquake

Coordination

- [ ] Continue work with response partners to obtain funding, equipment, etc.

Communication with Customers

- [ ] Assign a utility representative to continue to communicate with customers concerning a timeline for recovery and other pertinent information.

Facility and Service Area

- [ ] Complete damage assessments.
- [ ] Complete permanent repairs, replace depleted supplies and return to normal service.

FEMA

Documentation and Reporting

- [ ] Compile damage assessment forms and cost documentation into a single report to facilitate the sharing of information and the completion of state and federal funding applications. Visit EPA's web-based tool, Federal Funding for Utilities—Water/Wastewater—in National Disasters (Fed FUNDS), for tailored information and application forms for various federal disaster funding programs.
- [ ] Develop a lessons learned document and/or an after action report to keep a record of your response activities. Update your vulnerability assessment, ERP and contingency plans.
- [ ] Revise budget and asset management plans to address increased costs from response-related activities.

Mitigation

- [ ] Identify mitigation and long-term adaptation measures that can prevent damage and increase utility resilience. Consider impacts related to earthquakes when planning for system upgrades (e.g., replacing pipes, wellheads and water tanks to address seismic weaknesses).

Notes:

My Contacts and Resources

CONTACT NAME	UTILITY/ORGANIZATION NAME	PHONE NUMBER
	Local EMA	
	State EMA	
	State Primacy Agency	
	WARN Chair	
	Power Utility	

Planning

- Incident monitoring:
  - USGS recent earthquake activity map (U.S. Geological Survey [USGS])
  - NOAA National Weather Service tsunami alerts (National Oceanic and Atmospheric Administration [NOAA])
- Earthquake Resilience for Water and Wastewater Utilities (EPA)
- Earthquake Hazards Program (USGS)
- National Seismic Hazard Maps (USGS)
- Earthquake Hazard Maps (FEMA)
- Earthquake ShakeMap (USGS)
- California ShakeMaps (CaDC)
- Planning for an Emergency Drinking Water Supply (EPA)
- Emergency Response Plan Template (EPA)
- All-Hazard Consequence Management Planning for the Water Sector (Water Sector Emergency Response Critical Infrastructure Partnership Advisory Council [CIPAC] Workgroup)
- Utility Risk Assessment Tool (EPA)
- Tabletop Exercise Tool for Water Systems (EPA)
- How to Develop a Multi-Year Training and Exercise (T&E) Plan (EPA)
- Make a Plan (FEMA)

Coordination

- Water/Wastewater Agency Response Network (WARN) (EPA)

Communication with Customers

- Communication During Emergencies (EPA)
- Community Resilience (EPA)

Facility and Service Area

- Response On-The-Go Mobile Application (EPA)
- Oregon Earthquake Resiliency Plan (see Chapter 8: Water and Wastewater Systems) (Oregon Seismic Safety Policy Advisory Commission)
- Seismic Guidelines for Water Pipelines (American Lifelines Alliance)

Power, Energy, and Fuel

- Power Resilience Guide (EPA)
- Power Outage Incident Action Checklist (EPA)
- EPA Region 1 Water/Wastewater System Generator Preparedness Brochure (EPA)

Documentation and Reporting

- Federal Funding for Utilities In National Disasters (Fed FUNDS) (EPA)
- FEMA Public Assistance Factsheet (EPA)
- Reimbursement Tips for the Water Sector (EPA)

Mitigation

- Earthquake Publications: Building Designers, Managers and Regulators (FEMA)
- IS-323: Earthquake Mitigation Basics for Mitigation Staff (FEMA)
- HAZUS: FEMA's Methodology for Estimating Potential Losses from Disasters (FEMA)
- Earthquake Hazard Mitigation Handbook (Federal Emergency Management Agency [FEMA])
- Mitigation Ideas (FEMA)

Appendix F – Section 5.03.220 | Cash Reserves Policy

Section 5.03.220
Cash Reserves Policy

5.03.220.01 Purpose

The purpose of the RMWD Reserve Policy is to ensure that the District will at all times have sufficient funding available to meet the operating, capital, and debt service cost obligations, as well as to provide for stable water and wastewater rates to minimize rate shock on customers. Adequate reserves and sound financial policies promote RMWD's bond ratings in the capital markets and lower the cost of capital, provide financing flexibility, as well as help avoid potentially restrictive debt covenants. This Reserve Policy shall cover all reserve funds of the District.

5.03.220.02 Categories, Funding Timeframe Goal, and Level of Priority

The following comprise the main categories of reserves, their respective funding goal timeframes, and level of prioritization to receive unrestricted water and wastewater revenue to meet their reserve targets.

Categories –

1. Liquidity (Minimum Target)– these reserves are essential to the basic functioning of the District as they are intended to meet basic cash flow requirements to meet operating and debt obligations. They receive the highest priority of being funded by net revenues.
    a. Funding Timeframe Goal – Within 3 years.
    b. Actions for consideration to meet timeframe goal – budget very conservatively, retain unexpected savings or additional revenues, raise liquidity through debt if fiscally prudent, obtain additional non-rate revenues, and strongly consider raising rates.
    c. Reserves in this category in order of priority:
        i. Working Capital (Operating) Reserve
        ii. Debt Service Reserve
2. Stabilization (Target) – these reserves address certain and frequent risks of higher than anticipated expenses, or lower than anticipated revenues, to provide for stable rates and smooth rate transitions when overall rate requirements are increasing over a multi-year period. These reserves receive the next highest overall priority in being funded by net revenues.
    a. Funding Timeframe Goal – Within 10 years.
    b. Actions for consideration to meet timeframe goal – budget conservatively, retain unexpected savings or additional revenues, and consider raising rates, if necessary.
    c. Reserves in this category in order of priority:
        i. Rate Stabilization Reserve
        ii. Capital Replacement Reserve
3. Contingency (Maximum Target) – these reserves address known significant but less frequent risks, such as major disasters, or projects where a dedicated funding set aside is desired. These reserves receive the lowest priority for funding,
    a. Funding Timeframe Goal – Generally within 20 years.
    b. Actions for consideration to meet timeframe goal – These reserves are discretionary in nature and are usually funded by the intentional retention of unexpected savings or additional revenues.
    c. Reserves in this category in order of priority:
        i. Special Project Reserve (if any)
        ii. Emergency Reserve

5.03.220.03 Administrative Requirements

The District's Chief Financial Officer and/or the General Manager will present the status of the cash reserves and a plan to reach reserve targets within Funding Timeframe Goals at least annually to the Budget and Finance Committee and the Board of Directors, as part of the budget review process.

Available cash reserves for the sake of this policy shall constitute total cash and investments not externally restricted for other purposes. Each reserve target listed in this Policy is calculated and applicable for both Water and Wastewater Funds.

Restricted reserves, such as debt service reserves held by a trustee, may be established from time to time and are set based on the terms of contracts with funding providers, or other externally imposed restrictions as applicable, and are otherwise governed by those agreements or external restrictions, separate than this Policy.

5.03.220.04 Working Capital (Operating) Reserves

This reserve target is intended to provide funding for short-term cash flow needs from timing variances between revenues and expenses and provides liquidity to fund its operating and capital obligations. The target is set at 3 months of budgeted operating expenses, not including depreciation, for the current fiscal year. It is funded through net operating revenues sourced primarily from monthly rates and charges.

5.03.220.05 Debt Service Reserve (unrestricted)

This reserve target is intended to ensure there is sufficient funding for the District to be able to fully pay its debt service obligations in any given year. The target is set at one year of debt service (principal and interest) for all external loans and outstanding bonds, less any restricted funds available to pay debt service that are held in trust according to debt agreements. The reserve target calculation for variable interest debt may use the rate used in the development of the budget or the most current projected probable rate. It is funded through net operating revenues sourced primarily from monthly rates and charges.

5.03.220.06 Rate Stabilization Reserve

This reserve target is intended to provide funding for unbudgeted higher expenses (operating and capital) or lower than anticipated revenues to enable stable rates and smoother year-to-year rate transitions. The target is set at 10% of current budgeted revenues, excluding grants and capacity fees or other non-reoccurring type revenues. It is funded through net operating revenues sourced primarily from monthly rates and charges.

5.03.220.07 Capital Facility Replacement Reserve

This reserve target is intended to fund unanticipated capital asset replacements, capital project cost increases, and advancing the implementation timing of planned capital projects, if prudent. The target is set at 1 year of depreciation on the best available estimate of the current capital asset replacement value assuming an average useful life of assets of 75 years. Capital replacement reserves are primarily funded by capacity fees, and if insufficient, then net operating revenues.

5.03.220.08 Special Project Reserve

This reserve target is intended as a mechanism to set aside funding for future major capital improvement projects or initiatives that would require significant rate increases or an undesired debt burden. The target is based on the cumulative total funding targets for any applicable specific projects or initiatives as included in the adopted budget or approved by separate Board action. It is funded through net operating revenues sourced primarily from monthly rates and charges, or other sources as determined by the Board.

5.03.220.09 Emergency (Disaster) Reserve

This reserve target is intended to provide initial liquidity to respond to major emergencies, such as earthquakes or wildfires, until other funding can be secured (i.e. FEMA, debt financing, insurance proceeds, etc.), or cover the costs of these disaster responses, in whole or part. The target is set at 1 year of depreciation on best available estimate of the current capital asset replacement value assuming an average useful life of assets of 75 years. It is funded through net operating revenues sourced primarily from monthly rates and charges.

5.03.220.10 Facility Expansion Reserve

Facility Expansion Reserves are funded by the cash collected for water or wastewater capacity fees assessed for the purpose of future expansion or improvement of water system benefitting new customers. It does not have a specific target and is funded purely by the portion of collected capacity fees for this purpose and applicable interest revenues. Any funds in this reserve are accounted for separately than the Liquidity, Stabilization, or Contingency reserve targets outlined in this Policy.

RAINBOW
MUNICIPAL WATER DISTRICT

BOARD ACTION
COMMITTEE REVIEW ITEM NO. 3.B

BOARD OF DIRECTORS

May 26, 2026

SUBJECT

REVIEW OF OPTERRA ENERGY SERVICES PROPOSED PROJECTS

BACKGROUND

Rainbow Municipal Water District (District) has been working with Opterra Energy Services (Opterra) to identify a paid-through-savings comprehensive energy conservation program. This includes utilizing the electricity cost savings that result from upgrading the lighting to energy-efficient LED technology where inefficient lighting currently exists, savings from installing solar photovoltaics, installing a Battery Energy Storage System (BESS) for peak demand savings, installing generators to supply emergency back-up power, savings by changing San Diego Gas & Electric (SDG&E) rates on select accounts, upgrading pumps, motors, and electrical systems, and installing Advanced Meter Infrastructure (AMI) technology on water meters where it doesn't currently exist.

At the February 24, 2026 Board meeting, Opterra provided a presentation on the benefits of a comprehensive energy conservation paid-through-savings program, as well as potential scope items.

DESCRIPTION

Working alongside District staff, Opterra identified a one-time renewable energy grant through the Inflation Reduction Act (IRA) of more than $4.7M, and a comprehensive energy conservation program that will save the District more than $1M annually of its approximately $1,800,000 annual electric costs (> 57% reduction). Significant savings to the District would not be realized until 2028 and are contingent on successfully acquiring the IRA grant. Without the IRA grant, no savings would be realized from the $10M solar installation until approximately year 20 of the agreement, presenting a financial risk that staff deems unacceptable. Due to the approaching deadline for filing the renewable energy grant (July 3, 2026), as well as extended engineering that is still required to be performed for two (2) of the energy measures, Opterra is recommending a two-phased approach. The scope of work for the initial phase:

Phase 1: Scope of work:

- Installation of solar photovoltaic systems at HQ site / parking lots as well as lower lots (see attached exhibits of proposed locations)
- Installation of BESS at Rainbow Heights Pump Station
- Installation of generators at the following pump stations where none currently exist: Dentro de Lomas, West Lilac, Rainbow Hills, and Vallecitos
- Retrofit old, inefficient lighting at HQ with new LED energy saving lighting
- EV charging systems at HQ (as required by the California Green Building Standards Code)
- Change select SDGE accounts to a more favorable electric rate

Descriptions and costs are listed in the table below:

	DESCRIPTION	COST
1	Solar Photovoltaics	$9,904,080
2	Battery Energy Storage System	$1,665,745
3	Backup Generators (4 Pump Station Sites)	$2,407,908
4	LED Lighting (District HQ)	$170,808
5	Utility Rate Change	$20,927
6	RMWD-Controlled Contingency (for unforeseen conditions i.e., utility upgrades, soil conditions)	$1,500,000
	Total	**$15,669,468**

Based on the aforementioned table, a total of $15,669,468 is required to implement Phase 1 of the energy conservation project. Twenty (20%) precent of the total for Phase 1, $3,133,894 is due by July 3, 2026. Phase 2 costs would not be available until December 2026.

POLICY/STRATEGIC PLAN KEY FOCUS AREA

Strategic Focus Area Four: Fiscal Responsibility

ENVIRONMENTAL

In accordance with California Environmental Quality Act (CEQA) guidelines Section 15378, the action before the Board does not constitute a "project" as defined by CEQA and further environmental review is not required at this time. Environmental studies will be conducted prior to and during construction of the project.

BOARD OPTIONS/FISCAL IMPACTS

While the proposed project may qualify for a $4.7M grant there are no guarantees the District will be awarded the grant, the District would need to cover the project installation costs up to $15M. Significant savings would not be seen until year 3 (2028) with the grant and not until after year 15 if the grant is not obtained. Funding the proposed project would require redirecting Years 1 & 2 of the District's proposed CIP budgets or require the District to issue new debt.

Option 1:

- Conduct a public hearing for the proposed energy conservation measures and Energy Services Contract with Opterra Energy Services, LLC.
- Adopt the Findings and Energy Contract Resolution making the required findings pursuant to Government Code section 4217.10 et seq., thereby authorizing the District to enter into an Energy Services Contract with Opterra.
- Authorize the General Manager to execute the Energy Services Contract with Opterra in an amount not-to-exceed $15,669,468 for the design and construction of specified energy conservation measures subject to:
    - Non-monetary changes approved the General Manager and District's General Counsel
    - Finalization and receipt of project financing
- Adopt the Lease Purchase Agreement Resolution authorizing the execution and delivery of a Lease Purchase Agreement and related Escrow Agreement to finance the ECMs described in the Energy Services Contract.

Option 2:

- Do not enter into an Energy Services Contract with Opterra and direct staff to coordinate with SDG&E to change select accounts to a more favorable electricity rate and replace existing inefficient lighting at HQ and other sites with new LED energy saving lighting.

Option 3:

- Provide other direction to staff.

STAFF RECOMMENDATION

For the past several years, District staff have been working with vendors and consultants to find a viable renewable energy program. To date, this action for the Board's consideration is the best option staff have been presented with. That said, Phase 1 of this program is estimated to cost $15M. Costs for Phase 2 will not be known until December of 2026 or January of 2027. The District does not have this appropriated in the proposed FY26-27 budget and would either have to issue debt to cover the costs of Phase 1, or defer the CIP projects (pipeline replacements, water quality upgrades, pump station rehabilitation, etc.) scheduled to be designed and constructed over the next two (2) fiscal years.

While this program has the potential for savings on the District's energy bills, there is no guarantee of grant funding or realized savings. There are, however, some items identified in Phase 1 that the District could implement without issuing debt or deferring CIP projects. Those items include: Retrofitting old, inefficient lighting at HQ with new LED lighting, and changing select SDGE accounts to a more favorable electric rate.

Chad Williams 05/26/2026
Engineering & CIP Program Manager

Attachment(s):

1. *Project Site Map*
2. *Opterra Energy Services Agreement*
3. *Lease / Purchase Agreement*
4. *Resolution 26-XX*

ENERGY SERVICES CONTRACT

This **ENERGY SERVICES CONTRACT** (this "Contract") is made and entered into as of May 27, 2026 (the "Contract Effective Date") by and between **OPTERRA Energy Services, LLC**, a Delaware limited liability company, with California State Contractor's License Number 1142716 ("Opterra"), and **Rainbow Municipal Water District** ("District" and together with Opterra the "Parties" and each of District and Opterra a "Party").

CONTRACT RECITALS

WHEREAS, District owns and/or operates certain public facilities specifically described in Attachment A (the "Facilities") and District wishes to reduce the Facilities' energy consumption and costs and improve the Facilities' energy quality and reliability; and

WHEREAS, Opterra is a full-service energy services company with the technical capabilities to provide services to District including identifying supply-side and/or demand-side energy conservation measures ("ECMs"), engineering, procurement, construction management, installation, construction and training; and

WHEREAS, Opterra has identified potential energy and operational savings opportunities at District's Facilities and estimated program costs to implement the ECMs and presented an overall potential energy cost and consumption savings for implementing the ECMs; and

WHEREAS, pursuant to California Government Code §4217.12, District held a regularly scheduled public hearing on May 26, 2026, of which two weeks advance public notice was given regarding this Contract and its subject matter, and

WHEREAS, District has determined that the anticipated cost to District to implement the ECMs will be less than the anticipated cost to District for thermal, electrical, and other energy, together with anticipated operational, maintenance and other costs, that would have been consumed by District in the absence of the ECMs in compliance with California Government Code §§4217.10 through 4217.18; and

WHEREAS, District has determined that entering into this energy services contract to implement the ECMs is in the best interests of District and that California Government Code §4217.10 *et seq.* allows District to enter into this Contract; and

WHEREAS**,** by adoption of Resolution No. _____ at the above-referenced meeting, District approved this Contract and authorized its execution.

NOW, THEREFORE, District and Opterra hereby agree as follows:

ARTICLE 1. DEFINITIONS

For purposes of this Contract and its Attachments, defined terms will have the following meanings:

"**Abnormally Severe Weather Conditions**" means typhoons, hurricanes, tornadoes, lightning storms and other climatic and weather conditions that are abnormally severe for the period of time when, and the area where, such storms or conditions occur, in each case occurring at a property, the access roads to a property, or any other location where Work or Professional Services are then being performed. The term "Abnormally Severe Weather Conditions" specifically includes rain, snow or sleet in excess of one hundred fifty percent (150%) of the median level over the preceding ten (10) year period for the local geographic area and time of year in which such rain, snow or sleet accumulates.

"**Act**" is defined in ARTICLE 14.

"**Affiliate**" means any Person that directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with the Person specified. For purposes of this definition, control of a Person means the power, direct or indirect, to direct or cause the direction of the management and policies of such Person whether by contract or otherwise; ownership of fifty percent (50%) or more of the voting securities of another Person creates a rebuttable presumption that such Person controls such other Person.

"**Applicable Law**" means any statute, law, treaty, building code, rule, regulation, ordinance, code, enactment, injunction, writ, order, decision, authorization, judgment, decree, protocol, procedure or other legal or regulatory

determination or restriction by a court or Governmental Authority of competent jurisdiction, as may be in effect at the time the Work or Professional Services are undertaken.

"**Applicable Permits**" means all permits, approvals, inspections and certifications required to be issued by any Governmental Authority in connection with the Professional Services or the building, installation and start-up of the Work as of the Contract Effective Date.

"**Application for Payment**" means a monthly progress payment as described in Section 8.01 or an invoice for materials stored off-site as described in Section 8.02.

"**Arbitral Panel**" is defined in Section 19.04(ii).

"**Arbitration Rules**" is defined in Section 19.04(ii).

"**Attachment**" means the following attachments to this Contract, each of which is an "Attachment:"

Attachment A	District's Facilities and Existing Equipment
Attachment B	*Not used*
Attachment C	Scope of Work
Attachment D	Scope of Monitoring Installation
Attachment E	M&V Services
Attachment F	Maintenance Services
Attachment G	Lighting Line by Line

"**Beneficial Use**" means when major new equipment and systems included in the Scope of Work are properly installed, inspected, operational, and are capable of being used for their intended purpose. Criteria for Beneficial Use of equipment / systems will be established as defined in Attachment C.

"**Business Day**" means any calendar day other than a Saturday, a Sunday or a calendar day on which banking institutions in San Francisco, California, are authorized or obligated by law or executive order to be closed.

"**CEQA**" means the California Environmental Quality Act, codified at California Public Resource Code § 21000 *et seq.*, and the applicable state and local guidelines promulgated thereunder.

"**Certificate of Beneficial Use**" means the certificate, issued by Opterra to District and subcontractor(s), which identifies when District took Beneficial Use of the Work or any portion thereof. A Certificate of Beneficial Use may be executed for an individual subcontract, a specific building, a portion of the Work, or the entire Work.

"**Certificate of Final Completion**" means the certificate issued by Opterra to District, in accordance with Section 6.03. A Certificate of Final Completion may be executed for an individual subcontract, a specific building, a portion of the Work, or the entire Work.

"**Certificate of Substantial Completion**" means the certificate issued by Opterra to District, in accordance with Section 6.02. A Certificate of Substantial Completion may be executed for an individual subcontract, a specific building, a portion of the Work, or the entire Work.

"**Change**" means any addition to, deletion from, suspension of, or other modification to the quality, function, or intent of the Work or Professional Services.

"**Change in Law**" means any of the following events or circumstances occurring after the Contract Effective Date: (i) an amendment, modification, interpretation, construction, enforcement standard, supplement or other change in or repeal of an existing Applicable Law; or (ii) an enactment or making of a new Applicable Law (excluding a change in any income or franchise tax law, worker's compensation, payroll or withholding tax law, but including any change in law imposing new or additional tariffs or import duties).

"**Change Order**" means a written document, signed by both Opterra and District, authorizing Opterra to perform a Change. The Change Order modifies the Scope of Work and should identify: (i) the applicable Change; (ii) any additional compensation to be paid to Opterra to perform such Change; and (iii) any extension of time to complete the Project.

"**Construction**" means any and all Work to be performed that involves construction, alteration, repair, installation or removal of equipment, addition to, subtraction from, improving, moving, wrecking or demolishing any building, parking facility, excavation, or other structure or improvement, or any part thereof.

"**Construction Documents**" means the final designs, drawings, specifications and submittals that are used for Construction, and any Change Orders affecting those documents, that describe the technical requirements for the installation of all the materials and equipment pursuant to this Contract.

"**Construction Period**" means the period beginning with the first day of the month in which material or equipment is first installed at the Facilities and continuing until the M&V Commencement Date.

"**Contract**" is defined in the Preamble, and includes all Attachments hereto (all of which are incorporated herein by this reference), as well as all Change Orders, amendments, restatements, supplements and other modifications hereto.

"**Contract Amount**" means Fourteen Million One Hundred Sixty-Nine Thousand Four Hundred Sixty-Nine Dollars ($14,169,469.00), which is inclusive of the mobilization payment, as set forth in Section 8.01, but exclusive of any fees for Professional Services.

"**Contract Bonds**" is defined in Section 12.02.

"**Contract Effective Date**" is defined in the Preamble.

"**District**" is defined in the Preamble.

"**District Persons**" means District, its agents, employees, subcontractors, architects, general contractors, lease/leaseback contractors or other Persons acting on behalf of District or for whom District is responsible.

"**Delay**" means any circumstances involving delay, disruption, hindrance or interference affecting the time of performance of the Work or the Professional Services.

"**Dispute**" is defined in Section 19.02.

"**DOE Guidelines**" is defined in Section 13.01.

"**ECM**" is defined in the Recitals.

"**EMS**" means an energy management system.

"**Energy Delivery Point**" means, for each Generating Facility, the point at which Utility meter energy is being delivered, as designated in the Interconnection Agreement.

"**Energy Usage Data**" is defined in Section 2.05.

"**Opterra**" is defined in the Preamble.

"**Opterra Warranty**" is defined in Section 9.01.

"**Event of Default**" is defined in ARTICLE 16.

"**Excusable Event**" means an act, event, occurrence, condition or cause beyond the control of Opterra, including, but not limited to, the following: (i) any act or failure to act of, or other Delay caused by any District Person; (ii) the failure to obtain, or delay in obtaining, any Interconnection Agreement, Applicable Permit, or approval of a Governmental Authority (including due to failure to make timely inspection), or Delays caused by Changes and/or modifications to the Scope of Work required by a Governmental Authority, other than a failure caused by the action or inaction of Opterra; (iii) changes in the design, scope or schedule of the Work required by any Governmental Authority or District Person; (iv) undisclosed or unforeseen conditions encountered at the Project Location, including discovery or existence of Hazardous Substances; (v) the failure to obtain, or delay in obtaining, approval of any Governmental Authority for design and installation of any portion of the Work, including any further or subsequent approval required with respect to any Change, other than a failure caused by the action or inaction of Opterra; (vi) information provided to Opterra by any District Person or Utility is later found to be inaccurate or incomplete; (vii) any Change in Law; (viii) Delay caused by pending arbitration; (ix) acts of God; (x) war (including trade war) acts of the public enemy or terrorist acts; (xi) relocation or construction of transmission facilities or the shutdown of such facilities for the purpose of necessary repairs; (xii) work by Utility; (xiii) flood, earthquake, tornado, storm, fire, explosions, lightning, landslide or similar cataclysmic occurrence; (xiv) sabotage, vandalism, riots or civil disobedience; (xv) labor disputes or strikes; (xvi) labor or material shortages; delay in manufacturing and deliveries of equipment; supply chain disruptions; material price increases that equal or exceed fifteen percent (15%) in a six (6) month period; (xvii) Abnormally Severe Weather Conditions; (xviii) an annual level of direct beam solar resource availability that is less than or equal to 90% of historical averages as measured by long-term weather data (minimum 5 years) collected at the applicable Facility and/or other reliable calibrated and appropriate weather station representative of such Facility; (xix) requirement by Utility that any Generating Facility discontinue operation; (xx) any action by a Governmental Authority that prevents or inhibits the Parties from carrying out their respective obligations under this Contract (including an unstayed order of a court or administrative agency having the effect of subjecting the sales of energy output to federal or state regulation of prices and/or services); (xxi) any Utility power outage at a Facility; or (xxii) regional epidemic or global pandemic.

"**Facilities**" is defined in the Recitals.

"**Final Completion**" means the stage in the progress of the Work at which the Construction Work as identified in the Scope of Work, or a designated portion thereof, has been completed and commissioned, including completion of all Punch List items, completion of all required training, and delivery to District of the final documentation (as-built drawings, operation and maintenance manuals, warranty documentation and final submittals).

"**Generating Facility**" means each of the photovoltaic, solar powered generating facilities located at the sites listed in Attachment E, and includes all associated photovoltaic panels, mounting assemblies, inverters, converters, metering, lighting fixtures, transformers, ballasts, disconnects, combiners, switches, wires and other equipment that may be necessary to connect the Generating Facility to the applicable Energy Delivery Point.

"**Governmental Authority**" means any federal, state, regional, town, county, city, municipal or local government agency, department or regulatory body having jurisdiction under Applicable Law over the matter in question.

"**Greenhouse Gas**" is defined in Section 13.01.

"**Hazardous Substances**" means (i) any hazardous, toxic, or dangerous wastes, substances, chemicals, constituents, contaminants, pollutants, and materials and any other carcinogenic, liquids, corrosive, ignitable, radioactive, reactive, toxic, or otherwise hazardous substances or mixtures (whether solids, liquids, gases) now or at any time subject to regulation, control, remediation, or otherwise addressed under Applicable Laws; (ii) any "hazardous substance" as defined by the Resource, Conservation and Recovery Act of 1976 (42 U.S.C. §6901 *et seq.*), as amended, and regulations promulgated thereunder; (iii) any "hazardous, toxic or dangerous waste, substance or material" specifically defined as such in 42 U.S.C. §9601 *et seq.*), as amended and regulations promulgated thereunder; and (iv) any hazardous, toxic or dangerous waste, substance, or material as defined in any so-called "superfund" or "superlien" law.

"**Incentive Funds**" is defined in Section 8.06.

"**Installation**" means the setting up, construction, and placement of any equipment or materials in the manner it will be operated, in accordance with the Scope of Work and in accordance with all Applicable Laws.

"**Instruments of Service**" is defined in Section 10.01(c).

"**Interconnection Agreement**" means the Interconnection Agreement to be entered into between District and the Utility with respect to the Generating Facilities.

"**Interconnection Facilities**" is defined in Section 18.02.

"**Interest**" means interest calculated at the lesser of (i) the prime rate plus two percent (2%) or (ii) the maximum rate permitted by Applicable Law. The "prime rate" will be the "Prime Rate" of interest per annum for domestic banks as published in The Wall Street Journal in the "Money Rates" section.

"**Losses**" is defined in Section 11.01.

"**M&V Commencement Date**" means the first day of the month immediately following the later of (i) Opterra's receipt of the fully signed Certificate of Final Completion, and (ii) Opterra's receipt of the full Contract Amount.

"**M&V Services**" (if any) are defined in Attachment E.

"**Maintenance Services**" (if any) are defined in Attachment F.

"**Measurement Period**" means each one-year period following the M&V Commencement Date.

"**NEC**" means the National Electric Code.

"**Notice to Proceed**" is defined in Section 2.04.

"**Party**" and "**Parties**" are defined in the Preamble.

"**Person**" means any natural person, corporation, general partnership, limited partnership, limited liability company, proprietorship, other business organization, trust, union, association or Governmental Authority.

"**Professional Services**" means professional services (such as Maintenance Services and M&V Services, if any) provided by Opterra to District under this Contract.

"**Project**" means the entirety of Work to be performed by Opterra pursuant to the Scope of Work, and any Change Orders.

"**Project Location**" means the area or areas where the Project materials and equipment and any other energy related equipment, as described in the Scope of Work, are installed, and the general area where the Work is performed.

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"**Punch List**" means, with respect to any portion of the Work, a list of minor corrective items which need to be completed or corrected in order to complete such portion of the Work, but do not impair District's ability to beneficially operate and utilize such portion of the Work.

"**Retained Items**" is defined in Section 10.02.

"**Retention**" is defined in Section 8.03.

"**Schedule of Values**" is defined in Section 8.01.

"**Scope of Work**" means the Work set forth in Attachments C and D, as modified by any Change Order.

"**Substantial Completion**" means the stage in the progress of the Work at which the Work, or a designated portion thereof, is sufficiently complete, in conformance with the Scope of Work, the Construction Documents and any Change Orders, so that District can take Beneficial Use thereof.

"**Surety**" means the surety supplying the Contract Bonds, which must be an "admitted surety insurer," as defined by California Code of Civil Procedure §995.120, authorized to do business in the State of California, and reasonably satisfactory to District.

"**Utility**" is defined in Section 18.02.

"**Work**" means the Work to be done by Opterra pursuant to the Scope of Work, subject to any Change Orders.

ARTICLE 2. TERM; PERFORMANCE OF THE WORK

Section 2.01 Contract Term. The term of this Contract commences on the Contract Effective Date and ends on the last day on which Professional Services are provided, unless terminated earlier as provided in this Contract.

Section 2.02 Performance of Work. The Work and Professional Services to be performed hereunder will be provided in accordance with the terms of this Contract and the applicable standard of care. Opterra will perform its obligations under this Contract (i) using the degree of skill and care that is required by current, good and sound professional procedures and practices, and (ii) in conformance with (x) generally accepted professional standards prevailing at the time the Work is performed, (y) the covenants, terms and conditions of this Contract, and (z) applicable laws, codes, rules and regulations, including, without limitation, the applicable provisions of the California Building Code. Opterra represents and warrants that it is fully experienced in projects of the nature and scope of the Work and Professional Services, and that it is properly qualified, licensed and equipped to supply and perform the Work and Professional Services. The Work completed herein will be subject to District's general right of inspection and supervision to secure the satisfactory completion thereof in accordance with this Contract.

Section 2.03 Scope of Work.

(a) The Scope of Work may not exceed that set forth in Attachments C and D, except pursuant to a Change Order.

(b) The Professional Services may not exceed those set forth in Attachments E, F and G, except pursuant to a Change Order.

Section 2.04 Notice to Proceed. Within ten (10) days after District has closed the financing referenced in Section 2.07, District will issue to Opterra a written Notice to Proceed ("Notice to Proceed"). Opterra will begin Work within thirty (30) calendar days after Opterra's receipt of the Notice to Proceed. If District fails to issue the Notice to Proceed within twenty (20) calendar days after the financing has closed, Opterra will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount as a result of such delay.

Section 2.05 Project Schedule. After receipt of the Notice to Proceed, Opterra will develop, with input from District, a master project schedule using Microsoft Project®. District will have ten (10) calendar days following receipt of the project schedule to provide input. Opterra will establish a weekly construction meeting at which time the Work of the previous week will be reviewed and a two-week look ahead will be coordinated. The project schedule will be updated monthly.

Section 2.06 District's Energy and Operational Records and Data. If Opterra requests, District will provide to Opterra, within thirty (30) calendar days after such request, District's Energy Usage Data for the twelve (12) months preceding the Contract Effective Date, and will make commercially reasonable efforts to provide the Energy Usage Data for the thirty-six (36) months preceding the Contract Effective Date. "Energy Usage Data" means all of District's records and complete data concerning energy usage, energy-related maintenance, and other related costs for the Facilities, and including, without limitation, utility records; occupancy information; descriptions of any past, present or anticipated changes in a building's structure or its heating, cooling, lighting or other systems or energy requirements; descriptions of all energy consuming or saving equipment used in the Facilities; applicable building drawings, specifications, existing AutoCAD files, operation and maintenance manuals, and as-builts; bills and records relating to operation and maintenance of systems and equipment within the Facilities, and a description of operation and management procedures currently utilized. District agrees that Opterra may rely on the foregoing data as being accurate in all respects. If Opterra

requests, District will also provide to Opterra, within thirty (30) calendar days after such request, any prior energy audits of the Facilities, and copies of District's financial statements and records related to energy usage and operational costs for said time period at the Facilities, and will authorize its agents and employees to provide and freely discuss such records and to make themselves available for consultations and discussions with authorized representatives, employees, subcontractors, and agents of Opterra

Section 2.07 Finance Contingency. It is acknowledged and agreed by the Parties that the continued existence of this Contract is expressly contingent upon District closing financing that will allow it to make the payments to Opterra required by this Contract. District will have thirty (30) calendar days after the Contract Effective Date to close such financing. If the financing is not closed within this time, for any reason, either Party may by written notice to the other Party declare this Contract to be null and void; and the Contract will be null and void as of the other Party's receipt of this notice; *provided* that District may not declare this Contract to be null and void after it has issued the Notice to Proceed. It is acknowledged and agreed that Opterra will have no obligation to commence performance of the Work unless and until the financing has been closed.

Section 2.08 Proof of Financial Arrangements. Prior to the commencement of the Work, District will provide Opterra proof that financial arrangements have been made to fulfill District's obligations under this Contract. District's requirement to furnish such proof to Opterra is a condition precedent to commencement of the Work. After commencement of the Work, Opterra may request such proof if (i) District fails to make payments to Opterra as this Contract requires; (ii) a Change in the Work materially changes the Contract Amount; or (iii) Opterra has other reasonable concerns regarding District's ability to fulfill its payment obligations under this Contract when due. District will furnish such proof as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change. After District furnishes any such proof, District will not materially vary such financial arrangements without prior consent of Opterra If District fails to provide Opterra with such proof within ten (10) calendar days of receiving a demand from Opterra, Opterra will be entitled to suspend its performance under this Contract until such proof is received.

ARTICLE 3. PROJECT IMPLEMENTATION - GENERAL

Section 3.01 Registrations, Permits and Approvals.

(a) Prior to issuing the Notice to Proceed, District must register the Project with the California Department of Industrial Relations, using Form PWC-100.

(b) Opterra is responsible for obtaining (but not paying for) all Applicable Permits required under this Contract. District will cooperate fully with and assist Opterra in obtaining Applicable Permits.

(c) District is responsible for paying for all permit fees (including expedited plan check fees), inspections, and certifications costs, including any additional work that may be required by the Authority(ies) Having Jurisdiction as part of the permitting process.

(d) District is responsible for hiring and paying for all inspectors, site testing (including geotechnical observations) and laboratory testing.

(e) District is responsible for paying for all utility interconnection(s) costs, including any additional work that may be required by the Utility(ies) as part of the Interconnection Agreement(s).

(f) District is responsible for obtaining and paying for any annual operating permits and approvals or exemptions required by CEQA, as applicable.

Section 3.02 Coordination. District will be responsible for coordinating the activities of Opterra and Opterra's subcontractors and suppliers with those of District Persons.

Section 3.03 Project Meetings/Status Updates. During the course of the Work, Opterra will periodically meet with District to report on the general status and progress of the Work. Opterra may (but is not required to) make food and beverage items of nominal value available to District and District's employees and agents at such meetings, which if offered will be deemed part of the Scope of Work and included in the Contract Amount.

Section 3.04 Project Location Access. District hereby grants to Opterra, without cost to Opterra, all rights of ingress and egress at the Project Location, necessary for Opterra to perform the Work and provide all services contemplated by this Contract. Opterra will provide twenty-four-hour advance notice to District for access to any District Facilities. All persons entering the Project Location, including District and its employees and agents, must follow Opterra's safety procedures. Opterra may (but is not required to) make transportation available to District and District's employees and agents between and within Project Locations, which if offered will be deemed part of the Scope of Work and included in the Contract Amount.

Section 3.05 Consents; Cooperation. Whenever a Party's consent, approval, satisfaction, or determination will be required or permitted under this Contract, and this Contract does not expressly state that the Party may act in its sole discretion, such consent, approval, satisfaction, or determination will not be unreasonably withheld, qualified, conditioned, or delayed, whether or not such a "reasonableness" standard is expressly stated in this Contract. Whenever a Party's cooperation is required for the other Party to carry out its obligations hereunder, each Party agrees that it will act in good faith and reasonably in so cooperating with the other Party or its designated representatives or assignees or subcontractors. Each Party will furnish decisions, information, and approvals required by this Contract in a timely manner so as not to delay the other Party's performance under this Contract.

Section 3.06 Independent Contractor. The Parties hereto agree that Opterra, and any agents and employees of Opterra, its subcontractors and/or consultants, is acting in an independent capacity in the performance of this Contract, and not as a public official, officer, employee, consultant, or agent of District for purposes of conflict of interest laws or any other Applicable Law.

ARTICLE 4. FINAL DESIGN PHASE – CONSTRUCTION DOCUMENTS / EQUIPMENT PROCUREMENT

Section 4.01 General Provisions.

(a) After receipt of the Notice to Proceed, Opterra will proceed with the preparation of any necessary designs, drawings, and specifications related to the Scope of Work.

(b) After completion of the design phase and approval of the final plans and specifications by District, Opterra will order the equipment identified in the Scope of Work, and any other necessary materials and supplies in order to meet the project schedule.

(c) District will designate a single-point representative with whom Opterra may consult on a reasonable, regular basis and who is authorized to act on District's behalf with respect to the Project design. District's representative will render decisions in a timely manner with regard to any documents submitted by Opterra and to other requests made by Opterra in order to avoid delay in the orderly and sequential progress of Opterra's design services.

(d) Within ten (10) Business Days after Opterra's request, District will:

(i) furnish all surveys or other information in District's possession that describe the physical characteristics, legal limitations, and utility locations in and around the Project Location;

(ii) disclose any prior environmental review documentation and all information in its possession concerning subsurface conditions, including without limitation the existence of any known Hazardous Substances, in or around the general area of the Project Location;

(iii) supply Opterra with all relevant information in District's possession, including any as-built drawings and photographs, of prior construction undertaken at the Project Location;

(iv) obtain any and all easements, zoning variances, planning approvals, including any resolution of any environmental impact issues, and any other legal authorization regarding utilization of the Project Location for the execution of the Work; and

(v) obtain any and all title reports for those Project Locations reasonably requested by Opterra

(e) All information furnished pursuant to this Section 4.01 will be supplied at District's expense, and Opterra will be entitled to rely upon the accuracy and completeness of all information provided. If Opterra is adversely affected by any failure to provide, or delay in providing, the information specified in Section 4.01(d), Opterra will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount.

(f) If any information disclosed under this Section 4.01 gives rise to a Change to the Work or an Excusable Event, Opterra will notify District. The Parties will meet and confer with respect to those Changes, and Opterra will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount. If the Parties, however, are unable to agree on whether District's disclosed information gives rise to a Change to the Work or an Excusable Event, those disputes are to be resolved in accordance with ARTICLE 19.

(g) Opterra contemplates that it will not encounter any Hazardous Substances at the Project Location, except as has been disclosed as a pre-existing condition by District prior to the Contract Effective Date. However, any disclosure of Hazardous Substances that will affect the performance of the Work after the Contract Effective Date will constitute a valid basis for a Change Order.

Section 4.02 Review of Construction Documents. Opterra will prepare and submit all drawings and specifications to District for review. District will review the documents and provide any comments in writing to Opterra within ten (10) Business Days after receipt of the documents. Opterra will incorporate appropriate District comments into the applicable drawings and specifications. Opterra reserves the right to issue the drawings and specifications in phases

to allow Construction to be performed in phases. If District fails to provide written comments within the ten (10) Business Day period, District will be deemed to have no comments regarding the documents.

Section 4.03 Permits. The respective obligations of the Parties in obtaining inspections and permits are as specified in Section 3.01. District will agree to any nonmaterial changes to the designs, drawings, and specifications required by any Governmental Authority. The Contract Amount must be increased by any additional cost incurred by Opterra due to a Change required by a Governmental Authority and the time required to complete the Work must be increased by the number of additional days required to complete the Work because of a Change imposed by a Governmental Authority.

Section 4.04 Changes During Final Design Phase. If during the design phase any District Person requests Changes and/or modifications to the Work and/or an Excusable Event occurs, Opterra will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount. Valid bases for additional compensation and/or time extension include, but are not limited to: (i) any District Person requests changes and/or modifications to the Project Scope of Work during the Project design phase; (ii) any District Person causes delays during Opterra's design work; (iii) the discovery of subsurface or other site conditions that were not reasonably anticipated or disclosed as of the Contract Effective Date; (iv) the discovery of Hazardous Substances at or impacting the Project Location; (v) changes to the Scope of Work required to obtain Applicable Permits; (vi) damage to any equipment or other Work installed by Opterra caused by the act or omission of any District Person; (vii) changes and/or modifications to Scope of Work ordered by any Governmental Authority; and (viii) any other Excusable Event or condition that would not reasonably have been anticipated by Opterra, that modifies and/or changes the Scope of Work, that increases the agreed-upon Contract Amount or increases the time needed to complete the Work.

ARTICLE 5. CONSTRUCTION PHASE

Section 5.01 General Provisions. Upon securing the requisite Applicable Permits pursuant to Section 3.01, and completion of Construction Documents, Opterra will commence the construction of the Project in accordance with the Construction Documents. The construction will be performed in accordance with all Applicable Laws and Applicable Permits, by Opterra and/or one or more licensed subcontractors qualified to perform the Work.

Section 5.02 Opterra's Responsibilities during Construction Phase.

(a) As an independent contractor to District, Opterra will provide, or cause to be provided by its subcontractor(s), all labor, materials, equipment, tools, transportation, and other facilities and services necessary for the proper execution, construction, and completion of the Work. Opterra will purchase in advance all necessary materials and supplies for the construction of the Project in order to assure the prompt and timely delivery of the completed Work pursuant to the project schedule. Opterra will also be responsible for all means, methods, techniques, sequences, and procedures required by the Construction Documents.

(b) Opterra will make commercially reasonable efforts to coordinate construction activities and perform the Work to minimize disruption to District's operations at the Project Location. Opterra will provide at least fifteen (15) calendar days' written notice to District of any planned power outages that will be necessary for the construction. Opterra will cooperate with District in scheduling such outages, and District agrees to provide its reasonable approval of any scheduled outage.

(c) Opterra will initiate and maintain a safety program in connection with its Construction of the Project. Opterra will take reasonable precautions for the safety of, and will provide reasonable protection to prevent damage, injury, or loss to: (i) employees of Opterra and subcontractors performing Work under this Contract; (ii) Opterra's property and other materials to be incorporated into the Project, under the care, custody, and control of Opterra or its subcontractors; and (iii) other property at or adjacent to the Project Location not designated for removal, relocation, or replacement during the course of construction. Opterra will not be responsible for District's employees' safety unless Opterra's negligence in the performance of its Work is the proximate cause of the employee's injury.

(d) Opterra will provide notice to District of scheduled test(s) of installed equipment, if any, and District and/or its designees will have the right to be present at any or all such tests conducted by Opterra, any subcontractor, and/or manufacturers of the equipment.

(e) Pursuant to California Labor Code §6705, if the Work is a public work involving an estimated expenditure in excess of $25,000 and includes the excavation of any trench or trenches five (5) feet or more in depth, Opterra will, in advance of excavation, submit to District and/or a registered civil or structural engineer, employed by District, to whom authority to accept has been delegated, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation of such trench or trenches, which provisions will be no less effective than the current and applicable CAL-OSHA Construction Safety Orders. No excavation of such trench or trenches may be commenced until this detailed plan has been accepted by District or by the person to whom authority to accept has been delegated by

District. Pursuant to California Labor Code §6705, nothing in this Section 5.02(e) imposes tort liability on District or any of its employees.

(f) Pursuant to California Public Contract Code §7104, if the Work is a public work involving digging trenches or other excavations that extend deeper than four (4) feet below the surface of the ground:

(i) Opterra will promptly, and before the following conditions are disturbed, notify District, in writing, of any:

1) Material that Opterra believes may be material that is hazardous waste, as defined in California Health and Safety Code §25117, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law;
2) Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to Opterra before the Contract Effective Date;
3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract.

(ii) District will promptly investigate the conditions and, if it finds that the conditions do materially so differ or do involve hazardous waste, and cause a decrease or increase in Opterra's cost of, or the time required for, performance of any part of the Work will issue a Change Order under the procedures described in this Contract.

(iii) If a dispute arises between District and Opterra, whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in Opterra's cost of, or time required for, performance of any part of the Work, Opterra will not be excused from any scheduled completion date provided for by this Contract but will proceed with all Work to be performed under this Contract. Opterra will retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the Parties.

Section 5.03 District's Responsibilities during Construction Phase.

(a) District will designate a single-point representative authorized to act on District's behalf with respect to Project construction and/or equipment installation. District may from time to time change the designated representative and will provide written notice to Opterra of such change. Any independent review of the construction will be undertaken at District's sole expense, and will be performed in a timely manner so as to not unreasonably delay the orderly progress of Opterra's Work.

(b) District will provide a temporary staging area for Opterra, or its subcontractors, to use during the construction phase to store and assemble equipment for completion of the Work, if needed. District will provide sufficient space at the Facilities for the performance of the Work and the storage, installation, and operation of any equipment and materials and will take reasonable steps to protect any such equipment and materials from harm, theft and misuse. District will provide access to the Facilities, including parking permits and identification tags, for Opterra and subcontractors to perform the Work during regular business hours, or such other reasonable hours as may be requested by Opterra and acceptable to District. District will also either provide a set or sets of keys to Opterra and its subcontractors (signed out per District policy) or provide a readily available security escort to unlock and lock doors. District will not unreasonably restrict Opterra's access to Facilities to make emergency repairs or corrections as Opterra may determine are needed.

(c) District will maintain the portion of the Project Location that is not directly affected by Opterra's Work. District will keep the designated Project Location and staging area for the Project free of obstructions, waste, and materials within the control of District.

(d) District will obtain any required environmental clearance from, and any inspections, including special inspections, or permits required by, any federal, state, and local jurisdictions, including but not limited to any clearances required under CEQA, prior to scheduled construction start date.

(e) District will prepare the Project Location for construction, including, but not limited to, clearance of all above and below ground obstructions, such as vegetation, buildings, appurtenances, and utilities. Subsurface conditions and obstacles (buried pipe, utilities, etc.) that are not otherwise previously and accurately documented by District and such documentation made available to Opterra are the responsibility of District. If Opterra encounters such unforeseen conditions in the performance of the Work, Opterra will be entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount.

(f) District will remove any Hazardous Substances either known to District prior to the commencement of the Work or encountered by Opterra during the construction of the Project, if necessary in order for the Work to progress safely, that were not knowingly released or brought to the site by Opterra Opterra will respond to the discovery of Hazardous Substances at or around the Project Location during the course of Opterra's construction in accordance with Section 5.06.

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(g) District will coordinate the Work to be performed by Opterra with its own operations and with any other construction project that is ongoing at or around the Project Location, with the exception that Opterra will coordinate the Interconnection Facilities work, if any, which will be performed by the local utility.

(h) District will, and will cause District Persons to, allow Opterra and its subcontractors access to and reasonable use of necessary quantities of District's water and other utilities, including electrical power, as needed for the construction of the Work, at no cost to Opterra

(i) District will, and will cause District Persons to, provide Opterra and/or its subcontractors with reasonable access to the Project Location to perform the Work, including without limitation and at no extra cost to Opterra, access to perform Work on Saturdays, Sundays, legal holidays, and non-regular working hours.

(j) District will also do the following:

(i) Attend the regularly scheduled progress meetings. Participate as needed regarding scheduling of the Work.

(ii) When requested by Opterra, participate in the job inspection walk-through with Opterra to determine Substantial Completion or Beneficial Use of major equipment, and will sign the Certificate(s) of Substantial Completion.

(iii) Perform a final walk-through of the Project and, upon receipt of the operation and maintenance manuals and as-built drawings, sign the Certificate of Final Completion for the related Work.

(iv) Upon the completion of the entire Scope of Work listed in Attachment C, including training, if any, and submission of close-out documents, sign a Certificate of Final Completion for the entire Project.

Section 5.04 Changes.

(a) Change Orders Generally. Changes and/or modifications to the Scope of Work will be authorized by a written Change Order. The Change Order should state the change and/or modification to the Scope of Work, any additional compensation to be paid, and any applicable extension of time. Opterra may, at its election, suspend performance of that portion of the Work affected by any proposed Change until a written Change Order with respect to the Changed or modified Work has been signed by both District and Opterra Opterra will use its reasonable efforts to continue other portions of the Work not affected or impacted by such proposed Change until such time as the applicable Change Order is resolved. In addition, if any District Person requests a proposal from Opterra for a Change and District subsequently elects to not proceed with such Change, District agrees that a Change Order will be issued to reimburse Opterra for any costs reasonably incurred for estimating services, design services, and/or preparation of the proposal requested by such District Person.

(b) Change Orders Requiring Additional Compensation. If during construction any District Person requests changes and/or modifications to the Work, and/or there are Excusable Events, District will pay the extra costs caused by such modifications and/or changes and/or Excusable Event and Opterra will be entitled to additional compensation for the following reasons, that include, but are not limited to: (i) any District Person requests changes and/or modifications to the Scope of Work during the construction phase of the Project; (ii) any District Person causes delays during Opterra's construction work; (iii) discovery of subsurface or other site conditions that were not reasonably anticipated or disclosed prior to the commencement of the Work; (iv) discovery of Hazardous Substances at or impacting the Project Location; (v) changes and/or modifications to the Scope of Work required to obtain required permits and approvals as required by any Governmental Authority; (vi) damage to any equipment or other Work installed by Opterra caused by the act or omission of any District Person; (vii) changes and/or modifications to Scope of Work ordered by any Governmental Authority; and (viii) any other Excusable Event or condition that would not reasonably have been anticipated by Opterra, that modifies and/or changes the Scope of Work or the Contract Amount. The Contract Amount is based on prevailing market conditions as of the Effective Date. In the event of changes to applicable tariffs, duties, or other trade-related fees imposed by domestic or international regulatory authorities impacting the cost to complete the Work, Opterra reserves the right to a Change Order to adjust the Contract Amount accordingly. Any such adjustment will be communicated in advance and supported by relevant documentation. Opterra will use good faith efforts to mitigate any such adjustments.

(c) Change Orders Requiring Additional Time. If during construction any District Person requests changes and/or modifications to the Scope of Work and/or an Excusable Event occurs, the Parties agree that an equitable extension of time to complete the Work may be necessary. Prior to any extension of time, Opterra will use commercially reasonable efforts to make up such delays, including authorizing overtime payments; *provided* that District has issued a Change Order authorizing any such overtime payment and has specifically agreed to pay all costs, including administrative charges and expenses, associated therewith.

(d) Method for Adjustment. An increase or decrease in the Contract Amount and/or time resulting from a Change in the Work and/or Excusable Event must be determined by one or more of the following methods:

(i) unit prices set forth in this Contract or as subsequently agreed;

(ii) a mutually accepted, itemized lump sum; or

(iii) costs calculated on a basis agreed upon by District and Opterra plus a fee (either a lump sum or a fee based on a percentage of cost) to which the Parties agree.

(e) Disagreements. If there is a disagreement between District and Opterra as to whether Opterra is entitled to an equitable extension of time and/or an equitable adjustment in the Contract Amount, those disputes are to be resolved in accordance with the provisions of ARTICLE 19. Pending the resolution of any such dispute, Opterra may suspend Work.

Section 5.05 Minor Changes to Scope of Work. Opterra has the authority to make minor changes that do not change the total Contract Amount and are consistent with the intent of the Construction Documents, without prior notice to District. Opterra will either promptly inform District, in writing, of any minor changes made during the implementation of the Project, or make available to District at the site a set of as-built drawings that will be kept current to show those minor changes.

Section 5.06 Hazardous Substances.

(a) Opterra will promptly provide written notice to District if Opterra observes any Hazardous Substance, as defined herein, at or around the Facilities during the course of construction or installation of any equipment which have not been addressed as part of the Scope of Work. Opterra will have no obligation to investigate the Facilities for the presence of Hazardous Substances prior to commencement of the Work unless otherwise specified in the Scope of Work. District will be solely responsible for investigating Hazardous Substances and determining the appropriate removal and remediation measures with respect to the Hazardous Substances. District will comply with all Applicable Laws with respect to the identification, removal and proper disposal of any Hazardous Substances known or discovered at or around the Facilities, and in such connection will execute all generator manifests with respect thereto. Opterra will comply with all Applicable Laws in connection with the use, handling, and disposal of any Hazardous Substances in the performance of its Work. In connection with the foregoing, District will provide Opterra, within ten (10) Business Days after the Contract Effective Date, a written statement that represents and warrants (i) whether or not, to its knowledge, there are Hazardous Substances either on or within the walls, ceiling or other structural components, or otherwise located in the Project Location, including, but not limited to, asbestos-containing materials; (ii) whether or not, to its knowledge, conditions or situations exist at the Facilities which are subject to special precautions or equipment required by federal, state, or local health or safety regulations; and (iii) whether or not, to its knowledge, there are unsafe working conditions at the Facilities.

(b) District will indemnify, defend, and hold Opterra harmless from and against any and all Losses that in any way result from, or arise under, such District owned or generated Hazardous Substances, except for liabilities to the extent due to the negligence or willful misconduct of Opterra, or its subcontractors, agents or representatives, in the handling, disturbance or release of Hazardous Substances. This indemnification will survive any termination of this Contract.

Section 5.07 Pre-Existing Conditions. Certain pre-existing conditions may be present within the Facilities that (i) are non-compliant with applicable codes, (ii) may become non-compliant with applicable codes upon completion of Opterra's Work, (iii) may cause Opterra's completed Work to be non-compliant with applicable codes, (iv) may prevent District from realizing the full benefits of Opterra's Work, (v) may present a safety or equipment hazard, or (vi) are otherwise outside the scope of Opterra's Work. Regardless of whether or not such conditions may have been readily identifiable prior to the commencement of Work, Opterra will not be responsible for repairing such pre-existing conditions unless such responsibility is expressly provided for in the Scope of Work or an approved Change Order. Opterra, in its sole discretion, may determine whether it will bring said pre-existing conditions into compliance by agreeing to execute a Change Order with District for additional compensation and, if appropriate, an extension of time.

ARTICLE 6. PROJECT COMPLETION

Section 6.01 Occupancy or Use of Work. District may take occupancy or use of any completed or partially completed portion of the Work at any stage, whether or not such portion is Substantially Complete, *provided* that such occupancy or use is authorized by Governmental Authority and, *provided further*, that District assumes responsibility for the security of, insurance coverage for, maintenance, utilities for, and damage to or destruction of such portion of the Work. If Substantial Completion of a portion of the Construction Work is not yet achieved, occupancy or use of such portion of the Work will not commence until District's insurance company has consented to such occupancy or use. When occupancy or use of a portion of the Work occurs before Substantial Completion of such portion, District and Opterra will accept in writing the responsibilities assigned to each of them for title to materials and equipment, payments and Retention with respect to such portion.

Section 6.02 Substantial Completion. When Opterra considers the Work, or any portion thereof, to be Substantially Complete, Opterra will supply to District a written Certificate of Substantial Completion with respect to such

portion of the Work, including a Punch List of items and the time for their completion or correction. District will within ten (10) Business Days of receipt of the Certificate of Substantial Completion, review such portion of the Work for the sole purpose of determining that it is Substantially Complete, and sign and return the Certificate of Substantial Completion to Opterra acknowledging and agreeing: (i) that such portion of the Work is Substantially Complete; (ii) the date of such Substantial Completion; (iii) that from the date of Substantial Completion District will assume responsibility for the security of, insurance coverage for, maintenance, utilities for, and damage to or destruction of such portion of the Work. District agrees that approval of a Certificate of Substantial Completion will not be unreasonably withheld, delayed or conditioned.

Section 6.03 Final Completion. When Opterra considers the entirety of the Work to be Finally Complete, Opterra will notify District that the Work is fully complete and ready for final inspection. District will inspect the Work to verify the status of Final Completion within ten (10) Business Days after its receipt of Opterra's certification that the Work is complete. If District does not verify the Final Completion of the Work within this period, the Work will be deemed fully completed. When District agrees that the Work is fully completed, Opterra will issue a Certificate of Final Completion, which District must sign. District agrees that its signing of the Certificate of Final Completion will not be unreasonably withheld, delayed or conditioned. At that time, District will pay Opterra any remaining Contract Amount due and any outstanding Retention being withheld by District, in accordance with Section 8.03. District may give Opterra written notice of acceptance of the Work and will promptly record a notice of completion or notice of acceptance in the office of the county recorder in accordance with California Civil Code §9204.

Section 6.04 Transfer of Title; Risk of Loss. Title to all or a portion of the Project equipment, supplies and other components of the Construction Work will pass to District upon the earlier of (i) the date payment for such Project equipment, supplies or components is made by District or (ii) the date any such items are incorporated into the Project Location. Opterra will retain care, custody and control and risk of loss of such Project equipment, supplies and components until the earlier of Beneficial Use or Substantial Completion. Transfer of title to District will in no way affect District's and Opterra's rights and obligations as set forth in other provisions of this Contract. Except as provided in this Section 6.04, after the date of Substantial Completion, Opterra will have no further obligations or liabilities to District arising out of or relating to this Contract, except for the obligation to complete any Punch List items, the obligation to perform any warranty service under Section 9.01, and obligations which, pursuant to their terms, survive the termination of this Contract.

ARTICLE 7. SUBCONTRACTORS

Section 7.01 Authority to Subcontract. Opterra may delegate its duties and performance under this Contract, and has the right to enter into agreements with any subcontractors and other service or material providers as Opterra may select in its discretion to perform the Work. Opterra will not be required to enter into any subcontracts with parties whom Opterra has not selected or subcontractors whom Opterra has objection to using.

Section 7.02 Prompt Payment of Subcontractors. Opterra will promptly pay, when due, all amounts payable for labor and materials furnished in the performance of this Contract and will endeavor to prevent any lien or other claim under any provision of Applicable Law from arising against any District property, against Opterra's rights to payments hereunder, or against District.

Section 7.03 Relationship. Nothing in this Contract constitutes or will be deemed to constitute a contractual relationship between any of Opterra's subcontractors and District, or any obligation on the part of District to pay any sums to any of Opterra's subcontractors.

Section 7.04 Prevailing Wages. To the extent required by California Labor Code §1771 or other Applicable Law, all employees of Opterra and Opterra's subcontractors performing Work at the Project Location will be paid the per diem prevailing wages for the employee's job classification in the locality in which the Work is performed. In accordance with California Labor Code §§1773 and 1773.2, District will obtain from the Director of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work, in the locality in which the Work is to be performed, for each craft, classification or type of worker needed to execute the Work at the Project Location, and will cause copies of such determinations to be kept on file at its principal office and posted at each Project Location. District will promptly notify Opterra of any changes to any such prevailing wage determination. Opterra will utilize LCPtracker to monitor prevailing wage.

ARTICLE 8. PAYMENTS

Section 8.01 Monthly Progress Payments. Promptly after the Contract Effective Date, Opterra will invoice District for a mobilization payment in the amount of twenty percent (20%) of the Contract Amount. This amount must be paid to Opterra within thirty (30) calendar days after District's receipt of an invoice therefor. In addition, as the Work progresses, Opterra will submit to District its applications for monthly payments based on the progress made on the Project through the date on which Opterra submits such Application for Payment. Within twenty-one (21) calendar days from the Contract Effective Date, Opterra will prepare and submit to District a schedule of values apportioned to the various divisions or phases of the Work ("Schedule of Values"). Each line item contained in the Schedule of Values will

be assigned a value such that the total of all items equals the Contract Amount. All Applications for Payment will be in accordance with the Schedule of Values.

Section 8.02 Materials Stored Off-Site. In addition to the monthly progress payments specified in Section 8.01, Opterra may invoice District for materials purchased in advance and not stored at the Project Location. Each such Application for Payment will be accompanied by proof of off-site material purchases, evidence that the materials have been delivered to a warehouse reasonably acceptable to District and evidence of appropriate insurance coverage. Opterra will furnish to District written consent from the Surety approving the advance payment for materials stored off site. District will pre-pay one hundred percent (100%) of Opterra's Application for Payment for the materials delivered, less Retention as indicated in Section 8.03. Opterra will protect stored materials from damage. Damaged materials, even though paid for, will not be incorporated into the Work.

Section 8.03 Retention. District, or its designee, must approve and pay each Application for Payment, less a retention amount ("Retention") of five percent (5%) in accordance with California Public Contract Code §7201, within thirty (30) calendar days after its receipt of the Application for Payment; *provided, however,* that there is to be no Retention with respect to the mobilization payment. A failure to approve and pay an Application for Payment in a timely manner is a material default by District under this Contract. District may make progress payments in full without Retention at any time after fifty percent (50%) of the Work has been completed, as permitted pursuant to California Public Contract Code §9203. Upon Substantial Completion, the Retention must be reduced to two percent (2%) of the Contract Amount, and Opterra may invoice and District will pay this amount. District will pay Opterra the remaining two percent (2%) Retention amount upon achieving Final Completion. In lieu of Retention being held by District, Opterra may request that securities be substituted or Retention be held in an escrow account pursuant to California Public Contract Code §22300.

Section 8.04 Final Payment. The final Application for Payment may be submitted after Final Completion. The final payment amount must also include payment to Opterra for any remaining Retention withheld by District.

Section 8.05 Disputed Invoices/Late Payments. District may in good faith dispute any Application for Payment, or part thereof, within fifteen (15) calendar days after the date the Application for Payment was received by District. If District disputes all or a portion of any Application for Payment, District will pay the undisputed portion when due and provide Opterra a written notice and explanation of the basis for the dispute and the amount of the Application for Payment being withheld related to the dispute. District will be deemed to have waived and released any dispute known to it with respect to an Application for Payment if such notice and written explanation is not provided within fifteen (15) calendar days after the date the Application for Payment was received by District. If any amount disputed by District is finally determined to be due to Opterra, either by agreement between the Parties or as a result of dispute resolution pursuant to ARTICLE 19 below, it will be paid to Opterra within ten (10) Business Days after such final determination, plus Interest from the date billed or claimed until such amount is paid. . Late payments will accrue Interest from the due date until paid.

Section 8.06 Rebate/Incentive/Tax Credit Programs. Opterra makes no guarantee that District will receive funding from any energy efficiency rebate, incentive, tax credit and/or loan program(s), including investment tax credits or other funding under the Inflation Reduction Act (collectively, "Incentive Funds"), or any portion thereof. Opterra cannot guarantee compliance with foreign entities of concern rules with regard to supply chains, but will provide District with all information it receives from suppliers with regard thereto. Opterra expressly disclaims any liability for District's failure to receive any portion of the Incentive Funds, and District acknowledges and agrees that Opterra will have no liability for any failure to receive all or any portion of the Incentive Funds. Procurement, or lack thereof, of the Incentive Funds will not alter the Contract Amount of this Contract or the payment timeline associated with payment of the Contract Amount.

ARTICLE 9. WARRANTY / LIMITATION OF LIABILITY

EXCEPT FOR THE WARRANTIES PROVIDED IN THIS ARTICLE 9, OPTERRA MAKES NO WARRANTIES IN CONNECTION WITH THE WORK PROVIDED UNDER THIS CONTRACT, WHETHER EXPRESS OR IMPLIED IN LAW, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ANY IMPLIED WARRANTIES AGAINST INTELLECTUAL PROPERTY INFRINGEMENT. District WILL HAVE NO REMEDIES AGAINST EITHER OPTERRA OR ANY OPTERRA SUBCONTRACTOR OR VENDOR FOR ANY DEFECTIVE MATERIALS OR EQUIPMENT INSTALLED, EXCEPT FOR THE REPAIR OR REPLACEMENT OF SUCH MATERIALS OR EQUIPMENT IN ACCORDANCE WITH THE WARRANTIES INDICATED BELOW. SPECIFICALLY, NEITHER OPTERRA, NOR OPTERRA's SUBCONTRACTORS OR VENDORS, WILL BE LIABLE TO District FOR LOSS OF PROFITS OR FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY.

Section 9.01 Opterra warrants to District that material and equipment furnished under this Contract will be of good quality and new, unless otherwise specifically required or permitted by this Contract. Opterra further warrants that its workmanship provided hereunder, including its subcontractors' workmanship, will be free of material defects for a period of one (1) year from the date of Substantial Completion as indicated on the executed Certificate of Substantial Completion, or the date of Beneficial Use as indicated on the executed Certificate of Beneficial Use ("Opterra Warranty").

Notwithstanding the preceding sentence, the date the Opterra Warranty commences with respect to a specific piece or pieces of equipment may be further defined in Attachment C.

Section 9.02 Equipment and material warranties that exceed the Opterra Warranty period will be provided directly by the equipment and/or material manufacturers and such warranties will be assigned directly to District, after the one (1) year period. During the Opterra Warranty period, Opterra will be District's agent in working with the equipment and material manufacturers in resolving any equipment or material warranty issues. If any material defects are discovered within the Opterra Warranty period, Opterra, or Opterra's subcontractors, will correct its defects, and/or Opterra will work with the equipment or material manufacturer as District's agent to facilitate the manufacturer's correction of the equipment or material defect. Such warranty services will be performed in a timely manner and at the reasonable convenience of District. If a warranty issue arises on any equipment or material installed after the Opterra Warranty period, and the equipment or material has a warranty period that exceeds one (1) year, District will contact the manufacturer directly to resolve such warranty issues and District acknowledges that the manufacturer will have sole responsibility for such issues.

Section 9.03 The warranties in this ARTICLE 9 expressly exclude any remedy for damage or defect caused by improper or inadequate maintenance of the installed equipment by service providers other than Opterra or its subcontractors, corrosion, erosion, deterioration, abuse, modifications or repairs not performed by an authorized Opterra subcontractor, improper use or operation, or normal wear and tear under normal usage. Opterra shall not be responsible for the cost of correcting a breach of warranty or defect to the extent that the manufacturer of the equipment that is the subject of a warranty hereunder does not honor its equipment warranty as a result of its termination of operations, insolvency, liquidation, bankruptcy or similar occurrence. Unless otherwise specified, all warranties hereunder, including without limitation those for defects, whether latent or patent, in design, engineering, or construction, will terminate one (1) year from the date of Substantial Completion or Beneficial Use; and thereafter, Opterra will have no liability for breach of any warranty or for any latent or patent defect of any kind pursuant to California Code of Civil Procedure §§337.1 and 337.15.

Section 9.04 District and Opterra have discussed the risks and rewards associated with this Project, as well as the Contract Amount to be paid to Opterra for performance of the Work. District and Opterra agree to allocate certain of the risks so that, to the fullest extent permitted by Applicable Law, Opterra's total aggregate liability to District and all third parties is limited to the Contract Amount for any and all injuries, damages, claims, losses, expenses, or claim expenses (including attorney's fees) arising out of this Contract from any cause or causes. Such causes include, but are not limited to, negligence, errors, omissions, strict liability, breach of contract, or breach of warranty.

ARTICLE 10. OWNERSHIP OF CERTAIN PROPERTY AND EXISTING EQUIPMENT

Section 10.01 Ownership of Certain Proprietary Property Rights.

(a) Ownership: Except as expressly provided in this Contract, District will not acquire, by virtue of this Contract, any rights or interest in any formulas, patterns, devices, software, inventions or processes, copyrights, patents, trade secrets, other intellectual property rights, or similar items of property which are or may be used in connection with the Work. Opterra will own all inventions, improvements, technical data, models, processes, methods, and information and all other work products developed or used in connection with the Work, including all intellectual property rights therein.

(b) License: Solely in connection with the Facilities, Opterra grants to District a limited, perpetual, royalty-free, non-transferrable license for any Opterra intellectual property rights necessary for District to operate, maintain, and repair any modifications or additions to Facilities, or equipment delivered, as a part of the Work.

(c) Ownership and Use of Instruments of Service. All data, reports, proposals, plans, specifications, flow sheets, drawings, and other products of the Work (the "Instruments of Service") furnished directly or indirectly, in writing or otherwise, to District by Opterra under this Contract will remain Opterra's property and may be used by District only for the Work. Opterra will be deemed the author and owner of such Instruments of Service and will retain all common law, statutory and other reserved rights, including copyrights. The Instruments of Service may not be used by District or any District Person for future additions or alterations to the Project or for other projects, without the prior written agreement of Opterra Any unauthorized use of the Instruments of Service will be at District's sole risk and without liability to Opterra If District uses the Instruments of Service for implementation purposes, including additions to or completion of the Project, without the written permission of Opterra, District agrees to waive and release, and indemnify and hold harmless, Opterra, its subcontractors, and their directors, employees, subcontractors, and agents from any and all Losses associated with or resulting from such use.

Section 10.02 Ownership of any Existing Equipment. Ownership of any equipment and materials presently existing at the Facilities on the Contract Effective Date will remain the property of District even if such equipment or materials are replaced or their operation made unnecessary by work performed by Opterra If applicable, Opterra will advise District in writing of all equipment and materials that will be replaced at the Facilities and District will, within five (5) Business Days of Opterra's notice, designate in writing to Opterra which replaced equipment and materials should not be

disposed of off-site by Opterra (the "Retained Items"). District will be responsible for and designate the location and storage for the Retained Items. Opterra will be responsible for the disposal of replaced equipment and materials, except for the Retained Items. Opterra will use commercially reasonable efforts to remove the Retained Items in such a manner as to avoid damage thereto, or if it is unreasonable to avoid damage altogether, to minimize the damage done. Opterra will not be responsible for the removal and/or disposal of any Hazardous Substances except as required by the Scope of Work.

ARTICLE 11. INDEMNIFICATION / LIMITATION ON LIABILITY

Section 11.01 Indemnification. To the fullest extent permitted by Applicable Laws, each Party will indemnify, hold harmless, release and defend the other Party, its officers, employees, and agents from and against any and all actions, claims, demands, damages, disabilities, fines, penalties, losses, costs, expenses (including consultants' and attorneys' fees and other defense expenses) and liabilities of any nature ("Losses") that may be asserted by any person or entity, to the extent arising out of that Party's performance or activities hereunder, including the performance or activities of other persons employed or utilized by that Party in the performance of this Contract, excepting liabilities to the extent due to the negligence or willful misconduct of the indemnified party. This indemnification obligation will continue to bind the Parties after the termination of this Contract.

Section 11.02 Waiver of Consequential Damages and Limitation of Liability. The liability of a defaulting Party will be limited to direct, actual damages. Neither Party shall be liable to the other Party for any special, indirect, incidental or consequential damages whatsoever, whether in contract, tort (including negligence) or strict liability, including, but not limited to, operational losses in the performance of business such as lost profits or revenues or any increase in operating expense. Additionally, each Party waives any claims for negligence against the other Party to the fullest extent permitted by Applicable Law.

ARTICLE 12. INSURANCE / BONDS

Section 12.01 Opterra Insurance. Opterra will maintain, or cause to be maintained, for the duration of this Contract, the insurance coverage outlined in (a) through (f) below, and all such other insurance as required by Applicable Law. Evidence of coverage will be provided to District via an insurance certificate.

(a) Workers' Compensation/Employers Liability for states in which Opterra is not a qualified self-insured. Limits as follows:

* Workers' Compensation: Statutory
* Employers Liability: Bodily Injury by accident $1,000,000 each accident
  Bodily Injury by disease $1,000,000 each employee
  Bodily Injury by disease $1,000,000 policy limit

(b) Commercial General Liability insurance with limits of:

* $2,000,000 each occurrence for Bodily Injury and Property Damage
* $4,000,000 General Aggregate - other than Products/Completed Operations
* $2,000,000 Products/Completed Operations Aggregate
* $2,000,000 Personal and Advertising Injury
* $ 100,000 Damage to premises rented to Opterra

Coverage to be written on an occurrence form. Coverage to be at least as broad as ISO form CG 0001 (04/13) or its equivalent forms, without endorsements that limit the policy terms with respect to: (1) provisions for severability of interest or (2) explosion, collapse, underground hazard.

(c) Auto Liability insurance for owned, hired and non-owned vehicles with limits of $1,000,000 per accident. Coverage to be written on an occurrence form.

(d) Professional Liability insurance with limits of:

* $1,000,000 per occurrence
* $1,000,000 aggregate

Coverage to be written on a claims-made form.

(e) Umbrella/Excess Liability Insurance. Limits as follows:

* $1,000,000 each occurrence
* $1,000,000 aggregate

Coverage terms and limits to apply excess of the per occurrence and/or aggregate limits provided for Commercial General Liability and Auto Liability written on a claims made form.

(f) Policy Endorsements.

* The insurance provided for Workers' Compensation and Employers' Liability above will contain waivers of subrogation rights against District, but only to the extent of the indemnity obligations contained in this Contract.
* The insurance provided for Commercial General Liability and Auto Liability above will:
  (i) include District as an additional insured with respect to Work performed under this Contract, but only to the extent of the indemnity obligations contained in this Contract, and
  (ii) provide that the insurance is primary coverage with respect to all insureds, but only to the extent of the indemnity obligations contained in this Contract.

Section 12.02 District's Insurance. District will maintain, or cause to be maintained, for the duration of this Contract, the insurance coverage outlined below, and all such other insurance as required by Applicable Law. Evidence of coverage will be provided to Opterra via an insurance certificate.

(a) Commercial General Liability insurance, written on an occurrence form, with limits of:

* $2,000,000 each occurrence for Bodily Injury and Property Damage; and
* $4,000,000 General Aggregate

(b) The insurance provided for above will contain waivers of subrogation rights against Opterra, will include Opterra as an additional insured, and will provide that the insurance is primary coverage with respect to all insureds.

Section 12.03 Waivers of Subrogation. The Parties waive all rights against each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this ARTICLE 12 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance. The Parties and their respective property damage insurers also waive all rights of subrogation against the other Party, its directors, officers, agents and employees. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

Section 12.04 Performance and Payment Bonds. Prior to commencing Work under this Contract, Opterra will furnish a performance bond, in an amount equal to one hundred percent (100%) of the Contract Amount, and a payment bond to guarantee payment of all claims for labor and materials furnished, in an amount equal to one hundred percent (100%) of the Contract Amount (collectively, the "Contract Bonds"). The Contract Bonds shall be maintained in full force and effect until Final Completion; provided that upon the achievement of Substantial Completion, the value of the Contract Bonds shall be reduced to the value of the Retainage being withheld by District. The Contract Bonds are not being furnished to cover the performance of any Professional Services, including any energy guaranty or guaranteed savings under this Contract, nor to cover any equipment and/or material manufacturer's warranty or other third-party warranty being assigned to District. District agrees that upon Final Completion and expiration of the Opterra Warranty period set forth in Article 9 herein, the Contract Bonds shall be returned to Opterra, and all obligations arising thereunder are terminated and the surety company that issued the bond is forever discharged from any and all liabilities of whatever nature arising in connection with the Contract Bonds.

ARTICLE 13. DOE GUIDELINES; ENERGY POLICY ACT

Section 13.01 As authorized by §1605(b) of the Energy Policy Act of 1992 (Pub. L. No. 102-486) the U.S. Department of Energy has issued, and may issue in the future, guidelines for the voluntary reporting of Greenhouse Gas emissions ("DOE Guidelines"). "Greenhouse Gases" means those gases and other particles as defined in the DOE Guidelines. District hereby assigns and transfers to Opterra, and its Affiliates and assigns, any Greenhouse Gas emission reduction credits that result from the Work.

ARTICLE 14. MUNICIPAL ADVISOR / TAX ADVISOR

Section 14.01 THE PARTIES ACKNOWLEDGE AND AGREE THAT OPTERRA IS NOT A MUNICIPAL ADVISOR AND CANNOT GIVE ADVICE TO District WITH RESPECT TO MUNICIPAL SECURITIES OR MUNICIPAL FINANCIAL PRODUCTS ABSENT District BEING REPRESENTED BY, AND RELYING UPON THE ADVICE OF, AN INDEPENDENT REGISTERED MUNICIPAL ADVISOR. OPTERRA IS NOT SUBJECT TO A FIDUCIARY DUTY WITH REGARD TO District OR THE PROVISION OF INFORMATION TO District. District WILL CONSULT WITH AN INDEPENDENT REGISTERED MUNICIPAL ADVISOR ABOUT THE FINANCING OPTION APPROPRIATE FOR District'S SITUATION.

Section 14.02 The Parties acknowledge and agree that Opterra is not a tax advisor and cannot give advice to District with respect to the Inflation Reduction Act, any funds the District may be eligible for thereunder or compliance

with foreign entities of concern rules and regulations. District must consult its own tax and legal advisors with regard thereto.

ARTICLE 15. TRADE SECRETS

If any materials or information provided by Opterra to District under this Contract are designated by Opterra as a "trade secret" or otherwise exempt from disclosure under the Public Records Act (California Government Code §7920.000 *et seq.*, the "Act") and if a third party makes a request for disclosure of the materials under the Act, as soon as practical (but not later than five (5) calendar days) after receipt of such request, District will notify Opterra of such request and advise Opterra whether District believes that there is a reasonable possibility that the materials may not be exempt from disclosure. Within ten (10) calendar days after a third party's request for disclosure of materials under the Act, Opterra will (i) authorize District to release the documents or information sought; or (ii) if Opterra reasonably believes that the information is exempt from disclosure, advise District not to release the materials.

ARTICLE 16. EVENTS OF DEFAULT

Section 16.01 Events of Default by Opterra Each of the following events or conditions will constitute an "Event of Default" by Opterra:

(i) any substantial failure by Opterra to perform or comply with this Contract, including a material breach of any covenant contained herein, and such failure continues for thirty (30) calendar days after notice to Opterra demanding that such failure to perform be cured; *provided* that (y) such failure to perform will not be deemed a default hereunder if it is excused by a provision of this Contract, and (z) if such cure cannot be effected in thirty (30) calendar days, Opterra will be deemed to have cured the default upon the commencement of a cure within thirty (30) calendar days and diligent subsequent completion thereof; or

(ii) any representation or warranty furnished by Opterra in this Contract which was false or misleading in any material respect when made.

Section 16.02 Events of Default by District. Each of the following events or conditions will constitute an "Event of Default" by District:

(i) any substantial failure by District to perform or comply with this Contract, including a material breach of any covenant contained herein, and such failure continues for thirty (30) calendar days after notice to District demanding that such failure to perform be cured; *provided* that (y) such failure to perform will not be deemed a default hereunder if it is excused by a provision of this Contract; and (z) if such cure cannot be effected in thirty (30) calendar days, District will be deemed to have cured the default upon the commencement of a cure within thirty (30) calendar days and diligent subsequent completion thereof; or

(ii) any representation or warranty furnished by District in this Contract which was false or misleading in any material respect when made; or

(iii) any failure by District to pay any amount to Opterra which is not paid within ten (10) calendar days after written notice from Opterra that the amount is past due.

ARTICLE 17. REMEDIES UPON DEFAULT

Section 17.01 Termination for Cause. If there is an Event of Default by either Party under this Contract, unless such Event of Default has been cured within the applicable time periods for a cure set forth in ARTICLE 16, the non-defaulting Party may terminate this Contract by providing three (3) Business Days' written notice to the defaulting Party in the case of a monetary default and ten (10) Business Days' written notice to the defaulting Party in the case of a non-monetary default. Upon termination of this Contract, each Party will promptly return to the other all papers, materials, and property of the other held by such Party in connection with this Contract. Each Party will also assist the other in the orderly termination of this Contract and the transfer of all aspects hereof, tangible and intangible, as may be necessary for the orderly, non-disrupted business continuation of each Party. If this Contract is so terminated, Opterra will be entitled to payment for Work satisfactorily performed, earned profit and overhead, and costs incurred in accordance with this Contract up to the date of termination.

Section 17.02 Remedies Upon Default by Opterra If an Event of Default by Opterra occurs, District will be entitled to obtain any available legal or equitable remedies through arbitration proceedings instituted pursuant to ARTICLE 19, including, without limitation, terminating this Contract, or recovering amounts due and unpaid by Opterra and/or damages, which will include District's reasonable, actual, direct out-of-pocket losses incurred by reason of such Event of Default and any cost of funding; loss of anticipated payment obligations; and any payment or delivery required to have been made on or before the date of the Event of Default and not made, including interest on any sums due, and

losses and costs incurred as a result of terminating this Contract and all costs and expenses reasonably incurred in exercising the foregoing remedies.

Section 17.03 Remedies upon Default by District. If an Event of Default by District occurs, Opterra will be entitled to obtain any available legal or equitable remedies through arbitration proceedings instituted pursuant to ARTICLE 19 including, without limitation, terminating this Contract or recovering amounts due and unpaid by District, and/or damages which will include Opterra's reasonable, actual, direct out-of-pocket losses incurred by reason of such Event of Default and any cost of funding; loss of anticipated payment obligations; and any payment or delivery required to have been made on or before the date of the Event of Default and not made, including Interest on any sums due, and losses and costs incurred as a result of terminating this Contract and all costs and expenses reasonably incurred in exercising the foregoing remedies.

ARTICLE 18. CONDITIONS BEYOND CONTROL OF THE PARTIES

Section 18.01 Excusable Events. If any Party is delayed in, or prevented from, performing or carrying out its obligations under this Contract by reason of any Excusable Event, such circumstance will not constitute an Event of Default, and such Party will be excused from performance hereunder and will not be liable to the other Party for or on account of any loss, damage, injury or expense resulting from, or arising out of, such delay or prevention. Notwithstanding the foregoing, no Party will be excused from any payment obligations under this Contract as a result of an Excusable Event.

Section 18.02 Utility Work. District expressly understands and agrees that Excusable Events may occur due to Interconnection Facilities work that may need to be performed by the local electric utility ("Utility") in order for Opterra to fully implement the Project. "Interconnection Facilities" means any distribution or transmission lines and other facilities that may be required to connect equipment supplied under this Contract to an electrical distribution/transmission system owned and maintained by the Utility. Any Interconnection Facilities work that may be required will be performed by the Utility under the Interconnection Agreement.

ARTICLE 19. GOVERNING LAW AND RESOLUTION OF DISPUTES

Section 19.01 Governing Law. This Contract is governed by and must be interpreted under the laws of the State where the Work is performed, without regard to the jurisdiction's choice of law rules.

Section 19.02 Initial Dispute Resolution. If a dispute arises out of or relates to this Contract, the transaction contemplated by this Contract, or the breach of this Contract (a "Dispute"), either Party may initiate the dispute resolution process set forth in this ARTICLE 19 by giving notice to the other Party. The Parties will endeavor to settle the Dispute as follows:

(i) *Field Representatives' Meeting*: Within fifteen (15) Business Days after notice of the Dispute, Opterra's senior project management personnel will meet with District's project representative in a good faith attempt to resolve the Dispute.

(ii) *Management Representatives' Meeting*: If Opterra's and District's project representatives fail to meet, or if they are unable to resolve the Dispute, senior executives for Opterra and for District, neither of whom have had day-to-day management responsibilities for the Project, will meet, within thirty (30) calendar days after notice of the Dispute, in an attempt to resolve the Dispute and any other identified disputes or any unresolved issues that may lead to a dispute. If the senior executives of Opterra and District are unable to resolve a Dispute or if a senior management conference is not held within the time provided herein, either Party may submit the Dispute to mediation in accordance with Section 19.03.

Section 19.03 Mediation. If the Dispute is not settled pursuant to Section 19.02, the Parties will endeavor to settle the Dispute by mediation under the Commercial Mediation Procedures of the American Arbitration Association. Mediation is a condition precedent to arbitration. Once one Party files a request for mediation with the other Party and with the American Arbitration Association, the Parties agree to conclude the mediation within sixty (60) calendar days after filing the request. Either Party may terminate the mediation at any time after the first session, but the decision to terminate must be delivered in person by the Party's representative to the other Party's representative and the mediator. If the Dispute is not resolved by mediation within sixty (60) calendar days after the date of filing of the request for mediation, then the exclusive means to resolve the Dispute is final and binding arbitration, as described in Section 19.04. Either Party may initiate arbitration proceedings by notice to the other Party and the American Arbitration Association.

Section 19.04 Arbitration Proceedings. The following provisions apply to all arbitration proceedings pursuant to this ARTICLE 19:

(i) The place of arbitration will be the American Arbitration Association office closest to where the Work was performed.

(ii) One arbitrator (or three arbitrators if the monetary value of the Dispute is more than $2,000,000) (the "Arbitral Panel") will conduct the arbitral proceedings in accordance with the Commercial Arbitration Rules and Mediation Procedures (Excluding the Procedures for Large, Complex Commercial Disputes) of the American Arbitration Association currently in effect ("Arbitration Rules"). To the extent of any conflicts between the Arbitration Rules and the provisions of this Contract, the provisions of this Contract prevail.

(iii) The Parties will submit true copies of all documents considered relevant with their respective statement of claim or defense, and any counterclaim or reply. In the discretion of the Arbitral Panel, the production of additional documents that are relevant and material to the determination of the Dispute may be required.

(iv) The Arbitral Panel does not have the power to award, and may not award, any punitive, indirect or consequential damages (however denominated). All arbitration fees and costs are to be shared equally by the parties, regardless of which Party prevails. Each Party will pay its own costs of legal representation and witness expenses.

(v) The award must be in the form of a reasoned award.

(vi) The Dispute will be resolved as quickly as possible. The Arbitral Panel will endeavor to issue the arbitration award within six (6) months after the date on which the arbitration proceedings were commenced.

(vii) The award will be final and binding and subject to confirmation and enforcement proceedings in any court of competent jurisdiction.

Section 19.05 Multiparty Proceeding. Either Party may join third parties whose joinder would facilitate complete resolution of the Dispute and matters arising from the resolution of the Dispute.

Section 19.06 Lien Rights. Nothing in this ARTICLE 19 limits any rights or remedies not expressly waived by Opterra that Opterra may have under any lien laws or stop notice laws.

ARTICLE 20. REPRESENTATIONS AND WARRANTIES

Section 20.01 Each Party warrants and represents to the other that:

(i) it has all requisite power and authority to enter into this Contract, to perform its obligations hereunder and to consummate the transactions contemplated hereby;

(ii) the execution, delivery, and performance of this Contract have been duly authorized by its governing body, or are in accordance with its organizational documents, and this Contract has been duly executed and delivered for it by the signatories so authorized, and constitutes its legal, valid, and binding obligation;

(iii) the execution, delivery, and performance of this Contract will not breach or violate, or constitute a default under, its organizational documents or any contract, lease or instrument to which it is a party or by which it or its properties may be bound or affected; and

(iv) it has not received any notice, nor to the best of its knowledge is there pending or threatened any notice, of any violation of any Applicable Laws, awards or permits which would materially and adversely affect its ability to perform hereunder.

ARTICLE 21. NOTICE

Any notice required or permitted hereunder will be deemed sufficient if given in writing and delivered (i) personally, (ii) by email, (iii) sent by registered or certified mail, return receipt requested, postage prepaid, or (iv) delivered to a nationally recognized express mail service, charges prepaid, receipt obtained, to the address shown below or to such other persons or addresses as are specified by similar notice.

TO OPTERRA:

OPTERRA Energy Services, LLC
35 North Lake Avenue, Suite 900
Pasadena, CA 91101-1892

Attention: Shane Carlson, Project Manager
Email: scarlson@opterraenergy.com

With a COPY TO:

Legal Department
OPTERRA Energy Services, LLC

35 North Lake Avenue, Suite 900
Pasadena, CA 91101-1892
Attention: Contract Analyst Senior
Tel: 626-377-4948

TO District: Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, CA 92028
Attention:
Tel:
Email:

ARTICLE 22. CONSTRUCTION OF CONTRACT

This Contract is the result of arms-length negotiations between two sophisticated parties and ambiguities or uncertainties in it will not be construed for or against either Party, but will be construed in a manner that most accurately reflects the intent of the Parties as of the Contract Effective Date. Each of the Parties acknowledges and agrees that neither Party has provided the other with any legal, accounting, regulatory, financial, or tax advice with respect to any of the transactions contemplated hereby, and each Party has consulted its own legal, accounting, regulatory, financial and tax advisors to the extent it has deemed appropriate.

ARTICLE 23. CHOICE OF LAW

THE INTERPRETATION, VALIDITY AND ENFORCEMENT OF THIS CONTRACT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA.

ARTICLE 24. BINDING EFFECT

Except as otherwise provided herein, the terms and provisions of this Contract will apply to, be binding upon, and inure to the benefit of the Parties hereto and their respective heirs, legal representatives, successors, and permitted assigns.

ARTICLE 25. NO WAIVER

The failure of Opterra or District to insist upon the strict performance of this Contract will not constitute or be construed as a waiver or relinquishment of either Party's right to thereafter enforce the same in accordance with this Contract in the event of a continuing or subsequent default on the part of Opterra or District.

ARTICLE 26. SEVERABILITY

If any clause or provision of this Contract or any part thereof becomes or is declared by a court of competent jurisdiction invalid, illegal, void, or unenforceable, this Contract will continue in full force and effect without said provisions; *provided* that no such severability will be effective if it materially changes the benefits or obligations of either Party hereunder.

ARTICLE 27. HEADINGS

Headings and subtitles used throughout this Contract are for the purpose of convenience only, and no heading or subtitle will modify or be used to interpret the text of any section.

ARTICLE 28. COUNTERPARTS; INTEGRATION

This Contract may be executed in counterparts (and by different Parties hereto in different counterparts), each of which will constitute an original, but all of which when taken together will constitute a single contract. This Contract constitutes the entire contract among the Parties relating to the subject matter hereof and supersedes any and all previous agreements and understandings, oral or written, relating to the subject matter hereof. This Contract cannot be amended, modified, or terminated except by a written instrument, executed by both Parties hereto. Delivery of an executed counterpart of a signature page of this Contract by email will be effective as delivery of a manually executed counterpart of this Contract.

[*the Parties' signatures appear on the following page*]

DRAFT

IN WITNESS WHEREOF, and intending to be legally bound, the Parties hereto subscribe their names to this Contract by their duly authorized officers as of the Contract Effective Date.

OPTERRA:

OPTERRA Energy Services, LLC

By: _____
Name:
Title:

District:

Rainbow Municipal Water District

By: _____
Name:
Title:

DRAFT

ATTACHMENT A

FACILITIES

(a) The following District Facilities are included under the Scope of Work:

Facility	Address
District Office	3707 Old Highway 395, Fallbrook CA 92028
Rainbow Heights Pump Station	5463 8th Street, Fallbrook, CA 92028
Dentro Pump Station	1990 Dentro De Lomas Road, Bonsall, CA 92003
West Lilac Pump Station	7232 W Lilac Road, Bonsall, CA 92003
Rainbow Hills Pump Station	933 Rainbow Valley Blvd, Fallbrook, CA 92028
Vallecitos Pump Station	2718 Rainbow Valley Blvd, Fallbrook, CA 92028
Huntley Pump Station	9215 Huntley Road, Fallbrook, CA 92028
Lookout Mountain Pump Station	1040 Rainbow Glen Road, Fallbrook, CA 92028
Beck Reservoir	4091 Citrus Drive, Fallbrook, CA 92028

DRAFT

ATTACHMENT C

SCOPE OF WORK

California State Contractor's License Number 1142716
California Public Works Contractor Registration Number 2000014411

Energy Conservation Measures to Be Implemented

ECM #	Description
1	Solar Photovoltaic Systems
2	Battery Energy Storage System
3	Pump Station Back-up Generators
4	Building Lighting
5	Electric Rate Change

1. ECM-1 SOLAR PHOTOVOLTAIC (PV) SYSTEMS

1.1. Scope Summary

1.1.1. The table below lists the locations, estimated system sizing, and structure type for the PV systems.

Facility	Est. kW dc	Structure Type
District Office	1,354.1 kW	Ground Mount Systems (Arrays A-R)
District Office	55.8 kW	Parking Canopy (Array S)
District Office	46.5 kW	Parking Canopy (Array T)
District Office	46.5 kW	Parking Canopy (Array U)

1.2. General Scope of Work

1.2.1. Provide design, engineering, procurement and installation of solar photovoltaic (PV) systems including Data Acquisition System (DAS) at each of the listed Facilities in the sizes noted in the table above.

1.2.2. Prepare and submit design drawings to Authority Having Jurisdiction (AHJ) and to local Utility for approvals, interconnection, and applicable permits.

1.2.3. Project management and construction management necessary for a full and complete installation.

1.2.4. Procure materials and equipment necessary for construction.

1.2.5. Provide geotechnical evaluations necessary for design requirements.

1.2.6. Perform underground utility survey to locate existing utilities, if possible, and that may be in the path of work, boring, trenching, or foundations. Unknown utilities that cannot be identified on as-built drawings or via underground locating methods will be treated as Unforeseen Site Conditions.

1.2.7. Provide lighting fixture and bollard removal of existing light poles in conflict with structures, as required.

1.2.8. Provide labor, supervision, and coordination with District for the installation of photovoltaic modules and supporting structures, electrical distribution and control systems.

1.2.9. Provide all tools, equipment, lifts, storage, on-site supervision, labor, materials, and transportation necessary to complete the installation.

1.2.10. Coordinate receiving, unloading, handling, securing, and storing of all equipment necessary to complete the scope of work. Provide submittals of major equipment for District review and approval, prior to release of equipment. Geotechnical soils testing will be conducted post-award. Should the report or field conditions reveal unforeseen soil conditions necessitating additional work, a change order will be issued. Potential extra measures may include, but are not limited to:

1.2.10.1. Increased pier depths

1.2.10.2. Larger diameter foundations

1.2.10.3. Casing for vertical borings

1.2.10.4. Dewatering of borings

1.2.10.5. Spread footings

1.2.10.6. Shoring, benching, or larger column profiles.

1.2.11. Provide and install solar PV modules and necessary mounting hardware for each system. Modules shall be Canadian Solar, or Opterra approved equal.

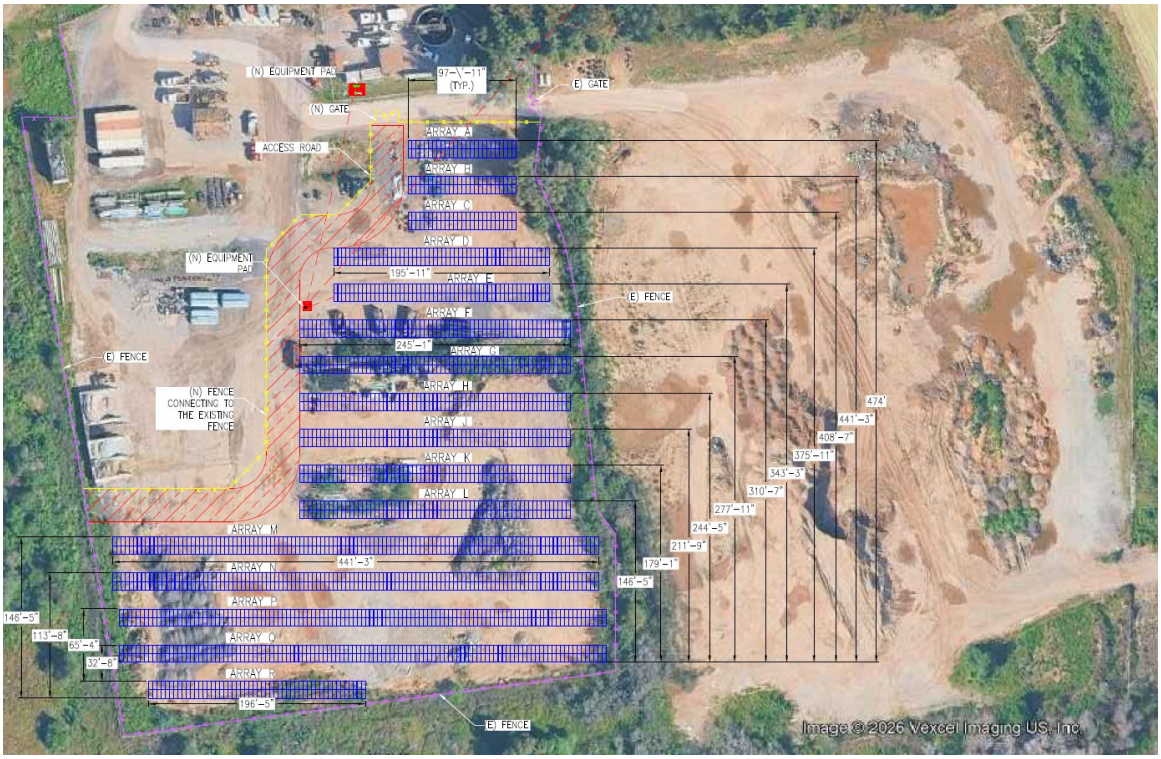
1.2.12. Provide and install string inverters and necessary electrical equipment and conduits to connect system to the electrical switchgear or meter. String inverters shall be Chint Power Systems, or Opterra approved equal.
1.2.13. Electrical shutdowns are anticipated at each Facility. The time of shutdown will be coordinated with District and Utility and may include weekends.
1.2.14. Provide and install new utility approved AC disconnect switch for each solar installation.
1.2.15. DC wiring and AC wiring within the solar structures shall be copper wire. All other wiring larger than #2 shall be Aluminum wire for example, used from each system's AC combiner to the main point of connection at the site's electrical switchgear.
1.2.16. Provide and install new weather station and data acquisition system (DAS) including all necessary communication conduit and wiring. Provide and install electrical conduits for communication wiring from the string inverters to the DAS. DAS to be connected to the internet via cellular modem. Online access to PV production data to be provided to District with login.
1.2.17. Provide and coordinate installation of the net generation output meter (NGOM) and net energy meter (NEM) equipment to monitor solar PV production and facility usage.
1.2.18. Provide traffic redirection during rigging operations, and during the move-in and move-out of large equipment. District will assist with the foregoing site logistics by coordinating access and scheduling with Opterra.
1.2.19. Provide temporary fencing and sanitation during construction.
1.2.20. Provide as-built drawings and Operations & Maintenance manuals in electronic format upon project completion.
1.2.21. The PV carport structures are not weather tight and will not provide shelter from rain.
1.2.22. Start-up, test, and commission the PV systems in accordance with design plan and applicable industry standards.
1.2.23. Install PV signage and labeling per utility specifications.
1.2.24. The images below in Section 1.3 are schematic engineering layouts and are subject to change due to field conditions and upon completion of final engineering.

1.3. Site Specific Scope

1.3.1. **District Office – Ground Mount Systems (Arrays A-R)**

1.3.1.1. Install a 1,354 kWdc solar photovoltaic ground mount system.
1.3.1.2. Ground mount systems will be designed with a twenty degree tilt angle.
1.3.1.3. The ground mount structure design is based on a pier depth of 7' and assumes no de-watering, benching, shoring, or casing.
1.3.1.4. Remove all trees in the area where the solar PV systems will be located.
1.3.1.5. Furnish and install 600V to 480V step down transformer.
1.3.1.6. Provide up to 580 linear feet of access road comprised of 6" thick aggregate base.
1.3.1.7. Grade dirt area as needed and within tolerances required for ground mount array structures. Assumes soil on site will balance. District to clear and remove all stored material, containers, vehicles, etc. prior to grading.
1.3.1.8. Stormwater Pollution Prevention Plan (SWPPP) development, implementation, and reporting for up to 9 months.
1.3.1.9. Up to 680 linear feet of permanent 2 inch chain-link fence with two (2) twelve foot wide double swing chain link gates connecting up to existing chain-link fence serving as perimeter of the ground mount solar PV. Gate posts to have concrete footings and line posts to be driven into the ground.

Schematic layout of ground mount:



1.3.2. **District Office – Parking Canopy (Arrays S, T, & U)**

1.3.2.1. Provide and install three (3) solar PV canopy structures with a total system size of 148.8 kW. The canopy structure design will have the following minimum clearances. 10’-0” minimum clearance at Arrays T and U, 13’-6” minimum clearance at Array S, A total of 6 columns or piers with footings to depths of no more than 12’-0”and assumes no de-watering, benching, shoring, or casing.

1.3.2.2. String inverters and electrical combiner panels will be column mounted.

1.3.2.3. PV modules to be mounted on galvanized steel purlins per approved Drawings.

1.3.2.4. Asphalt and concrete patch will be provided where existing hardscape was removed or damaged during construction.

1.3.2.5. The structure steel columns and beams will be primed and painted (color to be chosen from Standard Color offering) with field touch-ups as required. One coat of primer, and one finish coat.

1.3.2.6. Provide and install new LED lighting fixtures for under canopy lighting and utilizing existing lighting electrical circuits.

1.3.2.7. All canopy structures will have a maximum tilt angle of 7 degrees from horizontal.

1.3.2.8. Provide and install up to three (3) Level 2 electric vehicle (EV) charging stations if required by code or AHJ.

1.3.2.8.1. Furnish and install new concrete pads and mounting hardware for new charging stations.

1.3.2.8.2. Furnish and install required power and communication conduit to the location of the charging stations and associated equipment. This includes wiring from switch gear to EV chargers.

1.3.2.8.3. Furnish and install protective bollards as required by code for charging stations only.

1.3.2.8.4. Perform startup and commissioning per manufacturer requirements on EV chargers.

Schematic layout of canopy structures:

1.4. Training
1.4.1. Provide up to 4 hours of training of new equipment to designated District staff.

1.5. Schedule
1.5.1. Work will be completed in a continuous manner without delays or restrictions. District will support workflow to ensure Facilities are available for the work, based upon pre-agreed schedule of buildings and times. Opterra assumes one mobilization per site and free access to the entire mobilized portion of that parking or ground area for the full scope of work. Additional mobilizations will be at an additional cost.
1.5.2. Schedule change requests for work currently in progress in a Facility site will be provided by either party with a minimum of forty-eight (48) hours' notice prior to requested change in schedule. Schedule change requests for work scheduled in a different Facility site than where work is currently proceeding, will be provided by District with a minimum of five (5) business days' notice prior to requested change in schedule.

1.6. Exclusions to Solar Photovoltaic Systems Scope of Work:
1.6.1. Cameras or other site security measures.
1.6.2. Any driveway or walkway changes due to gate accessibility or aesthetics.
1.6.3. Any work related to bringing project sites up to Americans with Disability Act (ADA) code compliancy.
1.6.4. Asphalt patching or restriping unless damage occurs by Opterra. Parking lot repairs are excluded, except to the extent of damage caused by Designer/Builder's negligent errors or omissions.
1.6.5. Unsuitable soil conditions including, but not limited to, water intrusion, liquefaction, caving, sandy/rocky soils etc.
1.6.6. Unforeseen underground conditions such as utilities or other.
1.6.7. Electrical upgrades on the Utility side of the electrical gear. If utility upgrades are required, additional costs are excluded by Opterra.
1.6.8. Corrections or upgrades to existing equipment, systems, or other improvements not associated with the specific scope of work above.
1.6.9. Temporary power during facility shutdowns.
1.6.10. No wheel stops, drive aisle bollards or low clearance signage for array protection. This includes repairs to damaged existing wheel stops.
1.6.11. Proposal does not include the painting of electrical conduit, or other accessory items attached to the shade structure.

1.6.12. Proposal does not contemplate the use of hot dipped galvanized structures, anchor bolts, or other standard parts to be hot dipped galvanized that normally would not be coated in that manner.
1.6.13. Any Work related to site drainage and storm drains, is excluded.
1.6.14. Ongoing landscaping maintenance and weed abatement is excluded.
1.6.15. Arc flash studies for existing electrical switchgear are excluded.
1.6.16. Permanent fencing beyond what has been included above or replacing existing chain-link fencing
1.6.17. Access road beyond what has been included above.
1.6.18. Fire access roads.
1.6.19. Fire hydrant flow tests.
1.6.20. Clearing or removing District stored materials, including mounds of asphalt, soil, pipes, etc.
1.6.21. Import or export of soil.
1.6.22. Testing, inspection, or handling of existing soils, hazardous soils, or materials.
1.6.23. Construction water, District to supply.
1.6.24. Ongoing EV charger software, service, operation and maintenance.
1.6.25. Installation of water hose bibs for washing the panels are excluded.
1.6.26. Decorative fascia along the perimeter of the panels and decorative covering underneath the panels are excluded.
1.6.27. Additional footing depths beyond that included above.
1.6.28. Multiple mobilizations or phasing of work.
1.6.29. Damage or shading to PV systems caused by the District or third parties (e.g., vehicles, balls, toys, or clothing) is the County's responsibility. Any energy production loss will reduce the Guaranteed Savings.
1.6.30. CEQA documentation and fees
1.6.31. Installation or implementation of bird nest prevention.
1.6.32. Installation of column padding or similar impact protection.
1.6.33. Preventive measures against standing water or tripping hazards at column bases.

2. ECM-2 BATTERY ENERGY STORAGE SYSTEMS

2.1. Scope Summary

2.1.1. The table below lists the locations, estimated system sizing, for the battery energy storage system (BESS).

Facility	Est. kW/kWh
Rainbow Heights Pump Station	100 kW / 203 kWh

2.2. Scope of Work

2.2.1. Opterra will provide design, engineering, procurement and installation of a BESS and associated controls at each of the listed Facilities in the sizes noted in the table above. The precise design and arrangement of the BESS will be determined during final engineering and will be subject to the Authority Having Jurisdiction (AHJ) plan check approval. Any AHJ-required scope changes not identified in this scope may result in a Change Order. Opterra will provide engineered design drawing plan sets and calculation packages for the BESS as necessary for AHJ approval.
2.2.2. Opterra will prepare and submit utility interconnection applications and coordinate with the serving utility through Permission to Operate (PTO). The BESS will comply with applicable California Rule 21 interconnection standards. Any utility-required system upgrades, studies, fees, or scope changes not identified in this scope may result in a Change Order.
2.2.3. Project management and construction management necessary for a full and complete installation.
2.2.4. Procure materials and equipment necessary for construction.
2.2.5. Provide tools, equipment, lifts, storage, on-site supervision, labor, materials, and transportation necessary to complete the installation.
2.2.6. Coordinate receiving, unloading, handling, securing, and storing of all equipment necessary to complete the scope of work.
2.2.7. Provide submittals of major equipment for District review and approval, prior to release of equipment.
2.2.8. The BESS installation will be designed to provide demand charge management and energy arbitrage savings only. Microgrid functionality and backup power are excluded from this scope of work.
2.2.9. Identify the available San Diego Gas and Electric (SDGE) rate schedules and recommend the optimal rate schedule for the electric meter.

2.2.10. Coordinate with SDGE and assist District to submit the rate change application with the new identified SDGE rate.
2.2.11. Provide and install an outdoor BESS at each Facility as noted in the table above. BESS shall be Socomec HES L skid-mounted, or Opterra approved equal.
2.2.12. Provide and install new concrete equipment pad and perform associated site work including minor grading as required to support the new BESS installation at each Facility.
2.2.13. Furnish and install required circuit breakers, utility approved AC Disconnects and other required electrical infrastructure to complete the BESS installation.
2.2.14. Furnish and install all conduit and wiring as necessary to complete the installation. All conductors #2 and larger will be aluminum unless otherwise required by code or final engineering design.
2.2.15. Provide boring and/or trenching of underground conduit to connect BESS with existing switchgear as required.
2.2.16. Fire protection engineering as required.
2.2.17. Sequence construction activities to maintain electrical service with minimal interruption. Planned outages will be required for interconnection to the Utility and system commissioning.
2.2.18. District will assist Opterra in scheduling required shutdowns and provide trained facility personnel to assist in the shutdown and restarting of building systems. No temporary power supply has been included in the scope.
2.2.19. Perform factory-authorized startup, testing, pre-commissioning, and commissioning of each system in accordance with manufacturer recommendations. Commissioning will include verification of system functionality, controls operation, and safety systems.
2.2.20. Provide training for facility personnel, including an overview of system operation, safety, and routine maintenance requirements. An operations and maintenance (O&M) manual will be provided and will delineate responsibilities between the District and Opterra under any applicable service agreement.
2.2.21. Provide and install protective bollards and required safety signage around new equipment in accordance with applicable codes and standards.
2.2.22. Provide a BESS monitoring system capable of remote data access, including system performance metrics, alarms, and operational status.
2.2.23. Annual Preventative Maintenance by Manufacturer is included as part of the manufacturer warranty. Opterra to help coordinate site services only.

2.3. Clarifications
2.3.1. This is not a microgrid system, therefore, the BESS will shut-off when there is no utility power and will turn back on when utility power is restored.
2.3.2. Due to the fluctuating price of lithium (known as the lithium price index) impacting the BESS components, the Total Contract Price reflects BESS pricing as of the Effective Date and is based upon a baseline lithium carbonate price of 70,000 Chinese Yuan per metric ton (RMB/mt) of lithium. Final BESS pricing will be provided by the manufacturer approximately forty-five (45) days prior to delivery of the BESS. Any adjustment will be handled via a Change Order at the time final lithium pricing is known.
2.3.3. Due to the variable nature of import tariffs, tariffs on BESS equipment are estimated based on laws in effect as of March 2, 2026. If these tariffs are modified or if additional tariffs are levied on project materials and equipment. Opterra Energy will provide advance notice of pricing changes resulting therefrom and any changes in tariffs will be handled via a change order.

2.4. Training
2.4.1. Provide up to 4 hours of training of new equipment to designated District staff.

2.5. Schedule
2.5.1. Work will be completed in a continuous manner without delays or restrictions. District will support workflow to ensure Facilities are available for the work, based upon pre-agreed schedule of Facilities and times. Opterra assumes one mobilization per Facility and free access to the entire mobilized portion of that Facility for the full scope of work. Additional mobilizations will be at an additional cost.
2.5.2. Schedule change requests for work currently in progress in a Facility site will be provided by either party with a minimum of forty-eight (48) hours' notice prior to requested change in schedule. Schedule change requests for work scheduled in a different Facility site than where work is currently proceeding, will be provided by District with a minimum of five (5) business days' notice prior to requested change in schedule.

2.6. Exclusions to Battery Energy Storage Systems Scope of Work:
2.6.1. Microgrid controls are excluded. Battery will not discharge while existing diesel generator is operating or while during a utility outage.
2.6.2. Measures resulting from Fire Protection Engineering analysis and review.

3. ECM-3 PUMP STATION BACK-UP GENERATORS

3.1. Scope Summary

3.1.1. The table below lists the locations, estimated system sizing, and structure type for the PV systems.

Facility	Est. kW dc	Electrical Service
Dentro Pump Station	400	1200A 480/277v
West Lilac Pump Station	500	1600A 480/277v
Rainbow Hills Pump Station	230	800A 480/277v
Vallecitos Pump Station	80	400A 240/120v

3.2. General Scope of Work

3.2.1. Opterra will provide design, engineering, procurement, and installation of diesel backup generator system(s) and associated controls at each of the Facilities in the sizes noted in the table above. The precise design and arrangement of the system will be determined during final engineering and will be subject to Authority Having Jurisdiction (AHJ) plan check approval. Opterra will provide engineered structural, civil, and electrical design drawing plan sets and calculation packages as necessary for AHJ approval.

3.2.2. All project management and construction management necessary for a full and complete installation.

3.2.3. Procure materials and equipment necessary for construction.

3.2.4. Provide and install Kohler diesel generator set(s) or Opterra approved equal, complete with weatherproof enclosure, integrated/belly fuel tank, and all manufacturer-required accessories.

3.2.5. Provide and install Kohler generator(s), automated transfer switch(es), remote emergency stop button, ancillary electrical equipment and controls to pro-vide backup power in the event of a utility outage at the designated sites, in accordance with applicable building codes and ordinances. The generator sizes are estimated based on the current peak demand at each of the sites.

3.2.6. Furnish and install integral (belly) fuel tank sized for a minimum of 24 hours of operation at 75% load unless otherwise noted. Tank shall be double-wall Underwriters Laboratories UL-142 listed or equivalent and include leak detection.

3.2.7. Perform required site preparation, including locating existing underground utilities to support the installation of generators.

3.2.8. Provide and install concrete equipment pads and mounting hardware as required.

3.2.9. Furnish and install generator control system to control generator operation and main breaker.

3.2.10. Furnish and install a fuel level monitoring system on the belly tank, including wiring, terminations, and integration with generator controls.

3.2.11. Furnish and install all conduit and wiring required for power, control, and communication systems. Underground conduits will be installed via trenching and/or directional boring as required.

3.2.12. Furnish and install all conductors in accordance with project feeder schedules and applicable codes.

3.2.13. Conduit installation requirements shall be as follows:

3.2.13.1. Underground conduits in trenches: PVC or HDPE

3.2.13.2. Conduits installed via directional boring: HDPE Schedule 40 (orange)

3.2.13.3. Above-ground conduits: GRC

3.2.14. Provide coring, cutting, patching, and labeling required for a complete installation.

3.2.15. Provide grounding and bonding for all equipment and associated structures in accordance with applicable codes.

3.2.16. Provide equipment and labor required to receive, offload, lift, and set generator equipment.

3.2.17. Coordinate with serving utilities and applicable regulatory agencies as required during installation. Obtain permits to construct and operate from the local Air Quality Management District, such as South Coast Air Quality Management District (SCAQMD), where applicable.

3.2.18. Support generator manufacturer for factory-authorized startup, testing, and commissioning of generator systems.

3.2.19. Sequence construction activities to maintain facility operations to the greatest extent possible. Planned outages will be required for system tie-in and testing.

3.2.20. Provide and install remote emergency stop (E-stop) device(s) in accordance with applicable codes and project requirements.

3.2.21. Provide and install protective bollards around new equipment where exposed to vehicular traffic. Removable bollards shall be provided where required for maintenance access. Bollards shall be painted to match site standards.

3.3. Training
3.3.1. Provide up to 4 hours of training of new equipment to designated District staff.

3.4. Schedule
3.4.1. Work will be completed in a continuous manner without delays or restrictions. District will support workflow to ensure Facilities are available for the work, based upon pre-agreed schedule of Facilities and times. Opterra assumes one mobilization per Facility and free access to the entire mobilized portion of that Facility for the full scope of work. Additional mobilizations will be at an additional cost.
3.4.2. Schedule change requests for work currently in progress in a Facility site will be provided by either party with a minimum of forty-eight (48) hours' notice prior to requested change in schedule. Schedule change requests for work scheduled in a different Facility site than where work is currently proceeding, will be provided by District with a minimum of five (5) business days' notice prior to requested change in schedule.

3.5. Inclusions
3.5.1. Provide all tools, equipment, lifts, storage, on-site supervision, labor, materials, and transportation necessary to complete the installation.
3.5.2. Coordinate receiving, unloading, handling, securing, and storing of all equipment necessary to complete the scope of work.
3.5.3. Provide submittals of major equipment for District review and approval, prior to release of equipment.

3.6. Exclusions to Pump Stations Back-Up Generators Scope of Work:
3.6.1. Initial fuel filling and Long-term fuel supply agreements and fuel delivery services.
3.6.2. Utility service upgrades or modifications not identified at time of contract
3.6.3. Structural upgrades beyond equipment pads identified in this scope
3.6.4. Building interior electrical modifications beyond generator interconnection points unless noted
3.6.5. Continuous (prime) power applications beyond standby/emergency use
3.6.6. Temporary power during construction
3.6.7. Ongoing operations and maintenance services unless provided under a separate agreement
3.6.8. Ongoing permits and any associated reporting.
3.6.9. Excludes diesel particulate filter on each generator.

4. ECM-4 BUILDING LIGHTING

4.1. Scope Summary
4.1.1. The table below lists the locations of the interior and exterior lighting retrofits. For detailed descriptions of each interior and exterior lighting retrofit, refer to "Attachment G – Lighting Line by Line".

Facility
District Office

4.2. Interior and Exterior Scope of Work
4.2.1. A schedule of equipment titled "Attachment G – Lighting Line by Line" has been provided as part of this agreement.
4.2.2. Prepare and submit final revisions to "Attachment G – Lighting Line by Line" to Rainbow Municipal Water District. Provide submittals to Rainbow Municipal Water District for review and approval.
4.2.3. Furnish and install new LED lamps, drivers/ballasts, fixtures, kits, and controls as identified in "Attachment H – Lighting Line by Line" and any revisions as described above.
4.2.4. No permit approval or AHJ formal review has been included for this scope of work.
4.2.5. Provide tools, equipment, lifts, storage, on-site supervision, labor, materials, and transportation necessary to complete the installation.
4.2.6. Old fixtures, lamps, and ballasts will be properly disposed of per EPA, or other state and local regulations. Rainbow Municipal Water District will be provided documentation (manifest, etc.) of proper disposal upon request. Rainbow Municipal Water District to provide EPA number for Opterra Energy Services to dispose against.
4.2.7. Interior lighting retrofit include:
4.2.7.1. Fluorescent troffers (2x4, 1x4 and 2x2) in grid ceilings will be retrofitted by either LED troffer kits or LED lamps and drivers per "Attachment H – Lighting Line by Line".

4.2.7.2. Surface mounted fixtures and recessed fixtures in hard lid ceilings will be retrofitted with LED lamps and drivers.
4.2.7.3. Downlights (Can lights) if CFL will either be retrofitted with LED downlight retrofit kits, LED bypass lamps, or LED lamps and ballasts per “Attachment H – Lighting Line by Line”.
4.2.7.4. Miscellaneous incandescent, halogen, and fluorescent lamps will be replaced with LED lamps per “Attachment H – Lighting Line by Line”.
4.2.7.5. Zero (0) emergency ballast fixtures were identified in linear fluorescent light fixtures. If any additional emergency fixtures are found during the installation, Opterra Energy Services will submit a change order to Rainbow Municipal Water District for the added work.
4.2.7.6. Lighting scope is subject to Title 24, One-for-One Alteration Method subcategory
4.2.7.7. Wireless with batteries or integrated controls will be installed to meet 2022 Title 24 requirements.
4.2.7.8. Wireless with batteries or integrated controls will be commissioned per manufacturers requirements.
4.2.7.9. All fixture lenses and housings will be wiped down and cleaned of dust. Any staining or deeper soiling will not be removed.

4.2.8. Exterior lighting retrofit include:
4.2.8.1. Where indicated, replace high pressure sodium, metal halide, compact fluorescent, incandescent or halogen fixtures with new LED fixtures per “Attachment H – Lighting Line by Line”.
4.2.8.2. Exterior fixtures that are in good condition and/or are historical or decorative may be retrofitted with LED bypass lamps or LED lamps and ballasts.
4.2.8.3. Exterior lighting controls will be provided in compliance with Title 24 per “Attachment H – Lighting Line by Line”.

4.3. Training:
4.3.1. Provide up to 4 hours of training of control system to designated District staff.

4.4. Schedule:
4.4.1. Work will be completed in a continuous manner such that the lighting crews will move within the Facility without delays or restrictions. District will support workflow to ensure Facility is available for the work, based upon pre-agreed schedule.
4.4.2. Lighting retrofits will be performed during 2nd shift.
4.4.3. Schedule change requests for work currently in progress in a Facility will be provided by either party with a minimum of forty-eight (48) hours’ notice prior to requested change in schedule. Schedule change requests for work scheduled in a different Facility than where work is currently proceeding, will be provided by District with a minimum of five (5) business days’ notice prior to requested change in schedule.

4.5. Inclusions
4.5.1. Provide all tools, equipment, lifts, storage, on-site supervision, labor, materials, and transportation necessary to complete the installation.
4.5.2. Coordinate receiving, unloading, handling, securing, and storing of all equipment necessary to complete the scope of work.

4.6. Exclusions
4.6.1. Any hazardous abatement, including asbestos or lead abatement of any kind, are excluded. If any of these hazards are found, it will cause the lighting retrofit or new lighting fixture installation in that location to be cancelled until abatement is completed by Rainbow Municipal Water District.
4.6.2. In the instance Opterra Energy Services deems certain light fixtures in scope not safe to access or work on, it will cause the lighting retrofit or new lighting fixture installation in that location to be cancelled until the safety issue is addressed. This would include:
4.6.2.1. light fixtures blocked by stationary equipment mounted to the ground
4.6.2.2. light fixtures above a stage with a wood construction where it is unknown if the stage can support the weight of a lift
4.6.2.3. light fixtures blocked by structures
4.6.2.4. light fixtures that have their integrity compromised
4.6.2.5. light fixtures that are not wired to code
4.6.2.6. light fixtures that have compromised wiring (bad wire, cloth wire, etc.)
4.6.2.7. light fixtures that are not mounted to code
4.6.2.8. light fixtures that have non original fasteners holding the lenses on or other parts of the original fixture together.
4.6.2.9. light fixtures with moisture or water inside
4.6.2.10. light fixtures in areas where existing asbestos could be disturbed
4.6.3. New seismic supports are excluded.

4.6.4. Repair or replacement of any existing damaged wire is excluded.
4.6.5. Installation of new grounding wires is excluded.
4.6.6. Standard manufacturers' warranty applies to all specified product.
4.6.7. Design services, including CAD drawings/reflective ceilings plans, are not included.
4.6.8. Replacement of lenses is not included for retrofit scopes.
4.6.9. Scope assumes one-for-one replacement only; any change in layout or unforeseen electrical issues are not included in the scope.
4.6.10. Opterra Energy Services scope is limited to replacing the fixtures identified in "Attachment H – Lighting Line by Line" or working inside the fixtures identified therein. Correction of any pre-existing defects or non-conformities with the applicable codes in the electrical wiring to the fixture is not included.
4.6.11. Existing LED fixtures, occupancy or dimming sensors, will not be replaced unless specifically included in "Attachment H – Lighting Line by Line" .
4.6.12. Replacement of existing or installation of any new time clocks unless noted in "Attachment H – Lighting Line by Line".
4.6.13. Any troubleshooting, repair or upgrade to emergency lighting or egress systems, unless specified.
4.6.14. Replacement or repair of ceiling tiles, ceiling track system, or other ceiling surfaces, except where damage was directly caused by Opterra Energy Services
4.6.15. The scope of work assumes that existing poles are structurally sound, that no internal wiring or fuse issues are present, that any pole arms are in working condition, and that adequate power is provided to all fixtures. No allowances have been made to bring existing poles, pole arms, wiring or fuses to proper working condition.
4.6.16. Emergency drivers are excluded except as identified above.
4.6.17. Any patching or painting is excluded.
4.6.18. Any existing or new sub-surface or well type fixtures are excluded from the scope of work.

5. ECM-5 ELECTRIC RATE CHANGE

5.1. Scope Summary

5.1.1. The table below lists the locations that will undergo electric utility rate changes.

Facility	Account/Meter Number	Existing Rate	Proposed Rate
Huntley Pump Station	6255190451	PAT1	TOUPA3
Lookout Mountain Pump Station	7380660852	PAT1	TOUPA3
Beck Reservoir	8507211705	PAT1	TOUPA3

5.2. General Scope of Work

5.2.1. Complete utility data analysis for all the meters specified in the above table.
5.2.2. Identify the available San Diego Gas and Electric (SDGE) rate schedules and recommend the optimal rate schedule for each meter based on the peak load.
5.2.3. Coordinate with SDGE and assist District to submit the rate change application with the new identified SDGE rate.

6. GENERAL PROJECT CLARIFICATIONS APPLICABLE TO ALL SCOPES

6.1. Opterra will be responsible for obtaining permits and scheduling inspections, however, District will be responsible for hiring and paying for inspections in accordance with sections 3.01 and 4.03 of the Contract.
6.2. Engineering and work shall comply with the latest applicable codes and per AHJ.
6.3. Opterra assumes one mobilization per Facility, which includes free access to the entire mobilized portion of the construction area for the full scope of work.
6.4. All work will be scheduled Monday through Friday, 7am to 5pm. Lighting scope to be scheduled for second shift.
6.5. Opterra will perform underground utility survey to locate any existing utilities that are in the path of boring, trenching and foundations. If underground utilities cannot be detected by this survey, any resulting impact caused by them is excluded.
6.6. Perform horizontal boring and/or trenching through existing concrete, hardscape or asphalt areas as required to route conduits.
6.7. Repair any concrete, hardscape, landscape or asphalt damaged by subcontractor to extent of what was damaged
6.8. All electrical equipment shall be new, UL listed material and equipment that carry the manufacturers' original warranties.
6.9. Shutdowns will be coordinated with Utility and District to minimize impact on facilities.
6.10. Opterra has assumed Construction will be allowed to proceed smoothly and in a continuous flow. No allowance has been made to demobilize and remobilize resources due to schedule interruptions.
6.11. Temporary utilities are to be provided by District at no cost to Opterra (including, without limitation, trailer power, phone lines, water and construction power).
6.12. Opterra will require the assistance of District personnel to secure the project location and to provide traffic redirection during rigging operations, and during the move-in and move-out of large equipment.
6.13. Opterra standard construction means and methods will be used.
6.14. Provide as-built drawings and Operations & Maintenance manuals upon project completion.
6.15. District will provide access to the Facilities, laydown areas at the work sites, and a reasonable number of parking spaces for Opterra and Opterra's subcontractor vehicles in parking lots at the Facilities.
6.16. Opterra is not responsible for all required ADA work under the arrays and in connecting to an existing path-of-travel. Opterra is not responsible for any grading, grinding or elevation adjustment work as it relates to existing or new ADA stalls and paths of travel. ADA upgrades to facilities outside the areas where the arrays are being installed and the immediate paths of travel that are not code compliant prior to the start of construction, shall be the responsibility of District.

5. GENERAL PROJECT EXCLUSIONS APPLICABLE TO ALL SCOPES

5.1. Hiring and paying all inspectors, including special inspectors.
5.2. Bringing existing systems up to code.
5.3. Any ongoing landscaping maintenance.
5.4. Removal and disposal of hazardous substances, including asbestos containing materials. If Opterra encounters material suspected to be hazardous, Opterra will notify District representative and stop further work in the area until the material is removed.
5.5. Contaminated soils, for their handling or disposal.
5.6. Additional costs related to underground obstructions or unsuitable soil conditions encountered during trenching or other excavation.
5.7. Structural upgrades to existing structures.
5.8. Screening of new or existing equipment.
5.9. Temporary heating, cooling or pumping services.
5.10. Repair or replacement of damaged or inoperable existing equipment that is not specifically being replaced under the Scope of Work. When such items are discovered, Opterra will immediately notify a District representative.
5.11. Smoke detectors, fire alarm system work, or fire life safety work.
5.12. Parking lot repairs are excluded, except to the extent of damage caused by Opterra or its subcontractors.
5.13. Repair or replacement of existing housekeeping pads, concrete pads, or base repair of existing walkway lighting are excluded.
5.14. Painting, unless specified in Scope of Work, is excluded.
5.15. With respect to Projects with new equipment connecting to the Building's existing electrical distribution system, Opterra will not be responsible for the electrical integrity of the existing electrical system, e.g., the condition and proper termination of current-carrying, grounded, and grounding conductors, bus taps, protective elements, the proper protection of existing wire through knockouts, or missing components. District is responsible for providing and maintaining the building's electrical distribution system that meets the latest NEC and guidelines adopted by the authority having jurisdiction.
5.16. Americans with Disabilities Act (ADA) regulation requirements.

5.17. Explosion rated equipment or materials necessary for hazardous environments.

6. OPTERRA BENEFICIAL USE AND WARRANTY CRITERIA FOR SPECIFIC PIECES OF EQUIPMENT

6.1. The warranty in the Terms and Conditions shall apply to all ECMs, but shall commence as indicated below. The warranty for each ECM shall commence as indicated herein, notwithstanding any other conflicting language in the Contract Documents. All materials and workmanship warranties are for 1 year, unless specified otherwise below.

6.2. SOLAR GENERATING FACILITIES - The Opterra Warranty commences immediately when the Generating Facility is capable of generating expected energy and the Utility is ready to issue the permission-to-operate letter.

6.2.1. Solar Module Warranty – solar modules will be provided with a 25-year manufacturer production warranty.

6.2.2. Solar Inverter Warranty – inverters will carry a 10-year manufacturer warranty through Opterra, with an included hardware replacement at the end of year 10 by Opterra included in the Contract Price, extending the manufacturer warranty life to 20 years.

6.2.3. Electric Vehicle Charging Station Warranty – charging stations will be provided with a standard manufacturer warranty.

6.3. BATTERY ENERGY STORAGE SYSTEM - With respect to each Facility's Scope of Work, the warranty commences immediately when the BESS has been commissioned as set forth in the Contract Documents.

6.3.1. Battery Warranty - The battery system will carry a 20-year manufacturer warranty that will be transferred to the District.

6.4. PUMP STATION BACK-UP GENERATORS - With respect to each Facility's Scope of Work, the Opterra Warranty commences immediately upon substantial completion. Opterra will provide written notice to District of the date the Opterra Warranty commences.

6.4.1. Generator Warranty - generators will be provided with a standard manufacturer warranty.

6.5. BUILDING LIGHTING – With respect to each Facility's Scope of Work, the Opterra Warranty commences immediately upon uninterrupted operation of 95% of retrofits for a duration of two (2) weeks. Opterra will provide written notice to District of the date the Opterra Warranty commences. Lighting products will be provided with standard manufacturer warranty.

6.6. ELECTRIC RATE CHANGE – There is no warranty applicable to this ECM.

7. SUBSTANTIAL AND FINAL COMPLETIONS

ECM	Scope of Work	Location	Total Qnty of SC	Total Qnty of FC
1	Solar Photovoltaic Systems	1 Site	1; one per Site	1; for entire project
2	Battery Energy Storage System	1 Site	1; one per Site	
3	Pump Station Back-up Generators	4 Sites	4; one per Site	
4	Building Lighting	1 Site	1; one per Site	
5	Electric Rate Change	3 Sites	3; one per Site	

ATTACHMENT D

MONITORING INSTALLATION SCOPE OF WORK

Overview of DAS Network Installation and Equipment Requirements

Opterra will provide a revenue-grade billing, data acquisition system (DAS). This will provide readily available access to various internal and external information collected on the distributive generation (i.e., solar PV) plant.

Opterra DAS Monitoring Installation:

- Supply and install hardware specific to the DAS system.
- Supply and install, terminate, label, and test all Data Point of Connection (DPOC) communication cabling from each DAS node to the predetermined and respective DPOC(s); in accordance with District's specifications.
- Test and verify District/Facility network connectivity.
  a. TCP/IP internal addressing and verification
- Supply, install, and configure a Modbus based digital Net Energy Meter (NEM).
- Connect the data portion of digital NEM(s) to their respective DPOC(s).
- Supply, install, and configure a Modbus based digital Net Generation Output Meter (NGOM).
- Perform the physical installation, labeling, testing and certification testing of each data circuit from the digital NEM(s) to their respective DPOC(s).
- Provide basic system training to designated District/Facility maintenance staff.

ATTACHMENT E

M&V SERVICES

EQUIPMENT AND FACILITIES COVERED

Opterra will perform measurement and verification services ("M&V Services") as set forth in this Attachment E with respect to District's property at the Facilities as listed in Attachment A.

I. Definitions:

Capitalized terms used in this Attachment E and not defined in the Contract, have the meanings set forth below:

"**Accumulated Savings**" means, as of any date of determination, the cumulative total of Excess Savings.

"**Actual Energy Rate**" means, for any Measurement Period, utility rates calculated by Opterra using actual utility billing information supplied by District for that Measurement Period.

"**Annual M&V Fee**" means a fee payable annually in advance by District to Opterra, in consideration of the provision of up to five (5) years of M&V Services. The Annual M&V Fee for the first Measurement Period will be $15,610. The Annual M&V Fee will be increased annually thereafter at the rate of four percent (5%) per annum, each increase to be effective on the first day of the corresponding Measurement Period.

"**Assessment Work**" means work required to assess the effect on EC Savings for any significant changes to the Facilities (including, but not limited to, building additions, new buildings, and new or changed HVAC equipment).

"**Average Energy Unit Savings**" means, with respect to any number of consecutive Measurement Periods, the arithmetic mean of the Energy Unit Savings for such number of Measurement Periods.

"**Base Energy Rate**" means the dollars per energy unit for each building and/or each ECM, set forth in this Attachment E, Section (III), and used by Opterra to calculate the EC Savings.

"**Baseline**" means the energy use established by Opterra from time to time for each building in the Facilities, taking into consideration Energy Use Factors for such buildings.

"**EC Savings**" means the savings in units of dollars ($) calculated by Opterra in the manner set forth in this Attachment E, Section (III), achieved through the reduction in consumption or demand through implementation of the Work.

"**Energy Rate Factors**" means factors identified by Opterra which may affect utility rates from the local utility companies.

"**Energy Savings Report**" is defined in this Attachment E, Section (II)(D).

"**Energy Savings Term**" means the period beginning on the first day of the Construction Period and ending on the earlier of: (i) the day immediately preceding the twentieth (20^{th}) anniversary of the M&V Commencement Date; (ii) the termination of the Contract; (iii) the termination by District of the M&V Services in accordance with this Attachment E, Section (II)(G); or (iv) the failure by District to pay the Annual M&V Fee in accordance with this Attachment E, Section (II)(H)(i).

"**Energy Unit Savings**" means the savings in units of energy, power, water, etc., calculated by Opterra in the manner set forth in this Attachment E, Section (III), achieved through the reduction in consumption or demand through implementation of the Work.

"**Energy Use Factors**" means factors identified by Opterra which may affect the Baselines or energy use for the Facilities, including but not limited to: hours and levels of occupancy; adjustments in labor force; building use and operational procedures; temperature, humidification, and ventilation levels; installed lighting and scheduled use; building construction and size; general level of repair and efficiency of heating and air conditioning equipment and other energy-using equipment; and amount of heating and air conditioning and other energy-using equipment; quality, quantity, and timeliness of maintenance and repairs to the Generating Facilities or building electrical distribution system; inability to procure replacement parts/components; inability to submit claims under manufacturer warranty, including by reason of manufacturer insolvency; damage or defects no longer covered or excluded under manufacturer warranty; soiling in excess of predicted soiling based on industry-standard modeling; material reduction in energy consumption at a Project Location which significantly limits the Generating Facilities ability to offset Project Location electric consumption; non-operation or shutdown of the Generating Facilities by District or a third party other than Opterra; damage to the Generating Facilities not caused by Opterra; and any reduction in annual solar irradiation at a nearby NOAA weather station of more than 10% below the 30-year average.

"**Energy Use Savings**" means, for any Measurement Period, those savings, having units of dollars ($), achieved for such Measurement Period through reductions in energy use, energy demand, water use, and the use of other commodities.

"**Excess Savings**" means the excess of EC Savings over Guaranteed Savings, calculated in the manner set forth in this Attachment E, Section (II)(I)(iv).

"**Guarantee Payment**" means, for any Measurement Period, either: (i) a cash payment by Opterra to District in an amount equal to the Guarantee Shortfall for that Measurement Period pursuant to this Attachment E, Section (II)(A)(ii); or (ii) additional energy services or energy saving retrofits requested by District with an agreed value equal to the Guarantee Shortfall for that Measurement Period pursuant to this Attachment E, Section (II)(A)(iii).

"**Guarantee Shortfall**" means an amount calculated in accordance with this Attachment E, Section (II)(I)(v).

"**Guaranteed Savings**" means, for any Measurement Period, the dollar amount set forth below for such Measurement Period, as the same may be adjusted from time to time by Opterra for changes in Energy Rate Factors, Energy Use Factors and consequential revisions to the relevant Baseline:

Measurement Period	Guaranteed Savings
1	$1,139,468
2	$1,216,280
3	$1,298,281
4	$1,385,822
5	$1,479,279
6	$1,579,051
7	$1,685,568
8	$1,799,285
9	$1,920,690
10	$2,050,305
11	$2,188,685
12	$2,336,423
13	$2,494,155
14	$2,662,557
15	$2,842,352
16	$3,034,314
17	$3,239,267
18	$3,458,091
19	$3,691,727
20	$3,941,181

"**IPMVP**" means the International Performance Measurement and Verification Protocol prepared by Efficiency Valuation Organization.

"**Projected Energy Savings**" means those Energy Unit Savings which Opterra anticipates will be realized from the installation and continued operation of the Work, as set forth in this Attachment E, Section (III).

"**Savings Guarantee**" is defined in this Attachment E, Section (II)(A)(i).

"**Stipulated Non-Energy Savings**" means, for any Measurement Period, those savings, having units of dollars ($), achieved for such Measurement Period through reductions in non-energy costs due to the implementation of the Work. Stipulated Non-Energy Savings will be stipulated by the Parties and set forth in this Attachment E, Section (III).

II. Terms and Conditions

A. Guaranteed Savings.

i. Savings Guarantee. In consideration of the payment of the Annual M&V Fee, and upon the terms and subject to the conditions set forth herein, Opterra warrants that District will realize total EC Savings during the Energy Savings Term of not less than the total Guaranteed Savings (the "Savings Guarantee"), as the same may be adjusted from time to time for changes in Energy Rate Factors, Energy Use Factors and consequential revisions to the relevant Baseline.

ii. Guarantee Payment. For any Measurement Period in which there is a Guarantee Shortfall, Opterra will pay to District, within thirty (30) calendar days after the acceptance by District of the Energy Savings Report for such Measurement Period, the Guarantee Payment for that Measurement Period.

iii. Services or Retrofits in Lieu of Guarantee Payment. If in the judgment of District, District would benefit from additional energy services or energy saving retrofits, District and Opterra may mutually agree that Opterra will provide such services or retrofits in lieu of the Guarantee Payment for such Measurement Period. For the purposes of this Contract, such services or retrofits will have a deemed value equal to the Guarantee Shortfall for that Measurement Period.

iv. Excess Savings. For any Measurement Period in which there are Excess Savings, District will repay to Opterra, to the extent of such Excess Savings, any Guarantee Payments previously paid by Opterra to District and not previously repaid to Opterra by District, and the Excess Savings for such Measurement Period will be reduced by the amount of such repayment. If Opterra has provided services or retrofits in lieu of the Guarantee Payment for a prior Measurement Period, such that the Guarantee Payment for such Measurement Period cannot be repaid by District, then in lieu of such repayment Excess Savings will be increased by the deemed value of such services or retrofits.

v. Excusable Events. If Opterra is delayed in, or prevented from, accurately calculating the actual EC Savings for any day of any Measurement Period by reason of any Excusable Event, such circumstance will not constitute a default, and Opterra will be excused from performing the M&V Services while such event is continuing. During such event, Projected Energy Savings for the month(s) in which such event is continuing will be used in lieu of actual data; *provided* that if three (3) or more years of post M&V Commencement Date data are available for such month(s), the historical average of such data for such month(s) will be used in lieu of Projected Energy Savings.

vi. Average Energy Unit Savings. For any Measurement Period beginning with fifth (5^{th}), upon completion of that Measurement Period's Energy Savings Report, Opterra has the right to calculate the Average Energy Unit Savings which have occurred over all previous Measurement Periods. The Average Energy Unit Savings will be applied to all subsequent Measurement Periods to determine the Energy Unit Savings for each remaining Measurement Period. After applying such Average Energy Unit Savings for each subsequent Measurement Period and calculating the resulting EC Savings, if the *sum* of (i) such calculated EC Savings for any future Measurement Period *plus* (ii) the Annual M&V Fee for such Measurement Period is greater than the Guaranteed Savings for that Measurement Period, then such excess will be Excess Savings and the Savings Guarantee will have been met for that Measurement Period. If such *sum* of (i) calculated EC Savings for any future Measurement Period *plus* (ii) the Annual M&V Fee for such Measurement Period is less than the Guaranteed Savings for that Measurement Period, then Opterra will apply Accumulated Savings then outstanding to determine whether there is a Guarantee Shortfall for that Measurement Period. If a Guarantee Shortfall is calculated to exist for a future Measurement Period, Opterra may, in its sole discretion, pay to District, not later than the ninetieth (90^{th}) day of such future Measurement Period, the net present value of the Guarantee Shortfall for any or all of such future Measurement Period(s). Net present value will be determined using a discount rate of ten percent (10%).

B. Changes in Energy Use Factors.

i. Adjustments to Baselines. District will notify Opterra in writing within ten (10) Business Days of any change in any Energy Use Factor. In addition, data collected by Opterra during or before the Energy Savings Term may indicate a change in the energy use pattern at the Facilities or any portion thereof and require a change to one or more Baselines. Opterra will determine the effect that any such change will have on EC Savings and present to District a written analysis of the effects of such changes. Opterra will also make corresponding revisions to the Baselines and/or EC Savings that it deems appropriate in its reasonable discretion.

ii. Adjustments to Guaranteed Savings. If a change in any Energy Rate Factor or Energy Use Factor results in a reduction of EC Savings, then the Guaranteed Savings for the corresponding Measurement Period(s) will be decreased by the same amount. Opterra will notify District, in writing, of all such changes.

iii. Changes to Facilities. District or Opterra may from time to time propose to make changes to the Facilities for the express purpose of increasing EC Savings or addressing events beyond its control. It is agreed that these changes will only be made with the written consent of both Parties, which will not be unreasonably withheld. The Baseline will not be adjusted to reflect any changes agreed to under this Attachment E, Section (II)(B)(iii).

iv. Baseline Adjustment. If Opterra proposes changes to the Facilities that would not unreasonably interfere with the conduct of District's business or cause District to incur additional costs, and District

does not consent to the changes, then Opterra will adjust the Baselines upward by the amount of savings projected from the changes.

v. Projected Energy Savings. During the Energy Savings Term, when the ultimate effect of the Work on EC Savings cannot be accurately determined due to pending construction or changes to the Scope of Work, Projected Energy Savings for the Facilities will be used until the effect of the changes can be determined by Opterra

vi. Assessment Work. Opterra has the right to charge District for Assessment Work, which will be billed at current Opterra engineering rates and will be paid by District within thirty (30) calendar days after receiving Opterra's invoice. Before initiating Assessment Work, Opterra will notify District in writing of the intent and estimated cost associated with the Assessment Work. District will, within forty-five (45) calendar days, give Opterra written permission to proceed or, alternatively at no charge to Opterra, to stipulate that the Projected Energy Savings for the portion of the Facility in question be used for the purpose of meeting the Savings Guarantee for such Measurement Period and thereafter. If Opterra does not receive written notice within forty-five (45) calendar days, the Projected Energy Savings for the portion of the Facility in question will be used until such time as District approves the Assessment Work.

vii. Changes in Energy Use Factors. If District fails to notify Opterra of changes in Energy Use Factors or fails to supply Opterra in a timely manner with information that is requested by Opterra for the calculation of EC Savings, the Energy Unit Savings for the relevant Measurement Period will be deemed equal to the corresponding Projected Energy Savings for such period. If information for the relevant Measurement Period is supplied at a later date, the Energy Unit Savings will be modified only if and to the extent that the calculated savings for such period exceed the Projected Energy Savings for such period.

viii. Change Order – Savings Effect. Opterra will calculate the energy impact of any Change Orders.

ix. Changes in Savings Calculations. Any changes made by Opterra to the savings calculations will be presented to District in advance. District will have thirty (30) calendar days to challenge or question the changes in writing.

x. Inspection of Facilities. District agrees that Opterra will have the right, with or without prior notice, to inspect the Facilities to determine if District has consistently complied with its obligations as set forth above. If any inspection discloses that District has failed, on or prior to the date of such inspection, to be in compliance with any of its obligations, then the Guaranteed Savings will be assumed to have been achieved for the portion of the Energy Savings Term during which such failure will have existed.

xi. Interference. District may not cause, and will take all commercially reasonable steps to prevent any third party from causing, any overshadowing, shading or other interference with the solar insolation that falls on the Generating Facility. Upon discovering, or otherwise becoming aware of, any actual or potential overshadowing, shading or other interference with insolation, District will promptly notify Opterra If an unforeseeable overshadowing or shading condition not caused by Opterra or its subcontractors exists and continues for five (5) Business Days or more, District agrees that the Guaranteed Savings for such Generating Facility will be reduced based upon such shading condition, and Opterra may present District with a proposed reduction to the Guaranteed Savings reflecting such overshadowing, shading or other interference.

C. District Maintenance. Beginning at Beneficial Use or Substantial Completion for any portion of the Work, District will maintain such portion of the Work and upon Final Completion will maintain the Project, in accordance with the maintenance schedules and procedures recommended by Opterra and by the manufacturers of the relevant equipment, such maintenance to include maintaining all landscaping (including tree trimming) in and around the Generating Facilities. District is also responsible for managing the benefitting accounts designated to receive generation credits in regard to the Utility's RES-BCT tariff to ensure that generation is credited at the preferred rate.

D. Energy Savings Report. Annually during the first five (5) Measurement Periods of the Energy Savings Term, Opterra will submit to District an energy savings report containing a precise calculation of the EC Savings during the applicable Measurement Period (an "Energy Savings Report"). Opterra will use its best efforts to submit such Energy Savings Report within ninety (90) calendar days after receipt of all needed information for a Measurement Period, unless additional information is needed to accurately calculate the EC Savings, in which case District will be notified of such a situation within the ninety (90) calendar-day period.

E. On-Site Measurements. District irrevocably grants to Opterra the right, during the Energy Savings Term, to monitor EC Savings and energy management performance by conducting on-site measurements, including, but not limited to, reading meters and installing and observing on-site monitoring equipment. Opterra will not exercise such right in a manner that unreasonably interferes with the business of District as conducted at the

Facilities as of the date hereof. District will cooperate fully with the exercise of such right by Opterra pursuant to this Attachment E, Section (II)(E). District will further cooperate with Opterra's performance of the M&V Services by providing utility information, changes in Energy Use Factors, and/or additional information as reasonably requested by Opterra

F. Internet Communication Path. At Opterra's request, to facilitate Opterra's monitoring of the Work, District will open an internet communication path between District's energy management system(s) and Opterra's office in Overland Park, Kansas. District will provide, at District's expense, all networking, telecommunication, encryption, and security hardware and/or software Opterra deems necessary to achieve such communication path, as well as any similar hardware, software, or encryption devices necessary for use at Opterra's office. Opterra will provide District with the precise locations for network communication ports within District's Facilities. District agrees not to charge Opterra to install or maintain such communication paths.

G. Termination of Guaranteed Savings. If (i) District notifies Opterra in writing of its intent to terminate the M&V Services, (ii) the Contract is terminated by Opterra for default by District or by District for any reason permitted by the Contract, (iii) Opterra is no longer the provider of the Maintenance Services set forth in Attachment F, or (iv) District fails to maintain the Project in accordance with this Attachment E, Section (II)(C), or is in default of any of its other obligations under this Attachment E, the obligation of Opterra to prepare and deliver the Energy Savings Report and to make a Guarantee Payment will also be terminated. If such termination occurs on a date other than the last day of a Measurement Period, Opterra will have no obligation to make a Guarantee Payment or prepare and deliver an Energy Savings Report for such Measurement Period.

H. Annual M&V Fee.

i. Invoicing and Payment. The Annual M&V Fee for the first Measurement Period will be invoiced by Opterra to District in a lump sum on the M&V Commencement Date. All subsequent Annual M&V Fees will be invoiced by Opterra on the first day of the corresponding Measurement Period. District, or its designee, will pay Opterra such Annual M&V Fee, without any retention amount withheld, within thirty (30) calendar days after its receipt of the corresponding invoice. Unless District gives Opterra prior written notice of its intent to terminate the M&V Services, any failure to timely pay the Annual M&V Fee in accordance with this Attachment E, Section (II)(H) will be a material default by District under the Contract, and Opterra, in addition to any other legal, contractual and equitable remedies available to it, will have no obligation thereafter to perform M&V Services or to make Guarantee Payments.

ii. Any amount not paid when due will, from and after the due date, bear Interest. Accrued and unpaid Interest on past due amounts (including Interest on past due Interest) will be due and payable upon demand.

iii. Not Refundable. The Annual M&V Fee is not refundable for any reason.

I. Calculations.

i. Calculation of Accumulated Savings. Accumulated Savings will be increased, for any Measurement Period, by the amount of Excess Savings during such Measurement Period, and will be decreased, for any Measurement Period, by the *difference*, to the extent positive, between (i) the Guaranteed Savings for such Measurement Period *minus* (ii) the EC Savings for such Measurement Period. For the avoidance of doubt, Accumulated Savings will not be reduced below zero.

ii. Calculation of EC Savings. EC Savings for any Measurement Period will be equal to the *sum*, for such Measurement Period, of (i) the Energy Use Savings, *plus* (ii) the Stipulated Non-Energy Savings, in each case as adjusted for changes in Energy Use Factors during such Measurement Period. EC Savings achieved during the Construction Period will be included in the EC Savings for the first Measurement Period.

iii. Calculation of Energy Use Savings. Energy Use Savings will be calculated by Opterra as the *product* of (i) the Energy Unit Savings *multiplied by* (ii) the greater of (a) the applicable Base Energy Rate or (b) the applicable Actual Energy Rate.

iv. Calculation of Excess Savings. From and after the M&V Commencement Date, Excess Savings will be calculated by Opterra as the *difference*, to the extent positive, between (i) the EC Savings for the relevant Measurement Period *minus* (ii) the Guaranteed Savings for such Measurement Period. During the Construction Period, Excess Savings will be calculated by Opterra in the manner set forth in this Attachment E, Section (III). For the avoidance of doubt, Excess Savings will not be reduced below zero.

v. Calculation of Guarantee Shortfall. The Guarantee Shortfall, for any Measurement Period, will be calculated by Opterra as the *difference*, to the extent positive, between (i) the Guaranteed Savings for such Measurement Period *minus* (ii) the sum of (a) EC Savings for such Measurement Period plus (b) Accumulated Savings then outstanding.

III. Methodologies and Calculations

The following details the methodologies and calculations to be used in determining the Energy Unit Savings under this Contract.

Table E-1: Measurement and Verification Methods

ECM	ECM Description	M&V Method	
		Electric Usage	Electric Demand
1	Solar Photovoltaic Systems (PV)	Option B	N/A
2	Battery Energy Storage System	Stipulated	Stipulated
4	Building Lighting	Stipulated	N/A
5	Electric Rate Change	Stipulated	Stipulated

1. M&V Option B: Energy savings performance of Scope of Work are measured and verified at the end-use site. Option B techniques are designed for projects where long-term continuous measurement of performance is desired and warranted. Under Option B, while some parameter may be stipulated or measured once then stipulated, some individual loads are continuously monitored to determine performance; and this measured performance is compared with an equipment-use Baseline to determine the Energy Unit Savings.

a. Opterra will supply a one-time report to District detailing any initial measurements taken to establish usage Baselines or other parameters. Ongoing post-retrofit measurements will be compared to the Baselines, and the quantified Energy Unit Savings will be calculated and presented in ongoing reports. During the Construction Period, the Energy Unit Savings will be calculated by adding the savings measured for the whole months between Substantial Completion or Beneficial Use of the EC Measure and the M&V Commencement Date.

b. Scope of Work

i. No baseline measurements are necessary because pre-retrofit PV production is zero. Kilowatt-hours produced by the PV system will be measured using automated metering. Measured interval production kilowatt-hours will be compared against production shown on the monthly utility bills and any differences will be reconciled. Projected kWh production is shown in *Table E-2* below and is projected to degrade by 0.5% per year.

Table E-2: First Year Solar PV Production

Facility	Projected Annual Production (kWh)
District Office	2,546,519

ii. Assumptions: Once Work is Substantially Complete, these savings will be measured and verified monthly for the Energy Savings Term.

iii. Baselines and Projected Savings: EC Savings will be determined by multiplying the Energy Unit savings by the applicable Base Energy Rate. EC Savings will be calculated and presented in on-going reports.

2. Stipulated Savings: When the cost, complexity, or uncertainty of savings measurements are high as compared to the projected savings, District and Opterra may agree to stipulate the projected Energy Unit Savings as being achieved, without any measurements being taken.

a. For the Stipulated Option, the Energy Use Savings presented below will be agreed to occur each Measurement Period. During the Construction Period, the Energy Use Savings will be calculated by adding the savings projected for the whole months between Substantial Completion or Beneficial Use of the EC Measure and the M&V Commencement Date.

Table E-3: Stipulated Annual Savings

Measurement Period	BESS (ECM-2)	Lighting (ECM-4)

1	$9,241	$25,896
2	$9,690	$27,709
3	$10,162	$29,649
4	$10,656	$31,724
5	$11,173	$33,945
6	$11,716	$36,321
7	$12,285	$38,863
8	$12,882	$41,583
9	$13,508	$44,494
10	$14,165	$47,609
11	$14,853	$50,942
12	$15,575	$54,508
13	$16,332	$58,324
14	$17,126	$62,407
15	$17,958	$66,775
16	$18,831	$71,449
17	$19,746	$76,450
18	$20,705	$81,802
19	$21,712	$87,528
20	$22,767	$93,655

3. Base Energy Rates: EC Savings will be calculated using the Base Energy Rates or Actual Energy Rates for that meter, whichever results in greater EC Savings. Actual Energy Rates will be calculated at the end of each Measurement Period using utility billing information for that Measurement Period and using the same methodology as was employed to determine the base energy rate in the Recommendations.

The Base Energy Rates listed here are to be increased each Measurement Period on a cumulative basis by seven percent (7%) beginning on the first anniversary of the M&V Commencement Date and continuing on the first day of each Measurement Period thereafter.

Table E-4: Base Energy Rates

ECM	Location	Electric Rate ($/kWh)
1	District Office	0.2021

4. Stipulated Non-Energy $ Savings: The following dollar savings have been calculated by Opterra from the installation of the EC measures and have been agreed to by District and will not be measured. The sum of these savings for each Measurement Period will be added to the EC savings for that Measurement Period.

Table E-5: Stipulated Non-Energy Annual Savings

Measurement Period	Electric Rate Change (ECM-5)
1	$589,679
2	$630,957
3	$675,124

4	$722,383
5	$772,949
6	$827,056
7	$884,950
8	$946,896
9	$1,013,179
10	$1,084,101
11	$1,159,989
12	$1,241,188
13	$1,328,071
14	$1,421,036
15	$1,520,508
16	$1,626,944
17	$1,740,830
18	$1,862,688
19	$1,993,076
20	$2,132,592

ATTACHMENT F

MAINTENANCE SERVICES

EQUIPMENT AND FACILITIES COVERED

Opterra will perform preventive maintenance services ("Maintenance Services") as set forth in this Attachment F with respect to Generating Facilities being constructed on District's property at the following Project Locations:

Facility	Est. kW dc	Structure Type
District Office	1,354.1 kW	Ground Mount Systems (Arrays A-R)
District Office	55.8 kW	Parking Canopy (Array S)
District Office	46.5 kW	Parking Canopy (Array T)
District Office	46.5 kW	Parking Canopy (Array U)

Capitalized terms used in this Attachment F and not defined in the Contract, have the meanings set forth below:

I. Definitions

"**Annual Maintenance Fee**" means a fee payable annually in advance by District to Opterra, in consideration of the provision of up to ten (10) years of Maintenance Services. The Annual Maintenance Fee schedule will be as shown in the table below. Beginning in Year 11, the Annual Maintenance Fee for the remaining term shall be adjusted based on the prevailing market escalation rate. Opterra will notify the District of the applicable escalation rate no less than ninety (90) days prior to the end of each Measurement Period for Years 11 through 20.

Measurement Period	Maintenance & Monitoring	BESS Software	Annual Maintenance Fee
1	$47,845	Included	**$47,845**
2	$50,238	Included	**$50,238**
3	$52,749	Included	**$52,749**
4	$55,387	Included	**$55,387**
5	$58,156	$2,300	**$60,456**
6	$61,064	$2,415	**$63,479**
7	$64,117	$2,536	**$66,653**
8	$67,323	$2,663	**$69,986**
9	$70,689	$2,796	**$73,485**
10	$74,224	$2,935	**$77,159**

II. Term

So long as District pays Opterra the Annual Maintenance Fee, Opterra will provide the Maintenance Services, as described herein, up to twenty (20) years from the M&V Commencement Date on an annualized basis.

III. Annual Maintenance Fee; Reporting

The Annual Maintenance Fee for the first Measurement Period will be invoiced by Opterra to District in a lump sum on the M&V Commencement Date. All subsequent Annual Maintenance Fees will be invoiced by Opterra on the first day of the corresponding Measurement Period. District, or its designee, will pay Opterra such Annual Maintenance Fee, without any retention amount withheld, within thirty (30) calendar days after its receipt of the corresponding invoice. Any failure to timely pay the Annual Maintenance Fee in accordance with this Attachment F will be a material default by District, and Opterra, in addition to any other legal, contractual and equitable remedies available to it, will have no obligation thereafter to provide Maintenance Services.

Any amount not paid when due will, from and after the due date, bear Interest. Accrued and unpaid Interest on past due amounts (including Interest on past due Interest) will be due and payable upon demand.

The Annual Maintenance Fee is not refundable for any reason.

Upon completion of any maintenance or repair work, Opterra will update service logs detailing the work performed, location and any notes relevant to safe and efficient operations. These service logs will be compiled and submitted to District on a quarterly basis.

If Opterra is no longer the provider of Maintenance Services, District's new provider will maintain similar service logs. Opterra will have reasonable access to inspect service logs to determine that adequate Maintenance Services are being performed.

IV. Preventive Maintenance Services Provided

Opterra will provide the following Maintenance Services during the term:

a Inspection: Inspect PV modules, combiner boxes, inverters, isolation transformers, and PV service roof penetrations and support structure on an annual basis.

b. Testing: Perform voltage testing, amperage testing, and infrared scans of inverters, combiner boxes, disconnects and switchgear on an annual basis.

c. Monitoring: Monitor system performance on a daily basis.

d. Cleaning:

i. Remove dust, dirt, and debris from outside cabinets of combiner boxes, inverters, transformers, and disconnect switches on an annual basis.

ii Wash PV modules and remove accumulated dust and debris on a semi-annual basis.

e. Weed Abatement: The scope of work pertains solely to the District Office and involves the use of mechanical equipment for mowing or trimming vegetation within the fenced area enclosing the PV system, ensuring it remains at a height of 12 inches or less from the ground. No chemicals will be utilized for any purpose. These services will be conducted on an annual basis.

f. Battery Energy Storage System (BESS): At the Rainbow Heights Pump Station – Opterra will provide scheduling support and coordination of site access for BESS manufacturer and/or maintenance provider only. BESS manufacturer will provide all maintenance services.

V. Repair Services

If a Generating Facility is damaged and requires safe-off, repair, demolition and/or reconstruction, or otherwise requires repair outside of warranty or outside of the Maintenance Services described in Section 3.01, District must contact the Opterra PV Operations & Maintenance Manager and submit a request for quotation. Opterra will inspect the damage and provide a written quotation and complete scope of work to Customer to restore the Generating Facility to normal operational condition. Before proceeding with repairs, Opterra and District must execute a Work Order, on Opterra's form, a sample of which is attached hereto as Exhibit F-1, for the agreed scope of work and quotation amount. Quotations for repair work are calculated on a time and materials basis. Standard Business Hours are M-F, 7am to 5pm. Non-business Hours & Saturdays equals 1.5x Rates. Sundays & Holidays equals 2.0x Rates.

v. **Labor Category**	**Straight Time**	
Hourly Rate – PV Electrical Journeyman Technician[1]	$/hr.	County Labor Rate
Hourly Rate – PV Electrical Apprentice Technician[1]	$/hr.	County Labor Rate
Hourly Rate – Senior PV Tech/Commissioning[2]	$/hr.	$189
Hourly Rate – Engineering[2]	$/hr.	$185
Hourly Rate-Project Management [2]	$/hr.	$283
Hourly Rate – Administrative[2]	$/hr.	$108
Mileage	$/Mi	$1.05
Material mark-up %	%	15%

Lift rental fee	$	Current Market Price

[1] *Trade Hourly rate will be adjusted based on the current year of the local prevailing wage determination plus burden, requirement for either travel or subsistence and lodging, and markup for services being requested*.

[2] *Escalated according to inflation rate of the year in which service occurs.*

VI. Warranty Services

The Opterra PV Operations & Maintenance Manager will also be District's point of contact for all issues related to the Opterra Warranty set forth in Section 9.01 of the Contract. District should refer to Section 9.02 of the Contract for services provided by Opterra to District in relation to manufacturer's warranties. The terms and conditions of the relevant manufacturer's warranties can be found in the operation and maintenance manuals delivered to District at Final Completion. Opterra shall not be responsible for the cost of correcting a breach of warranty, performing preventative maintenance services, or addressing any defect to the extent that the BESS equipment manufacturer does not honor its warranty or service obligations due to termination of operations, insolvency, liquidation, bankruptcy, or similar occurrence.

VII. Services and Equipment to Be Covered by District

Opterra's obligations under this Attachment F are expressly conditioned upon District's payment of the Annual Maintenance Fee and providing and being responsible for the following, without cost to Opterra:

a. Making the Generating Facilities described herein available to Opterra as of the Contract Effective Date.
b. Operating and maintaining security systems associated with the Generating Facilities.
c. Backup generator maintenance, repairs, fuel, and associated equipment are excluded from this scope and shall be covered by the District.
d. Managing the benefitting accounts designated to receive generation credits in regard to the Utility's RES-BCT tariff to ensure that generation is credited at the preferred rate.
e. Maintaining all landscaping in and around Generating Facilities including tree trimming.
f. Allowing Opterra and its personnel access as necessary to the Generating Facilities, and any related areas that may be reasonably necessary for performance of the Maintenance Services, including reasonable work, parking, and equipment staging areas.
g. Allowing Opterra and its personnel to access electrical power and other utilities then existing at the Generating Facilities as necessary for Opterra to satisfy its obligations under the Contract.
h. Remediating, pursuant to Applicable Law, any known Hazardous Substances encountered by Opterra during the performance of the Maintenance Services which Hazardous Substances were not deposited by Opterra, including any backfill with clean soil as may be reasonably required.
i. Insuring the Generating Facilities against loss due to acts of God and the public enemy; flood, earthquake, tornado, storm, fire; civil disobedience, sabotage, and vandalism.
j. Timely reporting of, and permitting timely repair of, Generating Facilities damaged by District Persons or third parties, including damage resulting from parking lot, activities. Cost of repairs is the responsibility of District.

Opterra will have no obligation to provide the Maintenance Services to the extent such provision of Maintenance Services is materially adversely affected by District's failure to satisfy the conditions set forth in this Attachment F.

EXHIBIT F-1
FORM OF WORK ORDER

Work Order #__

This Work Order ("Work Order") dated _____ ("Work Order Effective Date") is issued pursuant to and is subject to the terms and conditions of the Energy Services Agreement ("Agreement") by and between Opterra Energy Services, LLC ("Opterra") and _____ ("Customer") dated _____. The terms and conditions of the Agreement are hereby incorporated into and made a part of this Work Order for all purposes.

Project Name:

Scope of Work:

Electrical and Structural Repairs:

Exclusions: [edit, as needed]

- *Premium Time or Over Time*
- *Work on Nights or Weekends*
- *Cutting, Patching or Painting*
- *Permitting*
- *Plan Revisions*
- *Review/Edit/Writing of Specifications*
- *Geotechnical Reports/Inspections*
- *PLA/PSA Agreements*
- *Irrigation System Inspection/Repairs*
- *Landscape Repair/Tire Track Removal*
- *Landscape Maintenance*
- *Infestations*

Cost Estimate: *[insert]*

Pricing assumes State prevailing wages for on-site labor. Quote valid for 30 days.
Payment to Opterra is not contingent on Customer's receipt of any insurance proceeds and will be invoiced by Opterra to Customer in a lump sum upon the completion of the work under this Work Order.

Acceptance and Notice to Proceed
By signing below, Customer agrees to the terms and conditions set forth in this Work Order and authorizes Opterra to proceed with the scope of work set forth herein.

The Parties may execute this Work Order in counterparts, each counterpart constituting an original, and all counterparts, collectively, constituting only one Work Order. The signatures of each Party need not appear on the same counterpart, and in the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature will create a valid and binding obligation of the Party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

ATTACHMENT G

LIGHTING LINE BY LINE

See following page

Area Scope of Work

Project Name: Rainbow MWD Lighting Retrofit

OPTERRA ENERGY SERVICES

					298			298
Location	ID#	Room	Existing Measure	Existing Measure Attributes	Existing Qty	Action	Proposed Measure Description	Proposed Qty
District Offices and Yard	1	Bldg 1 Entry Lobby	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	2	Bldg 1 Entry Lobby	UFL-FU31T8/6-2	2X2-Troffer-Prismatic-Recessed-4000-*-*-*-*	3	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	3
District Offices and Yard	3	Bldg 1 Entry RR	LED-L12-1	4-in Can-Medium-Open - no lens-Recessed-4000-*-*-*-*	3	Do Nothing		3
District Offices and Yard	4	Bldg 1 Open Cubical Areas	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	18	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	18
District Offices and Yard	5	Bldg 1 Copy Room	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	6	Bldg 1 Hallway	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	7	Bldg 1 Break Room	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	8	Bldg 1 RR	LED-L12-1	Box-Medium-Frosted-Surface-4000-Can Fan-*-*-*	2	Do Nothing		2
District Offices and Yard	9	Bldg 1 RR	LED-L12-4	Decorative-Medium-Open - no lens-Wall-4000-*-*-*-*	1	Do Nothing		1
District Offices and Yard	10	Bldg 1 Janitor	LED-L12-1	*-Medium-Open - no lens-Surface-4000-*-*-*-*	1	Do Nothing		1
District Offices and Yard	11	Bldg 1 Konstantin Office	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	12	Bldg 1 Esther Office	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	13	Bldg 1 Joshua Office	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	14	Bldg 1 Board Room	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	11	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	11
District Offices and Yard	15	Bldg 1 Board Room	HAL-H50-1	Track-Medium-PAR20-Track-2700-*-*-*-*	4	Retrofit	RELAMP WITH PAR 20 LED	4
District Offices and Yard	16	Bldg 1 Board Room	EXIT-LED2W-2	Exit-Black-Green-Surface-4000-*-*-*-*	1	Do Nothing		1
District Offices and Yard	17	Bldg 1 Hallway	F-F32T8-2	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	18	Bldg 1 Luke Office	F-F32T8-2	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	19	Bldg 1 Karleen Office	F-F32T8-2	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	20	Bldg 1 Karleen Office	F-F32T8-3	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	21	Bldg 1 Open Area	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	22	Bldg 1 Open Area	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	1	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	1
District Offices and Yard	23	Bldg 1 Storage	F-F34T12-2	Strip-1X4-Open - no lens-Surface-4000-*-*-*-*	1	Retrofit	RETROFIT 4' STRIP WITH NEW 4' LED RETROFIT KIT	1
District Offices and Yard	24	Bldg 1 Private Office	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	3	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	3
District Offices and Yard	25	Bldg 1 Private Office	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	1	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	1
District Offices and Yard	26	Bldg 1 Copy Room	F-F32T8-2	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	27	Bldg 1 Terese Office	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	28	Bldg 1 Claudia Office	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	29	Bldg 1 Private corner office	F-F32T8-2	Reflector-2X4-Prismatic-Recessed-4000-*-*-*-*	6	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	6
District Offices and Yard	30	Bldg 1 Electrical Room	F-F34T12-2	Strip-1X4-Open - no lens-Surface-4000-*-*-*-*	1	Retrofit	RETROFIT 4' STRIP WITH NEW 4' LED RETROFIT KIT	1
District Offices and Yard	31	Bldg 1 Electrical Room	HAL-H100-1	*-Medium-None-Surface-*-*-*-*	1	Retrofit	RELAMP WITH A21 LAMP	1
District Offices and Yard	32	Bldg 1 Exterior Canopy	LED-L12-1	9-in Can-Medium-Open - no lens-Recessed-4000-*-*-*-*	12	Do Nothing		12
District Offices and Yard	33	Bldg 1 Exterior Canopy	HAL-H75-2	Flood-Medium-PAR38-Surface-2700-*-*-*-*	4	Replace	REPLACE 2-HEADED FLOOD WITH NEW LED 2-HEADED BULLET	4
District Offices and Yard	34	Portable 1A Quiet Room	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	1	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	1
District Offices and Yard	35	Portable 1A RR	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	36	Portable 1A Green Room	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	37	Ops Port Main open Area	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-AB switched-*-*-*	11	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	11
District Offices and Yard	38	Ops Port Office 1	F-F34T12-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	39	Ops Port Office 2	F-F34T12-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	40	Ops Port Break Room	F-F34T12-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	41	Ops Port Office 3	LED-FIX-LED-L20	Troffer-*-*-*-*-*-*-*	2	Do Nothing		2
District Offices and Yard	42	Ops Port Office 4	F-F34T12-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	43	Ops Port Office 5	F-F34T12-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	44	Ops Port Office 6	F-F34T12-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	2	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	2
District Offices and Yard	45	Ops Port RR M	LED-L12-1	Box-Medium-Frosted-Surface-4000-Can Fan-*-*-*	1	Do Nothing		1
District Offices and Yard	46	Ops Port RR W	LED-L12-1	Box-Medium-Frosted-Surface-4000-Can Fan-*-*-*	1	Do Nothing		1
District Offices and Yard	47	Locker Room Portable Entry	F-F32T8-3	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	1	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	1
District Offices and Yard	48	Locker Room Portable Open Area	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	5	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	5
District Offices and Yard	49	Locker Room Portable RR	HAL-H60-1	Can Fan-*-*-*-*-*-*-*	1	Retrofit	RELAMP WITH SCREW IN	1
District Offices and Yard	50	Locker Room Portable Exterior	HAL-H60-1	Door Pack-Medium-Frosted-Wall-*-*-*-*	2	Replace	REPLACE EXISTING TALL PACK	2
District Offices and Yard	51	Bldg 2 Weld Shop	F-F40T12-4	Industrial Strip-1X8-Open - no lens-Pendant-4000-*-*-*-*	10	Retrofit	RETROFIT 8' STRIP WITH NEW 8' LED RETROFIT KIT	10
District Offices and Yard	52	Bldg 2 Auto Shop	F-F40T12-2	Industrial Strip-1X4-Open - no lens-Pendant-4000-*-*-*-*	4	Retrofit	RETROFIT 4' STRIP WITH NEW 4' LED RETROFIT KIT	4
District Offices and Yard	53	Bldg 2 Auto Shop	LED-FIX-LED-L100	High bay-*-*-*-*-*-*-*	10	Do Nothing		10
District Offices and Yard	80	Bldg 2 Auto Shop	F-F40T12-4	Industrial Strip-1X8-Open - no lens-Pendant-4000-*-*-*-*	4	Retrofit	RETROFIT 8' STRIP WITH NEW 8' LED RETROFIT KIT	4
District Offices and Yard	54	Bldg 2 Tool Room	F-F32T8-2	Industrial Strip-1X4-Open - no lens-Pendant-4000-*-*-*-*	2	Retrofit	RETROFIT 4' STRIP WITH NEW 4' LED RETROFIT KIT	2
District Offices and Yard	55	Bldg 2 Office	LED-L12-1	Drum-*-*-*-*-*-*-*	2	Do Nothing		2
District Offices and Yard	56	Bldg 2 Parts Room A	F-F34T12-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	4	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	4
District Offices and Yard	57	Bldg 2 Parts Room B	F-F40T12-2	Industrial Strip-1X4-Open - no lens-Pendant-4000-*-*-*-*	12	Retrofit	AND (1) EXTERNAL DRIVER	12
District Offices and Yard	58	Bldg 2 Exterior Wall	MH-MH175-1	Wallpack-Mogul-Clear-Wall-Large-*-*-*	3	Replace	REPLACE LARGE WALL PACK ADJUSTABLE WATTAGE	3
District Offices and Yard	59	Bldg 2 Exterior Wall	HAL-H75-2	Flood-Medium-PAR38-Surface-2700-*-*-*-*	1	Replace	REPLACE EXISTING TALL PACK	1
District Offices and Yard	60	Bldg 2 Exterior Door	CFL-CF15W-1	Door Pack-*-*-*-*-*-*-*	1	Replace	REPLACE EXISTING TALL PACK	1
District Offices and Yard	61	Bldg 3 Warehouse	F-F32T8-2	Industrial Strip-1X4-Open - no lens-Pendant-4000-*-*-*-*	1	Retrofit	RETROFIT 4' STRIP WITH NEW 4' LED RETROFIT KIT	1
District Offices and Yard	79	Bldg 3 Warehouse	F-F32T8-4	Industrial Strip-1X8-Open - no lens-Pendant-4000-*-*-*-*	35	Retrofit	RETROFIT 8' STRIP WITH NEW 8' LED RETROFIT KIT	35
District Offices and Yard	62	Bldg 3 Warehouse Office	F-F32T8-2	Box-2X4-Opaque-Surface-4000-Reflector-*-*-*	4	Retrofit	RETROFIT WITH (1) 13W T8-LAMP AND (1) DRIVER	4
District Offices and Yard	63	Bldg 3 IT Office	F-F32T8-2	Industrial Strip-1X4-Open - no lens-Pendant-4000-*-*-*-*	8	Retrofit	RETROFIT WITH (1) 13W T8-LAMP AND (1) DRIVER	8
District Offices and Yard	64	Bldg 3 Server Room	F-F32T8-2	Industrial Strip-1X4-Open - no lens-Pendant-4000-*-*-*-*	4	Retrofit	RETROFIT WITH (1) 13W T8-LAMP AND (1) DRIVER	4
District Offices and Yard	65	Bldg 3 Server Room	F-F32T8-4	Troffer-2X4-Prismatic-Recessed-4000-*-*-*-*	1	Retrofit	RETROFIT EXISTING TROFFER WITH NEW LED TROFFER WITH SMARTLOOP	1
District Offices and Yard	66	Bldg 3 Exterior wall	HPS-HPS250-1	Wallpack-Mogul-Clear-Wall-Large-*-*-*	1	Replace	REPLACE LARGE WALL PACK ADJUSTABLE WATTAGE	1
District Offices and Yard	67	Bldg 3 Exterior Wall	LED-FIX-LED-L50	Barn Light-*-*-*-*-*-*-*	3	Do Nothing		3
District Offices and Yard	68	Bldg 3A Storage	F-F32T8-6	Highbay-2X4-Open - no lens-Surface-4000-*-*-*-*	2	Replace	REPLACE EXISTING HIGH BAY WITH NEW LED WITH AISLE SENSOR	2
District Offices and Yard	69	Bldg 4 works storage	F-F40T12-4	Industrial Strip-1X8-Open - no lens-Pendant-4000-*-*-*-*	4	Retrofit	RETROFIT 8' STRIP WITH NEW 8' LED RETROFIT KIT	4
District Offices and Yard	70	Bldg 4 Exterior	HPS-HPS400-1	Flood-Mogul-Clear-Pole-Slip Fit-*-*-*-*	2	Replace	REPLACE EXISTING FLOOD WITH NEW LED	2
District Offices and Yard	71	Bldg 4 Exterior Wall	MH-MH175-1	Wallpack-Mogul-Clear-Wall-Large-*-*-*	1	Replace	REMOVE EXISTING WALL PACK AND INSTALL NEW LED	1
District Offices and Yard	72	Bldg 4 Exterior Wall	HAL-H100-1	Jelly Jar-Medium-Wall Mount-*-*-*-*-*	1	Replace	RELAMP WITH SCREW IN	1
District Offices and Yard	73	Bldg 5 Tire Storage	LED-L16-1	screw in-R40-Keyless-*-*-*-*-*	5	Do Nothing		5
District Offices and Yard	74	Bldg 5 Exterior Wall	HAL-H75-2	Flood-Medium-PAR38-Surface-2700-*-*-*-*	2	Replace	REPLACE 2-HEADED FLOOD WITH NEW LED 2-HEADED BULLET	2
District Offices and Yard	75	Bldg 5 Exterior Wall	MH-MH175-1	Wallpack-Mogul-Clear-Wall-Large-*-*-*	2	Replace	REMOVE EXISTING WALL PACK AND INSTALL NEW LED	2
District Offices and Yard	76	Exterior Entry Gate	HPS-HPS70-1	Security-Meduim-Clear-Pole-Flood-Threaded Knucle-*-*-*	2	Replace	REPLACE SMALL FLOOD	2
District Offices and Yard	77	Exterior Parking	LED-L135-1	Flood-Pole-*-*-*-*-*-*	2	Do Nothing		2
District Offices and Yard	78	Exterior Flag	LED-L50-1	Flood-Flag-*-*-*-*-*-*	2	Do Nothing		2

26 PANELS/STRING			
ARRAY	PANELS	STRINGS	KWDC
A	156	6	96.7
B	182	7	112.8
C	182	7	112.8
D	182	7	112.8
E	208	8	129.0
F	208	8	129.0
G	208	8	129.0
H	208	8	129.0
J	208	8	129.0
K	182	7	112.8
L	182	7	112.8
M	78	3	48.4
TOTAL	2184	84	1354.1

PROPOSED PV MODULES
CANADIAN SOLAR 620W

15 PANELS/STRING CANOPY			
ARRAY	PANELS	STRINGS	KWDC
N	90	6	55.8
P	75	5	46.5
Q	75	5	46.5
TOTAL	240	16	148.8

PROPOSED PV MODULES
CANADIAN SOLAR 620W

OPTION 1

PLAN NORTH

0 60' 120'
1"=60'-0"

CLIENT

RAINBOW MUNICIPAL WATER DISTRICT

Municipal Water District
3707 Old Hwy
395 Fallbrook, CA 92028

PROJECT LOCATION

Municipal Water District
3707 Old Hwy
395 Fallbrook, CA 92028

DESIGNER

OPTERRA ENERGY SERVICES

PASADENA, CALIFORNIA OFFICE
35 N. LAKE AVE, SUITE 900
Tel 626 377 4748
Fax 626 737 5978

CONSULTANTS

REGISTRATION

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJECT NO.:	CN-XXXXXX
DRAWN BY:	NP
CHECKED BY:	JP
SCALE:	1"=60'

KEY PLAN

SHEET TITLE

MUNCIPAL WATER DISTRICT ELECTRICAL PV GROUND MOUNT

SHEET NUMBER

MWD-E101

Renewable Energy Project

May 26, 2026

OPTERRA
ENERGY SERVICES

Agenda

- Quick Review
- Scope of Work
  - Phase 1
  - Phase 2
- Financial Analysis
- Process / Next Steps

Opterra

- Prior Communication with Nancy Rorabaugh: 2020 just before to COVID shutdown
- Follow Up Discussion: Meeting with Nancy Rorabaugh on July 24, 2025
- Completed hundreds of comprehensive energy efficiency and renewable energy projects for public sector customers throughout California including within San Diego County:
  - City of Oceanside, San Marcos USD, Escondido USD, City of Solana Beach, Grossmont UHSD, San Dieguito UHSD, San Diego USD to name a few
- General Contractor – 5% profit, 10% overhead
  - Turnkey: start to finish: design; permitting; installation; construction management; project management; secure rebates, grants, incentives; ongoing maintenance of the systems & verification of program performance
- Project is paid for with guaranteed savings, rebates, incentives, and grants

Some of OPTERRA's California Public Sector Customers

Cities
- City of Alhambra
- City of American Canyon
- City of Atwater
- City of Benicia
- City of Brea
- City of Buellton
- City of Concord
- City of Corcoran
- City of Delano
- City of Dinuba
- City of Dublin
- City of Escalon
- City of Firebaugh
- City of Fremont
- City of Garden Grove
- City of Gonzales
- City of Grass Valley
- City of Greenfield
- City of Gustine
- City of Hanford
- City of Hayward
- City of Hercules
- City of King City
- City of La Habra
- City of La Puente
- City of Lakeport
- City of Lemoore
- City of Livermore
- City of Lomita
- City of Lompoc
- City of Madera
- City of Marysville
- City of Mendota
- City of Menlo Park
- City of Millbrae
- City of Milpitas
- City of Moreno Valley
- City of Norco
- City of Oceanside
- City of Palm Springs
- City of Patterson
- City of Pismo Beach
- City of Port Hueneme
- City of Richmond
- City of Saint Helena
- City of Salinas
- City of San Jacinto
- City of San Jose
- City of Simi Valley
- City of Solana Beach
- City of South Gate
- City of Suisun City
- City of Tulare
- City of Union City
- City of Vacaville
- City of Waterford
- City of Yuba City

Counties
- Alameda County
- Contra Costa County
- Kings County
- Los Angeles County
- Madera County
- Merced County
- Monterey County
- North Monterey County
- Orange County Fire Authority
- Placer County
- Plumas County
- Riverside County
- Sacramento County
- San Benito County
- Santa Clara County
- Shasta County
- Solano County
- Sutter County
- Tulare County
- Yuba County

K-12 Districts
- Adelanto Unified School District
- Alisal Union School District
- Alpaugh Unified School District
- Alum Rock Union Elementary School District
- Atwater Elementary School District
- Banning Unified School District
- Barstow Unified School District
- Belmont-Redwood Shores School District
- Berryessa Union School District
- Burbank Unified School District
- Capistrano Unified School District
- Chula Vista Elementary School District
- Compton Unified School District
- Cupertino Unified School District
- Desert Sands Unified School District
- Dublin Unified School District
- East Side Union High School District
- El Camino Real Charter High School
- El Monte Union High School District
- Escalon Unified School District
- Escondido Union School District
- Fountain Valley School District
- Franklin-McKinley School District
- Gonzales Unified School District
- Greenfield Unified School District
- Grossmont Union High School District
- Hayward Unified School District
- Helendale School District
- Huntington Beach City School District
- Huntington Beach Union High SD
- Jefferson Elementary School District
- John Swett Unified School District
- Jurupa Unified School District
- La Mesa-Spring Valley Schools
- Lake Elsinore Unified School District
- Lemon Grove School District
- Lemoore Union High School District
- Live Oak School District
- Livermore Valley Joint Union SD
- Los Angeles Unified School District
- Lucia Mar Unified School District
- Magnolia School District
- Manhattan Beach Unified School District
- Millbrae School District
- Milpitas Unified School District
- Montebello Unified School District
- Monterey County Office of Education
- Moreno Valley Unified School District
- Morgan Hill Unified School District
- Mount Baldy Joint Elementary School District
- Mountain View Whisman School District
- North Monterey County Unified SD
- Nuview Union School District
- Oak Grove School District
- Oakland Unified School District
- Orange Unified School District
- Paso Robles Joint Unified School District
- Perris Union High School District
- Ravenswood City School District
- Rim of the World Unified School District
- Saddleback Valley Unified School District
- Salinas City Elementary School District
- Salinas Union High School District
- San Bernardino County Superintendent of Schools
- San Diego Unified School District
- San Dieguito Union High School District
- San Gabriel Unified School District
- San Jose Unified School District
- San Lorenzo Unified School District
- San Mateo Foster City School District
- San Mateo Union High School District
- San Marcos Unified School District
- Santa Ana Unified School District
- Santa Barbara Unified School District
- Santa Clara County Office of Education
- Santa Cruz County Office of Education
- Santa Maria Bonita School District
- Santa Maria Joint Union High School District
- Solana Beach School District
- Soledad Unified School District
- South San Francisco Unified School District
- Tamalpais Union High School District
- Temple City Unified School District
- Tulare Joint Union High School District
- Ventura Unified School District
- Walnut Valley Unified School District
- Wasco Union Elementary School District
- Wasco Union High School District
- West Contra Costa Unified School District
- Westminster School District
- Woodlake Unified School District
- Yucaipa Calimesa Joint Union SD

Higher Education
- Antelope Valley College
- Butte Community College District
- California State University, East Bay
- California State University, Fresno
- California State University, Sonoma
- Cerro Coso College
- Chabot-Las Positas Community College District
- Compton Community College
- Contra Costa County Community College District
- Copper Mountain College
- DeAnza College
- Foothill-DeAnza Community College District
- Glendale Community College
- Hartnell College
- Irvine Valley College
- Los Angeles Community College District
- Los Rios Community College District
- Mt. San Antonio College
- Peralta Community College District
- San Bernardino Community College District
- San Diego Community College District
- San Mateo County Community College District
- Santa Clarita Community College District
- Santa Monica College
- Solano Community College
- St. Mary's College
- State Center Community College District
- University of California, Davis
- University of California, San Francisco

Special Districts
- Adventist Health Feather River
- Alameda County Fairgrounds
- Antelope Valley-East Kern Water Agency
- Bay Area Rapid Transit
- Contra Costa County Fire Protection District
- Indian Wells Valley Water District
- Montara Water & Sanitary District
- Monterey Regional Airport
- Port of Long Beach
- San Diego County Regional Airport
- Selma-Kingsburg-Fowler County Sanitation District
- West County Wastewater
- Yucaipa Valley Water District

LEGEND
- Cities
- Counties
- K-12 Districts
- Higher Education
- Special Districts

Opterra's Energy Program Scope of Work – Phase 1

- Installation of Solar PV at HQ
- Installation of Electric Vehicle (EV) Charging Stations (per CA Green Building Standards Code)
- Installation of Battery Energy Storage System (BESS) to provide Peak Demand Savings
  - Rainbow Heights Pump Station
- Installation of Generators at Pump Stations to provide Emergency Back-Up Power:
  - Dentro
  - West Lilac
  - Rainbow Hills
  - Vallecitos
- Solve Deferred Maintenance Issues while Generating Savings:
  - HQ: Replace old, inefficient lighting with new LED lighting
- Change Select Accounts to a More Favorable Electric Rate

Phase I Proposed Site

Phase I Costs

	Description	Cost
1	Solar Photovoltaics	$9,904,080
2	Battery Storage Installation	$1,665,745
3	Backup Generators	$2,407,908
4	LED Lighting	$170,808
5	Utility Rate Change	$20,927
6	RMWD-Controlled Contingency (for unforeseen conditions i.e., utility upgrades, soil conditions)	$1,500,000

Opterra's Energy Program Scope of Work – Phase 2 (1st Qtr 2027)

- Solve Deferred Maintenance Issues while generating savings:
  - Replace old, inefficient pumps / motors; upgrade electrical systems at:
    - Huntley Pump Station
    - Lookout Mountain
    - Magee Pump Station

- Install AMI Water Meter Technology on 8,675 Water Meters
  - Of the 9,092 water meters within RMWD, only 417 have been retrofit with AMI technology

Energy Measure Summary

Energy Measure Summary	Solar PV	Battery Energy Storage System	Electric Rate Change	Lighting	New Generator	EV Charging Stations	Pump Station Replacement	AMI Water Meter Technology Installation
HQ Parking Lots & Lower West Dirt Lot	PH 1							
HQ				PH 1		PH 1		
Rainbow Heights Pump Station (8th St)		PH 1	PH 1					
Huntley Pump Station			PH 1				PH 2	
Lookout Mountain Pump Station			PH 1				PH 2	
Beck Reservoir			PH 1					
Dentro Pump Station					PH 1			
Rainbow Hills Pump Station					PH 1			
Vallecitos Pump Station					PH 1			
West Lilac Pump Station					PH 1			
Magee Pump Station							PH 2	
8,675 Water Meters (Residential & AG)								PH 2

Inflation Reduction Act (IRA) Renewable Energy Grant = $4,758,587

✓ For RMWD to Receive the $4,758,587 IRA Grant:

- Board approves Opterra Energy Services Contract at May 26, 2026 board meeting
- Contract signed by RMWD by June 1, 2026 or sooner
- Opterra invoices RMWD mobilization costs to order solar equipment and BESS and is required to receive this payment from RMWD before July 3, 2026. The solar equipment must be at Opterra's warehouse before September 15, 2026.
- Meeting the above considerations not only secures the IRA grant for RMWD, it allows for extra time to build the solar project - which is extremely helpful since this is a large system and the utility's timing to approve permission to operate (PTO) is unpredictable and often delayed.

Phase 1 Financial Analysis – Includes Inflation Reduction Act (IRA) Grant Funding

Project Cost	$14,169,468
Customer Contribution	
Customer Contingency	$1,500,000
Amount to be Financed	$15,669,468
Finance Term	15
Estimated Annual Interest Rate	4.18%
Annual Escalation of Electricity Cost	7.00%
Annual Degradation of Solar Panels	0.50%
Annual Escalation of O&M Cost	5.00%

Year	Solar Savings	Battery Savings	Lighting Savings	Rate Change Savings	Inflation Reduction Act Grant	Total Program Savings	Lease Payment	(M&V) & (O&M)	Total Program Costs	Net Savings
1	$514,777	$281,657	$25,894	$317,264		$1,139,592	$389,016	$78,731	$467,748	$671,845
2	$548,057	$301,373	$27,707	$339,473	$4,758,587	$5,975,197	$5,220,685	$82,668	$5,303,352	$671,845
3	$583,489	$322,469	$29,647	$363,236		$1,298,840	$540,194	$86,801	$626,996	$671,845
4	$621,212	$345,042	$31,722	$388,662		$1,386,637	$623,652	$91,141	$714,793	$671,845
5	$661,373	$369,194	$33,942	$415,868		$1,480,379	$708,236	$100,298	$808,534	$671,845
6	$704,131	$395,038	$36,318	$444,979		$1,580,467	$842,728	$65,894	$908,622	$671,845
7	$749,653	$422,691	$38,861	$476,128		$1,687,332	$946,299	$69,189	$1,015,488	$671,845
8	$798,118	$452,279	$41,581	$509,457		$1,801,435	$1,056,942	$72,648	$1,129,590	$671,845
9	$849,717	$483,939	$44,491	$545,119		$1,923,265	$1,175,140	$76,281	$1,251,421	$671,845
10	$904,651	$517,814	$47,606	$583,277		$2,053,348	$1,301,409	$80,095	$1,381,503	$671,845
11	$963,136	$554,061	$50,938	$624,106		$2,192,242	$1,436,298	$84,099	$1,520,398	$671,845
12	$1,025,403	$592,846	$54,504	$667,794		$2,340,547	$1,580,398	$88,304	$1,668,702	$671,845
13	$1,091,695	$634,345	$58,319	$714,539		$2,498,899	$1,734,335	$92,720	$1,827,054	$671,845
14	$1,162,274	$678,749	$62,402	$764,557		$2,667,981	$1,898,781	$97,355	$1,996,137	$671,845
15	$1,237,415	$726,261	$66,770	$818,076		$2,848,522	$2,074,454	$102,223	$2,176,677	$671,845
16	$1,317,413	$777,100	$71,444	$875,342		$3,041,298		$107,334	$107,334	$2,933,964
17	$1,402,584	$831,497	$76,445	$936,615		$3,247,141		$112,701	$112,701	$3,134,440
18	$1,493,261	$889,701	$81,796	$1,002,179		$3,466,937		$118,336	$118,336	$3,348,601
19	$1,589,801	$951,981	$87,522	$1,072,331		$3,701,634		$124,253	$124,253	$3,577,381
20	$1,692,581	$1,018,619	$93,648	$1,147,394		$3,952,243		$130,466	$130,466	$3,821,777
21	$1,802,007	$1,054,163		$1,227,712		$4,083,881		$126,948	$126,948	$3,956,933
22	$1,918,506	$1,127,954		$1,313,652		$4,360,112		$133,295	$133,295	$4,226,817
23	$2,042,538	$1,206,911		$1,405,607		$4,655,056		$139,960	$139,960	$4,515,096
24	$2,174,588	$1,291,394		$1,504,000		$4,969,982		$146,958	$146,958	$4,823,024
25	$2,315,175	$1,381,792		$1,609,280		$5,306,247		$154,306	$154,306	$5,151,941
26	$2,464,851	$1,478,517		$1,721,929		$5,665,298		$162,021	$162,021	$5,503,277
27	$2,624,204	$1,582,014		$1,842,464		$6,048,682		$170,122	$170,122	$5,878,559
28	$2,793,858	$1,692,755		$1,971,437		$6,458,050		$178,628	$178,628	$6,279,422
29	$2,974,481	$1,811,247		$2,109,437		$6,895,166		$187,560	$187,560	$6,707,607
30	$3,166,782	$1,938,035		$2,257,098		$7,361,914		$196,938	$196,938	$7,164,977
Totals	**$44,187,732**	**$26,111,437**	**$1,061,556**	**$29,969,012**	**$4,758,587**	**$106,088,323**	**$21,528,567**	**$3,458,273**	**$24,986,840**	**$81,101,483**

- Provides **> $670,000 annual positive cashflow** back to the District's General Fund each year

- **> $80M in net savings**

OPTERRA ENERGY SERVICES

Phase 1 Financial Analysis – Without Inflation Reduction Act (IRA) Grant Funding

Project Cost	$14,169,468
Customer Contribution	
Customer Contingency	$1,500,000
Amount to be Financed	$15,669,468
Finance Term	15
Estimated Annual Interest Rate	4.18%
Annual Escalation of Electricity Cost	7.00%
Annual Degradation of Solar Panels	0.50%
Annual Escalation of O&M Cost	5.00%

Year	Solar Savings	Battery Savings	Lighting Savings	Rate Change Savings	Inflation Reduction Act Grant	Total Program Savings	Lease Payment	(M&V) & (O&M)	Total Program Costs	Net Savings
1	$514,777	$281,657	$25,894	$317,264		$1,139,592	$788,333	$78,731	$867,064	$272,528
2	$548,057	$301,373	$27,707	$339,473		$1,216,610	$861,414	$82,668	$944,081	$272,528
3	$583,489	$322,469	$29,647	$363,236		$1,298,840	$939,511	$86,801	$1,026,312	$272,528
4	$621,212	$345,042	$31,722	$388,662		$1,386,637	$1,022,968	$91,141	$1,114,109	$272,528
5	$661,373	$369,194	$33,942	$415,868		$1,480,379	$1,107,552	$100,298	$1,207,850	$272,528
6	$704,131	$395,038	$36,318	$444,979		$1,580,467	$1,242,044	$65,894	$1,307,938	$272,528
7	$749,653	$422,691	$38,861	$476,128		$1,687,332	$1,345,615	$69,189	$1,414,804	$272,528
8	$798,118	$452,279	$41,581	$509,457		$1,801,435	$1,456,258	$72,648	$1,528,907	$272,528
9	$849,717	$483,939	$44,491	$545,119		$1,923,265	$1,574,456	$76,281	$1,650,737	$272,528
10	$904,651	$517,814	$47,606	$583,277		$2,053,348	$1,700,725	$80,095	$1,780,820	$272,528
11	$963,136	$554,061	$50,938	$624,106		$2,192,242	$1,835,615	$84,099	$1,919,714	$272,528
12	$1,025,403	$592,846	$54,504	$667,794		$2,340,547	$1,979,714	$88,304	$2,068,018	$272,528
13	$1,091,695	$634,345	$58,319	$714,539		$2,498,899	$2,133,651	$92,720	$2,226,371	$272,528
14	$1,162,274	$678,749	$62,402	$764,557		$2,667,981	$2,298,098	$97,355	$2,395,453	$272,528
15	$1,237,415	$726,261	$66,770	$818,076		$2,848,522	$2,473,770	$102,223	$2,575,994	$272,528
16	$1,317,413	$777,100	$71,444	$875,342		$3,041,298		$107,334	$107,334	$2,933,964
17	$1,402,584	$831,497	$76,445	$936,615		$3,247,141		$112,701	$112,701	$3,134,440
18	$1,493,261	$889,701	$81,796	$1,002,179		$3,466,937		$118,336	$118,336	$3,348,601
19	$1,589,801	$951,981	$87,522	$1,072,331		$3,701,634		$124,253	$124,253	$3,577,381
20	$1,692,581	$1,018,619	$93,648	$1,147,394		$3,952,243		$130,466	$130,466	$3,821,777
21	$1,802,007	$1,054,163		$1,227,712		$4,083,881		$126,948	$126,948	$3,956,933
22	$1,918,506	$1,127,954		$1,313,652		$4,360,112		$133,295	$133,295	$4,226,817
23	$2,042,538	$1,206,911		$1,405,607		$4,655,056		$139,960	$139,960	$4,515,096
24	$2,174,588	$1,291,394		$1,504,000		$4,969,982		$146,958	$146,958	$4,823,024
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30	$3,166,782	$1,938,035		$2,257,098		$7,361,914		$196,938	$196,938	$7,164,977
Totals	**$44,187,732**	**$26,111,437**	**$1,061,556**	**$29,969,012**	**$0**	**$101,329,736**	**$22,759,724**	**$3,458,273**	**$26,217,997**	**$75,111,739**

- Provides **> $270,000 annual positive cashflow** back to the District's General Fund each year

- **> $75M in net savings**

OPTERRA ENERGY SERVICES

PHASE I Commitment

- 20% of Phase I total $15,669,468 = $3,133,894
- 20% Due by July 3, 2026
- Phase 2 dollar amounts are not available December 2026

Phase 1 Next Steps and Timeline

I. Assessment

- Discuss priorities and program possibilities with RMWD
- Perform preliminary technical analysis
- Present findings and savings to RMWD

II. Development

- Board Presentation
- File incentive and rebate applications
- Finalize savings and costs
- Propose final recommendations and contract for Board approval

III. Implementation

- Commence Implementation with Groundbreaking
- Manage construction and program delivery
- Celebrate completion at RMWD ribbon cutting event
- Ongoing monitoring & performance

MARCH '26

Opterra delivers preliminary project findings to RMWD / Opterra completes final engineering

APRIL / MAY '26

Opterra delivers final project scope, savings, & pricing to RMWD / Board approves Opterra project

SEPT '26

Opterra submits solar and battery storage designs for permitting and begins lighting installation

OCT - NOV '26

Opterra begins solar PV and battery storage installation

1st QTR '28

Installation complete / Secure grants & rebates / Project closeout / Ribbon-Cutting Ceremony

Thank you!

Nancy Rorabaugh
Senior Program Development Manager
Nrorabaugh@opterraenergy.com
(619) 322-5400

OPTERRA
ENERGY SERVICES

RAINBOW
MUNICIPAL WATER DISTRICT

CONSENT CALENDAR
COMMITTEE REVIEW ITEM NO. 3 C

BOARD OF DIRECTORS

May 26, 2026

SUBJECT

NOTICE OF COMPLETION AND ACCEPTANCE OF THE MANUAL TRANSFER SWITCHES AT MORRO HILLS, VALLECITOS, AND RAINBOW HILLS PUMP STATIONS PROJECT (DIVISIONS 2 & 5)

BACKGROUND

The Rainbow Municipal Water District (District) owns and operates the Morro Hills, Vallecitos, and Rainbow Hills pump stations (MTS Project). The Morro Hills pump station serves the Morro Tank, the Vallecitos pump station serves the Vallecitos Tank, and the Rainbow Hills pump station serves the Rainbow Hills Reservoir. During both planned and unplanned power outages, and routine maintenance operations, staff must manually connect power from the portable generators to each pump station's electrical bus bar by the District's electrician. Especially during emergency conditions like a fire, this type of work is considered high risk, costly work for the District and requires an electrician to perform. The installation of a manual transfer switch (MTS) at each pump station allows any staff member to safely and easily connect to temporary generator power.

In 2022, the District contracted with Harris and Associates to provide design specifications and plans for the project. However, upon completion of the design, the project was placed on hold due to budgetary restrictions. The Project was funded within the FY25 & FY 26 Capital Improvement Program, therefore in April 2025, Harris and Associates was tasked to update the design and specifications to prepare the project for public bidding.

Following a public bidding process, Southern Contracting Company was the lowest responsible and responsive bidder. At the June 24, 2025 meeting, the Board awarded a construction contract to Southern Contracting Company for the construction of the MTS Project.

DESCRIPTION

On June 24, 2025, the District's Board of Directors awarded a construction contract to Southern Contracting Company in the amount of $320,000. One Change Order was issued for a credit to the District in the amount of $2,889 was approved by the General Manager as it was within their signing authority, bringing the contract total value to $317,611.

CONTRACT SUMMARY			
Original Contract Amount	**Previous Change Orders**	**Additional Contract days**	**Total Contract Amount**
$320,00	**CO-01: ($2,889)**	**0 Days**	**$317,611**

The project was constructed per the approved plans and specifications, inspected, tested according to the District's standards and are ready for acceptance. Upon acceptance by the Board, the improvements become part of the District's water and wastewater system and staff will take over operation of the newly constructed facilities. Warranty related maintenance falls under the purview of the Contractor until such time that the warranty period ends. Installation costs of $317,116 will be added to the District's Total Valuation along with all other costs associated with the project and a one (1) year warranty phase will commence upon the filing of the Notice of Completion (NOC).

POLICY/STRATEGIC PLAN KEY FOCUS AREA

Strategic Focus Area Two: Asset Management.

ENVIRONMENTAL

In accordance with California Environmental Quality Act (CEQA) guidelines Section 15378, the action before the Board of filing a Notice of Completion and accepting facilities does not constitute a "project" as defined by CEQA. Previous Board action addressed the CEQA requirements on the construction project.

BOARD OPTIONS/FISCAL IMPACTS

The construction costs of the improvements, totaling $317,611 will be added to the District's asset valuation. The final amount of other costs associated with the project will be added to the District's asset valuation once year-end financials have been completed.

Option 1:

- Accept the Manual Transfer Switches at Morro Hills, Vallecitos, and Rainbow Hills Pump Stations project infrastructure
- Approve filing the Notice of Completion
- Add installation costs of $317,611 to the District's valuation
- Make a finding that the action herein does not constitute a "project" as defined by CEQA.

Option 2:

- Provide other direction to staff.

STAFF RECOMMENDATION

Staff recommends Option 1.

Chad Williams 05/26/2026
Engineering & CIP Program Manager

Attachment(s): Project Site Maps

RECORDING REQUESTED BY:

Rainbow Municipal Water District

WHEN RECORDED RETURN TO:

Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, California 92028

MAIL TAX STATEMENTS TO:

NO FEE REQUIRED PER GOVERNMENT CODE SECTION 27383

SECTION 00687

NOTICE OF COMPLETION

To: County of San Diego
1600 Pacific Highway, Suite 103
San Diego, CA 92101

Date: 05/27/2026

Project/Contract No.: 600058/25-16

Owner: Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, CA 92028

Date of Completion: 04/23/2026

RMWD Board Acceptance: 05/26/2026

OWNER'S ESTATE OF INTEREST:

Easement _____ Fee Owner X Encroachment Permit _____

Other (describe)

CONTRACTOR FOR WORK OF IMPROVEMENT AS A WHOLE:

Name: Southern Contracting Company

Address: 559 N. Twin Oaks Valley Road San Marcos, CA 92069

TITLE OF PROJECT: **MANUAL TRANSFER SWITCHES FOR THE MORRO HILLS, VALLECITOS, & RAINBOW HILLS PUMP STATIONS**

DESCRIPTION OF PROJECT: all labor, materials, and equipment to install one (1) manual transfer switch at each of the following three (3) pump stations: Morro Hills, Vallecitos, and Rainbow Hills.

ADDRESS OF THE SITE(s):

Morro Hills PS: located west of the intersection of Morro Hills Road and San Jacinto Circle East. Fallbrook, CA 92028
Vallecitos PS: located off Rainbow Valley Blvd, 2718 Rainbow Valley Blvd., Fallbrook, CA 92028
Rainbow Hills PS: located off Old Highway 395, 933 Rainbow Valley Blvd., Fallbrook, CA 92028

This Notice is given for (check one):

X Completion of the work of improvement as a whole.
Completion of a contract for a particular portion of the work of improvement (per Cal. Civ. Code § 8186).

If this notice is given only of completion of a contract for a particular portion of the work of improvement, the name and address of the direct contractor under that contract is:

Final payment will be made to the above contractor on or after thirty-five (35) calendar days from the recording date of this Notice of Completion, except where otherwise provided for by law.

VERIFICATION

I, the undersigned state that I am the General Manager of the Rainbow Municipal Water District, the public agency authorizing the Work of Improvement referred to in the foregoing Notice of Completion; that I have executed such Notice of Completion on behalf of such public agency and likewise make this verification on behalf of said public agency; and that I have read said Notice of Completion and know the contents thereof and the facts therein stated are true of my own knowledge.

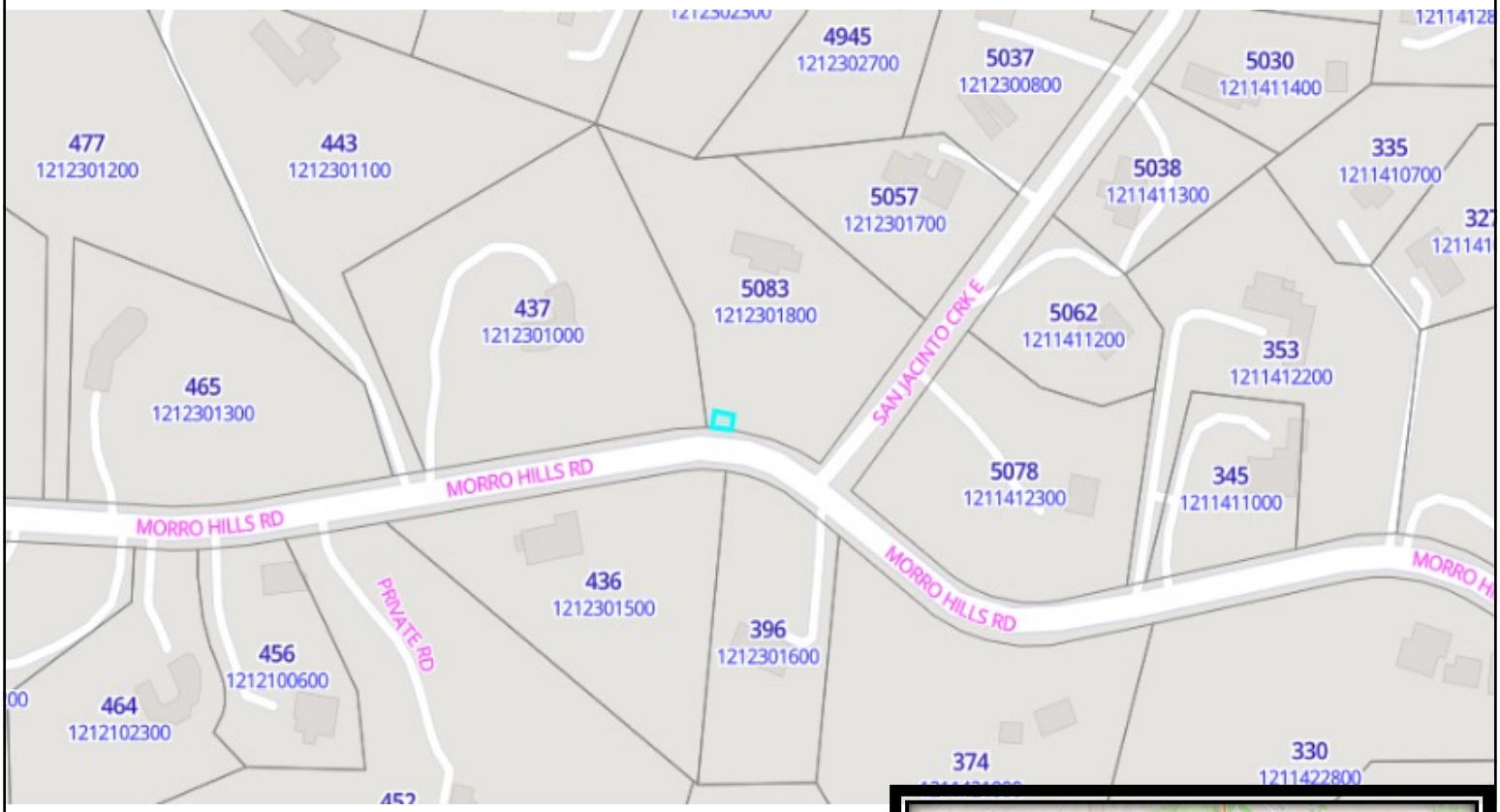
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

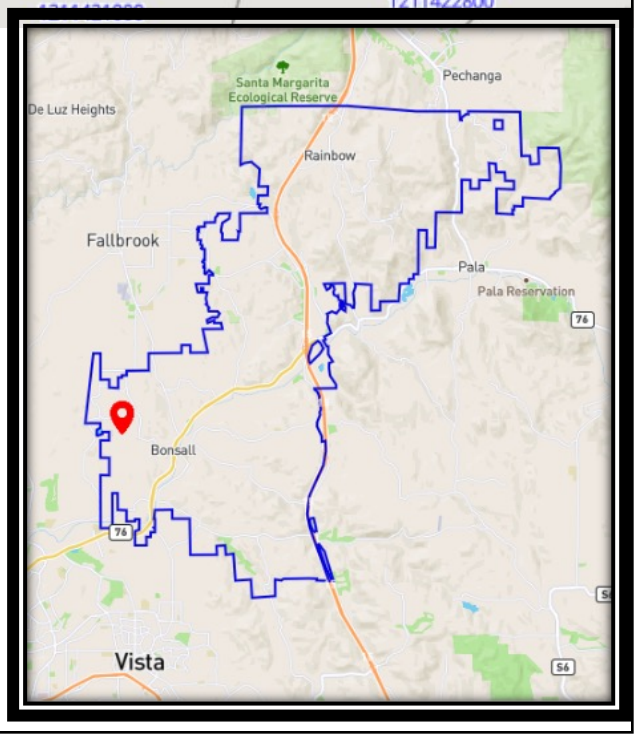
May 26, 2026

Jake Wiley, General Manager
Rainbow Municipal Water District

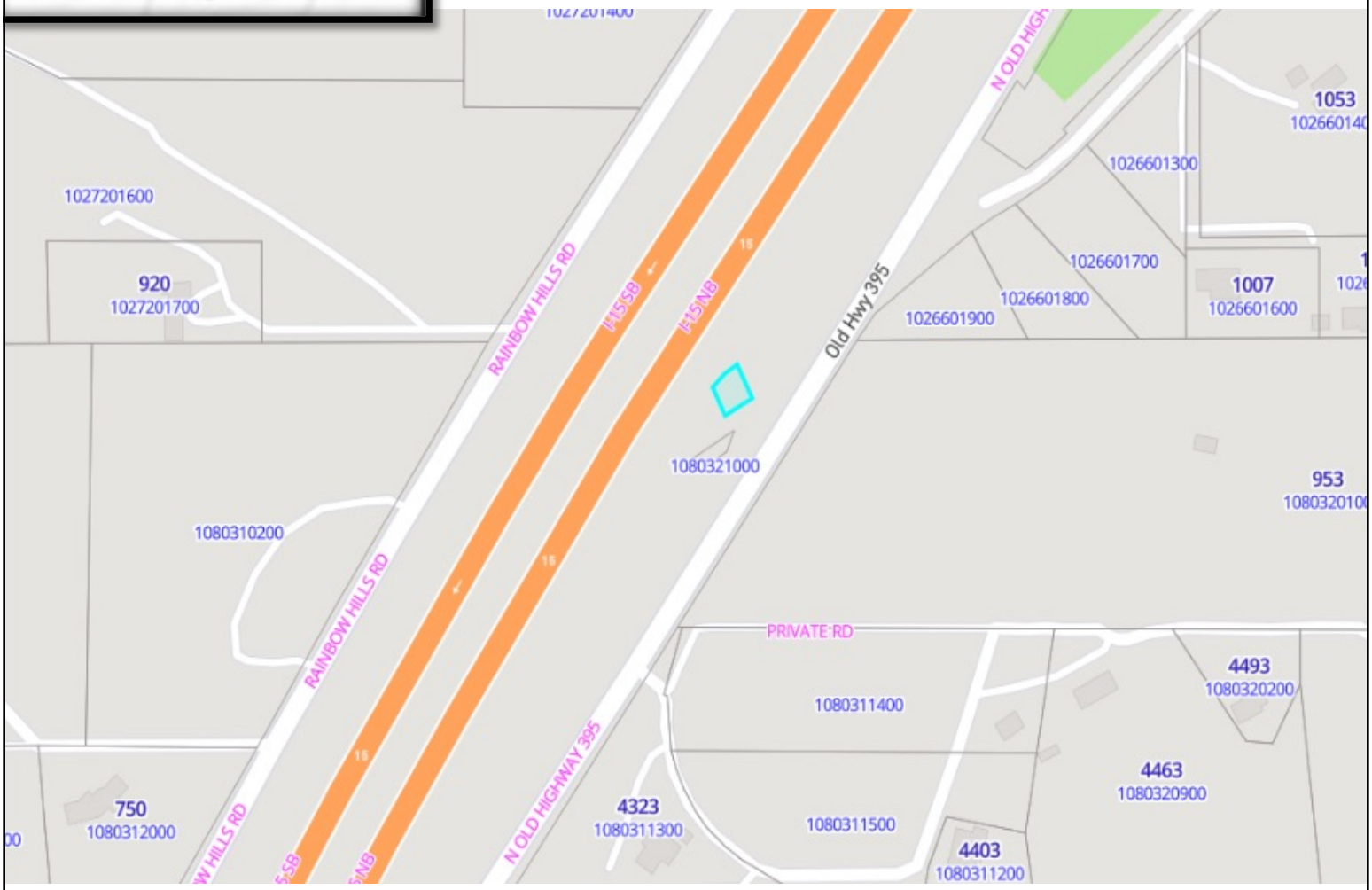
END OF SECTION 00687

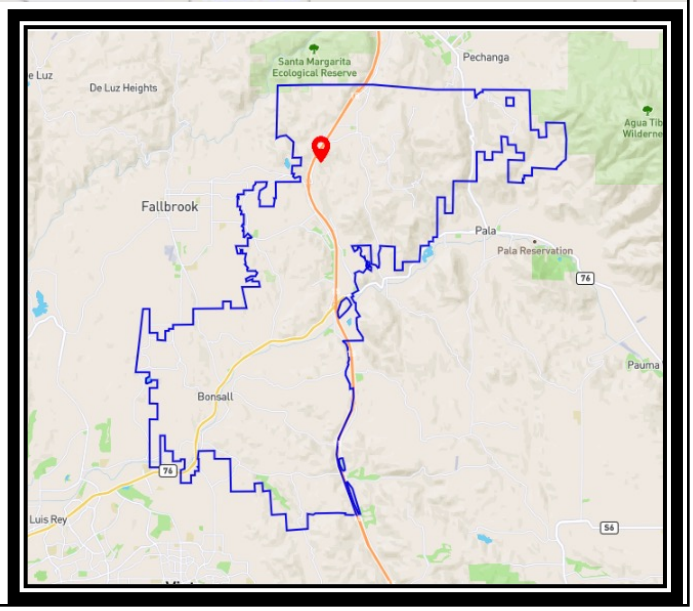
MANUAL TRANSFER SWITCHES – MORRO HILLS PUMP STATION PROJECT NO. 600058



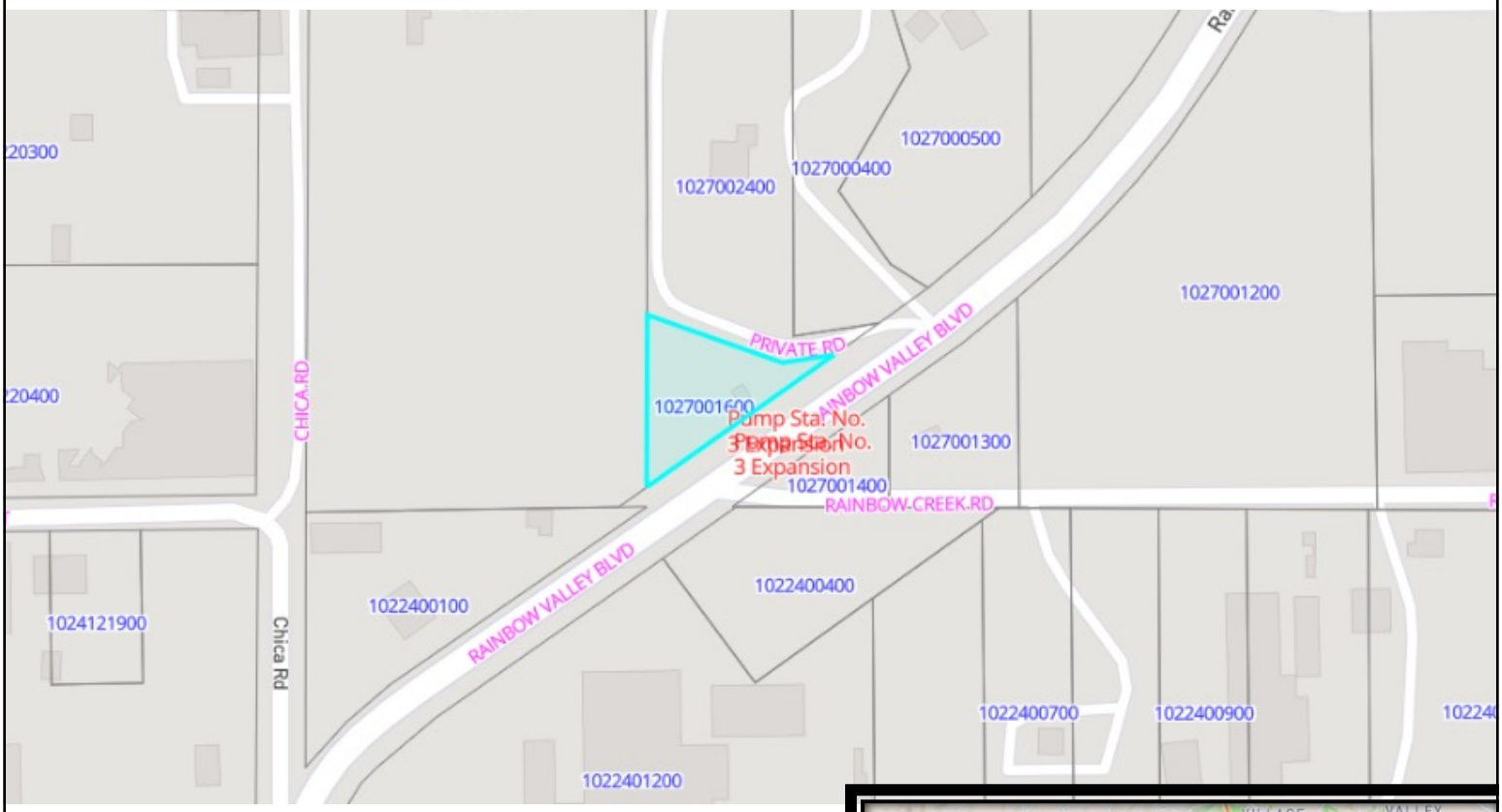


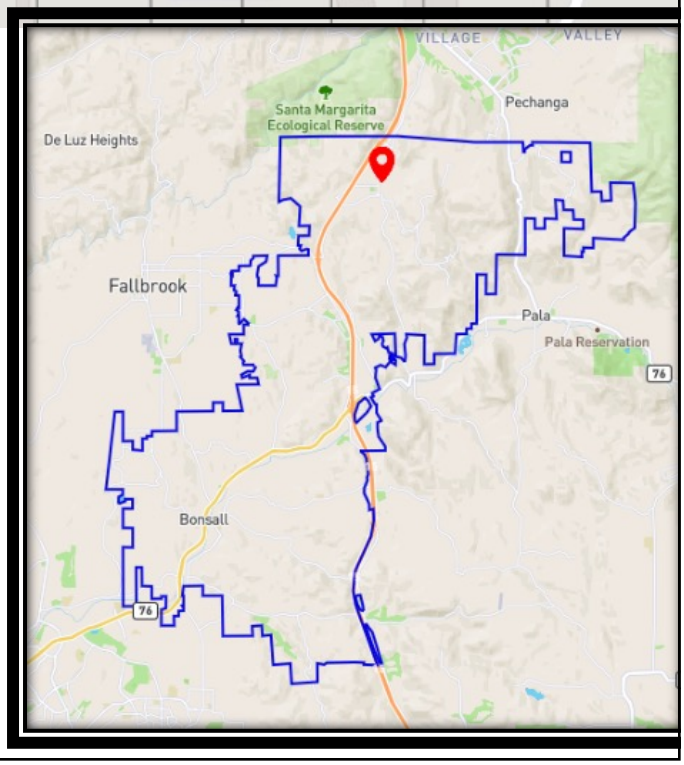
MANUAL TRANSFER SWITCHES – RAINBOW HILLS PUMP STATION PROJECT NO. 600058





MANUAL TRANSFER SWITCHES – VALLECITOS PUMP STATION PROJECT NO. 600058





RAINBOW
MUNICIPAL WATER DISTRICT

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COMMITTEE REVIEW ITEM NO. 3 D

Eagles Perch Pipeline Replacement Update

1. This project is for the installation of new segments of pipelines at and adjacent to Eagles Perch Lane and includes several private driveways/roadways. The proposed segments of pipeline to be added are 8-inch steel pipe as well as new appurtenances, including fire hydrants. The project also would relocate water service laterals and water meters. The proposed pipelines will eliminate existing pipelines traversing behind homes, reducing risk of property damage during pipe breaks/leaks.
2. The original design was completed in 2020; however, the project was not placed out for public bidding due to lack of available funding. District staff reviewed those plans and in September 2025, conducted site visits to field-verify the planned improvements and prepared additional comments. The plan markups have been provided to the design engineer. The design plans have not been finalized due to the determination that the District is not a party to the existing roadway and utility easements. An easement is required where the proposed outlines are to be placed.
3. District staff have been coordinating the efforts with the design engineer (Omnis), Dokken Engineering, and the Surveyor (KDM) to discuss the project alignment, easement acquisition, and logistics.
4. An assignment letter was issued to KDM to order title reports and to provide support in developing legal and plat maps as part of the easement acquisition process.
5. KDM has already ordered the title reports. This included ordering six title reports and four updated title reports. All the title reports and updates have been received and are currently being reviewed.

6. The design engineer also conducted a site walk on April 17th along the proposed pipeline alignment to verify that proposed appurtenances and meters are in workable locations. The data collected will assist with finalizing of the legal descriptions and plat maps for the proposed easements.
7. KDM is also researching whether an existing 20-foot road easement parallel to Camino Del Rey has been accepted by the County of San Diego. If it has been accepted, then acquisition of an easement is not anticipated at this time for that specific area.
8. Once easement documents have been finalized, District staff will engage the affected property owners on the project and coordinate the easement acquisition.
9. It is worth noting that the engineer's estimate in 2020 was $1.6 million dollars. It is anticipated that escalation over the past 6 years will likely be in the $2.0 million range. An updated engineer's estimate is part of Omnis' scope of work in finalizing/updating the plans.