DUDEK

2015 URBAN WATER MANAGEMENT PLAN

PREPARED FOR

Ramona Municipal Water District

PREPARED BY

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May 2016

2015 URBAN WATER MANAGEMENT PLAN
RAMONA MUNICIPAL WATER DISTRICT

Prepared for:

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MAY 2016

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1 INTRODUCTION AND OVERVIEW

1.1 Background and Purpose

This section of the 2015 Urban Water Management Plan (UWMP) provides an introduction to the Ramona Municipal Water District (District), summarizes the Urban Water Management Planning Act (UWMP Act), the coordination process, the history and description of the District, the physical water delivery system, and service area characteristics.

The District is a public agency organized under the Municipal Water District Law of 1911, Water Code Section 71000. The District is governed by five-member Board of Directors, whose members are publically elected to staggered four-year terms, and an appointed General Manager. The mission of the District is to provide a safe and reliable supply of water to its customers in the District Service Area of San Diego County. This 2015 UWMP identifies a mix of water resources projected to ensure long-term water supply reliability for the District over the next 25 years.

The District is a member agency of the San Diego County Water Authority (Water Authority), which is in turn a member agency of the Metropolitan Water District of Southern California (Metropolitan). The District relies on Metropolitan and Water Authority to continue to provide a reliable supply of imported treated and untreated water to the region.

1.2 Urban Water Management Planning and the California Water Code

The sections below are summaries of the California Water Code (CWC) sections applicable to UWMPs. The California Department of Water Resources (DWR) provides guidance on addressing CWC UWMP requirements, but water suppliers are solely responsible for ensuring that all CWC requirements and applicable laws have been met.

1.2.1 Urban Water Management Planning Act of 1983 (Appendix A)

The UWMP Act requires the District to develop UWMPs. The UWMPs provide a framework for long term water planning and inform the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands.

This part of the CWC requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses;
- Water supply sources;

- Efficient water uses;
- Demand management measures; and
- Water shortage contingency planning.

1.2.2 Applicable Changes to the Water Code Since 2010 UWMPs (Appendix C)

See Appendix C for a detailed table of these changes. Guidance for addressing the changes is included in the relevant chapters of the UWMP Guidebook and a summary list is provided below.

- Demand Management Measures CWC Section 10631 (f) (1) and (2) Assembly Bill 2067, 2014 *Guidebook Chapter 9*
- Submittal Date CWC Section 10621 (d) Assembly Bill 2067, 2014 *Guidebook Chapter 10*
- Electronic Submittal CWC Section 10644 (a) (2) Senate Bill 1420, 2014 *Guidebook Chapter 10*
- Standardized Forms CWC Section 10644 (a) (2) Senate Bill 1420, 2014 *Guidebook Chapter 10*
- Water Loss CWC Section 10631 (e) (1) (J) and (e) (3) (A) and (B) Senate Bill 1420, 2014, *Guidebook Appendix L*
- Estimating Future Water Savings CWC Section 10631 (e) (4) Senate Bill 1420, 2014 *Guidebook Appendix K*
- Voluntary Reporting of Energy Intensity CWC Section 10631.2 (a) and (b) Senate Bill 1036, 2014 *Guidebook Appendix O*
- Defining Water Features CWC Section 10632 (b) Assembly Bill 2409, 2010 *Guidebook Chapter 4*

1.2.3 Water Conservation Act of 2009 (SBX7-7) (Appendix B)

The Water Conservation Act of 2009 required retail urban water suppliers to report in their UWMPs their Base Daily per Capita Water Use (Baseline GPCD), 2015 Interim Urban Water Use Target, 2020 Urban Water Use Target, and Compliance Daily per Capita Water Use. These terms are defined in *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, DWR 2011 (Methodologies)* consistent with SBX7-7 requirements. The *Methodologies* document can be found online at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SBX7-7 in order to be eligible for State water grants or loans. The complete text of the Water Conservation Act is in Appendix B. Guidance for addressing the requirements of the Act is found in Chapter 5 of the UWMP Guidebook and in the *Methodologies* document. Retail water agencies are required to set targets and track progress toward decreasing daily per capita urban water use in their service area, which will assist the State in meeting its 20 percent reduction goal by 2020.

1.3 Urban Water Management Plans in Relation to other Planning Efforts

Urban water suppliers provide information on water management specific to their service areas. However, water management does not happen in isolation; there are other planning processes that integrate with the UWMP to accomplish urban planning. Some of these plans include city and county General Plans, Water Master Plans, Recycled Water Master Plans, integrated resource plans, Integrated Regional Water Management Plans, Groundwater Management Plans, and others.

The following plan has been prepared in accordance with State of California Assembly Bill No. 797. The bill, adopted in 1983, required all water suppliers in California with more than 3,000 customers or a demand exceeding 3,000 acre-feet (AF) annually to prepare and adopt an UWMP by 1985. The legislation also required the suppliers to adopt follow-up plans by December 31, 1990. Since originally adopted in 1983, the UWMP Act has been modified by several bills:

1. Assembly Bill 2661, adopted in July 1990, formally extended the process, requiring suppliers to update their plans every five years.
2. Subsequently, Senate Bill 553 (SB 553) was signed into law on September 28, 2000, revising the Urban Water Management Planning Act by replacing the 16 Demand Management Measures (DMMs) with the 14 Best Management Practices (BMPs) currently being implemented by Group 1 signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California.
3. AB 2552 was signed into law on September 28, 2000, and requires each urban water supplier to notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing its UWMP and considering changes to the plan.
4. AB 1420 was adopted in 2007, and requires water suppliers to implement the water Demand Management Measures to be eligible for water management grants or loans administered by the Department of Water Resources (DWR).

5. SBX7-7, adopted in 2009, was passed with the goal of reducing municipal water use by 20 percent by the year 2020. SBX7-7 requires water suppliers to report baseline per capita water use, 2015 interim per capita water use target, 2020 per capita water use targets, and the basis for determining the estimates.

1.4 UWMP Organization

This section provides a brief description of the contents of the plan by section.

Chapter 1 — Introduction and Overview: This introductory chapter provides a discussion on the importance and extent of the District's water management planning efforts.

Chapter 2 — Plan Preparation: Chapter 2 provides information on the District's process for developing the UWMP, including efforts in coordination and outreach.

Chapter 3 - System Description: Chapter 3 contains an overview of the District, including history, organizational structure, service area, population, climate and a description of existing facilities.

Chapter 4 — System Water Use: Past, current, and projected water use is summarized in Chapter 4. Water use is quantified for five-year increments through the year 2040 for uses such as single- family residential, industrial, commercial, etc.

Chapter 5 — Baselines and Targets: The calculation of baseline per capita water use and per capita water use targets are described and presented in Chapter 5. The District will demonstrate whether or not it has achieved the 2015 interim water use target and provide plans for achieving its 2020 water use target.

Chapter 6 — System Supplies: This chapter reviews the sources for water in the District, including groundwater, imported water, surface water, and recycled water.

Chapter 7 — Water Supply Reliability: This chapter discusses the frequency and magnitude of supply deficiencies, plans to ensure a reliable water supply, transfer and exchange opportunities, and projected supply and demand comparisons.

Chapter 8 — Water Shortage Contingency Planning: This chapter details the District's contingency analysis, including discussions of catastrophic water shortages and drought management planning.

Chapter 9 – Demand Management Measures: Chapter 9 provides a description of the District's efforts to promote conservation and to reduce demand on its water supply.

Chapter 10 – Plan Adoption, Submittal, and Implementation: This chapter describes the steps taken to adopt and submit the UWMP and to make it publicly available. This chapter will also discuss the District's plan to implement the UWMP.

APPENDIX A Urban Water Management Plan Checklist

APPENDIX B RMWD Board of Directors Resolution

APPENDIX C RMWD Drought Response Conservation Program

APPENDIX D Proof of Publication; UWMP Public Hearing

1.5 UWMPs and Grant or Loan Eligibility

1.5.1 Funding Eligibility for Retail and Wholesale Suppliers

In order for an urban water supplier to be eligible for any water management grant or loan administered by DWR, the agency must have a current UWMP on file that has been determined by DWR to address the requirements of the CWC. A current UWMP must also be maintained by the water supplier throughout the term of any grant or loan administered by DWR.

An UWMP may also be required in order to be eligible for other State funding, depending on the conditions that are specified in the funding guidelines. Agencies should seek guidance on the specifics of any State funding source from the funding agency(ies).

Changes to California law require that beginning in 2016, urban retail water suppliers must comply with water conservation requirements established by the Water Conservation Act of 2009 in order to be eligible for State water grants or loans. For 2015 UWMPs, this means that a retail water agency must meet its 2015 Interim Urban Water Use Target (see Chapter 5) and report compliance in the 2015 UWMP.

Suppliers may still be eligible if either of the below requirements are met:

1. The urban retail water supplier submits a schedule, financing plan, and budget, for achieving the per capita reductions; and/or
2. The urban retail water supplier submitted to DWR, for DWR's approval, documentation demonstrating that its entire service area qualifies as a disadvantaged community.

If an agency met its 2015 Interim Target, or met either of the exceptions above, and is participating in a multiagency water project or an Integrated Regional Water Management Plan, it shall remain eligible to receive grants or loans even though one or more of the other participating agencies is not in compliance with the SBX7-7 requirements.

2 PLAN PREPARATION

This chapter includes specific information on how the 2015 UWMP was prepared, coordinated with other agencies and the public, and adopted. This section also includes information on how the UWMP will be implemented by the District.

2.1 Basis for Preparing a Plan

In accordance with the CWC, urban water suppliers with 3,000 or more service connections or supplying 3,000 or more acre-feet of water per year are required to prepare an UWMP every five years.

If an agency is under this defined threshold for the year that an UWMP is due, but meets this threshold before the next reporting cycle, the agency is required to adopt an UWMP within one year after meeting the reporting threshold.

Water suppliers will provide a brief discussion of the applicability of CWC 10617 to their agency.

2.1.1 Public Water Systems

Public Water Systems (PWSs) are the systems that provide drinking water for human consumption. These systems are regulated by the State Water Resources Control Board (Board), Division of Drinking Water. The California Health and Safety Code defines a PWS as 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.

PWS data reported to the Board are used to determine whether or not a retail supplier has reached the UWMP reporting threshold of 3,000 or more connections or 3,000 acre-feet of water supplied. This is done by reviewing the number of connections and volume of water supplied by each PWS that is managed by the water supplier.

Reporting the PWS(s) that are managed by a water agency demonstrates the basis of reporting, that is, if the agency is considered an urban water supplier for the purposes of submitting an UWMP.

2.1.2 Agencies Serving Multiple Service Areas/Public Water Systems

Many water suppliers within the State have more than one PWS. Such suppliers may determine regional groupings and reporting for these systems based on internal planning requirements, geographic distribution, and similarities between systems. Each PWS that exceeds the UWMP size threshold must either have an individual plan or be included in a multiple system plan.

The names and numbers of each PWS (drinking water only) that is managed by the District and reported in this UWMP are provided in Table 2-1.

Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
3710019	Ramona Muicipal Water District	9,446	4,653
	TOTAL	9446	4,653
NOTES:			

2.2 Regional Planning

Before developing the UWMP, water agencies should consider the extent to which they will become involved in regional planning processes. Developing a cooperative 2015 UWMP may be a natural continuation of other regional coordination efforts, such as Integrated Regional Water Management, or may present an opportunity to begin regional collaboration.

Regional planning can deliver mutually beneficial solutions to all agencies involved by reducing costs for the individual agency, assessing water resources at the appropriate geographic scale, and allowing for solutions that cross jurisdictional boundaries.

Some of the other possible benefits, depending on the level of regional cooperation, can include:

- More reliable water supplies;
- Increased regional self-reliance;
- Improved water quality;
- Better flood management;
- Increased economic stability;
- Restored and enhanced ecosystems; and
- Reduced conflict over resources.

In support of regional UWMPs and regional water conservation targets, the UWMP portion of the CWC provides mechanisms for participating in area-wide, regional, watershed, or basin-wide urban water management planning.

2.3 Individual or Regional Planning and Compliance

Before developing the UWMP, water suppliers should decide the level of regional coordination that they wish to engage in for the 2015 cycle of urban water management planning.

Regional planning provides many benefits, including increasing regional self-reliance, reducing the need for imported water, and proper management of regional water assets. Good regional planning considers all interests and works across jurisdictional boundaries.

Agencies may choose:

- **Individual Reporting** – An agency develops an UWMP that reports solely on its service area. The individual UWMP addresses all requirements of the CWC. The agency notifies and coordinates with appropriate regional agencies and constituents.
- **Regional Reporting** – Working with an Integrated Regional Water Management (IRWM) group, wholesaler, other retailers, or another regional entity, an agency becomes part of a regional group that may develop either a:
    - **RUWMP** – A regional group develops a RUWMP that reports on their combined regional service area. The RUWMP addresses all the requirements of the CWC. The requirements of SBX7-7 may be addressed either by individual agencies or through a Regional Alliance (see Section 2.3.2). RUWMPs will submit data for multiple agencies, requiring duplication of many standardized tables.
    - **Regional Alliance** – A regional group develops a Regional Alliance that addresses only the requirements of the Water Conservation Act of 2009 (SBX7-7), that is, planning, reporting and complying as a Regional Alliance on 2015 and 2020 water use targets. All other elements of the CWC must be addressed through either an individual or RUWMP.

Table 2-2 indicates that the District will prepare an Individual UWMP.

Table 2-2: Plan Identification (Select One)		
☑	Individual UWMP	
☐	Regional UWMP (RUWMP) *(checking this triggers the next line to appear)*	
	Select One:	
	☐	RUWMP includes a Regional Alliance
	☐	RUWMP does not include a Regional Alliance
NOTES:		

2.4 Fiscal or Calendar Year and Units of Measure

2.4.1 Fiscal or Calendar Year

A water supplier may report on a fiscal year or calendar year basis, but must clearly state in the UWMP the type of year that is used for reporting. The type of year should remain consistent throughout the Plan.

DWR prefers that agencies report on a calendar year basis in order to ensure UWMP data is consistent with data submitted in other reports to the State. However, DWR also understands that for some agencies fiscal year reporting ensures consistency with local, regional, and/or financial reports. The agency may report either calendar year or fiscal year data in the UWMP.

For agencies that are reporting on a fiscal year basis: table columns labeled with particular years signify the end year of the fiscal year. For example, 2015 denotes the fiscal year 2014-2015.

2.4.2 Reporting Complete 2015 Data

2015 UWMPs are required to include the water use and planning data for the entire calendar year of 2015, if an agency is reporting on a calendar year basis. If an agency is reporting on a fiscal year basis, it may complete its 2015 UWMP at the end of its fiscal year and include the water use and supply data for their fiscal year 2014-2015.

2.4.3 Units of Measure

Water agencies use various units of measure when reporting water volumes, such as acre-feet (AF), million gallons (MG), or hundred cubic feet (CCF). Agencies may report volumes of water in any of these units, but must maintain consistency throughout the Plan.

The units of measure the District will be using to report water volume throughout the UWMP are reported in Table 2-3.

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☐	Agency is a wholesaler
☑	Agency is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
If Using Fiscal Years Provide Month and Day that the Fiscal Year Begins (dd/mm)	
dd/mm	
Units of Measure Used in UWMP (select from Drop down)	
Unit	AF
NOTES:	

2.5 Coordination and Outreach

2.5.1 Wholesale and Retail Coordination

When a water supplier relies upon a wholesale agency for a water supply, both suppliers are required to provide each other with information regarding projected water supply and demand, as described below.

Retail agencies that receive a water supply from one or more wholesalers are required to provide their wholesaler(s) with the retail agency's projected water demand from that source, in five-year increments for 20 years, or as far as data is available.

Table 2-4 Retail: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name *(Add additional rows as needed)*
San Diego County Water Authority
City of Poway
NOTES:

2.5.2 Coordination with Other Agencies and the Community

Water suppliers must coordinate the preparation of their UWMP with other appropriate agencies in the area, to the extent practicable. In order to verify that agencies have fulfilled provisions set forth in CWC 10620(d)(2) and CWC 10642.

2.5.3 Public Outreach

In accordance with the UWMP Act, the District notified the land use jurisdictions within its service area that it was preparing the 2015 UWMP. Prior to adoption, the District mailed the draft 2015 UWMP to a list of stakeholders and local agencies that included San Diego LAFCO, the San Diego Association of Governments (SANDAG) and the County of San Diego. The draft 2015 UWMP was also available for public review at the District's office and on the District's website. The District reviewed all of the comments received from stakeholders and revised the plan accordingly. A copy of the adopted 2015 UWMP will be provided to all applicable parties within sixty days of submission to DWR.

2.5.4 Agency Coordination

This report constitutes the 2015 update to the District's 2010 UWMP. To adequately demonstrate that the District will have a reliable water supply over the next 25 years, the 2015 UWMP quantifies the mix of existing and projected local and imported supplies necessary to meet future water demands within the District's service area. While the 2015 UWMP includes specific documentation on development of the District's water supplies, the UWMPs submitted

by the Water Authority and Metropolitan provide details on their water supplies that are the major contributors to the diversification and reliability of supplies for the District.

Maintaining consistency among the plans of the District, Water Authority and Metropolitan is important to the accurate reflection of the projected supplies available to meet the demands of the District. To facilitate coordination of UWMPs the Water Authority formed an Urban Water Management Plan Working Group made up of staff from the Water Authority and its member agencies. This group provided a forum for exchanging demand and supply information. In addition, DWR hosted a special workshop to review the requirements of the UWMP Act. At a separate workshop, the Working Group received a briefing from Metropolitan on its regional plan, and participants discussed strategies for coordination between the supply agencies.

Table 2-5: DISTRICT COORDINATION WITH APPROPRIATE AGENCIES

Coordinating Agencies	Participated in Developing the Plan	Commented on the Draft	Attended Public Meetings	Was Contacted for Assistance	Was Sent a Notice of Intention to Adopt
Water Management Agencies					
Water Authority	X			X	X
Relevant Public Agencies					
SANDAG					X
San Diego LAFCO					X
County of San Diego					X
General Public			X		X

2.6 Plan Adoption

This 2015 update of the UWMP was prepared from February 2016 through June 2016. The District's Board of Directors held a public hearing regarding the 2015 UWMP on June 14 2016, and adopted the 2015 UWMP on June 14, 2016 after the public rate hearing was completed. The updated UWMP was submitted to the Department of Water Resources (DWR) in June 2016. See Appendix B for a copy of the resolution approving the filing of the 2015 Urban Water Management Plan Update. This plan includes all information necessary to meet the requirements of California Water Code Division 6, Part 2.6 (Urban Water Management Planning).

A copy of the adopted UWMP was submitted to the California Department of Water Resources, the California State Library, and is available to the public at the District's office, located at:

Ramona Municipal Water District Office (Engineering Counter)
105 Earlham Street
Ramona, California 92065

2.7 Plan Implementation

This UWMP provides a comparison of water supplies available to the District with the projected water demand through the year 2040, as well as discusses conservation measures the District has implemented to ensure a safe and reliable water source is available to residences of the District. As with previous UWMP updates prepared by the District, this plan will be used to provide the basis for determining that sufficient water supply is available for future proposed development.

The District has incorporated information on the District's wastewater operations in addressing the water recycling element of the 2015 UWMP, which describes the wastewater treatment requirements and water recycling potential.

This UWMP also provides the per capita water use baseline and target required by SBX7-7. The District will compare the per capita water use in upcoming years with the SBX7-7 targets to ensure the District will meet its 2020 and 2025 targets.

3 SYSTEM DESCRIPTION

This section presents history, service area description, and population growth information for the District, as well as a summary of the climate in the District's service area.

3.1 General Description

3.1.1 History of the Ramona Municipal Water District

A timeline detailing the history of the District is presented below.

1925	Ramona Irrigation District organized to encompass 660-acres, utilizing water obtained from wells.
1956	Ramona Municipal Water District organized on August 15, 1956 to encompass 20,600-acres that surrounded the Irrigation District.
1958	Poway Pump Station Built to deliver Water Authority filtered water to the District. Pump station and 18-inch pipeline become the District's treated water supply.
1967	The District acquires the Ramona Irrigation District.
1970	Annexed San Diego Country Estates, a 3,650-acre development with water and sewer system.
1972	Bargar Water Treatment Plant placed in service. Capacity is rated at 5.3-MGD but clarifiers are limited to 4.0-MGD.
1978	Untreated Water Pump Station (8.4-MGD) and 27-inch pipeline completed in 1978. Capacity is limited by 18-inch supply line, meter rated to 10.8-MGD, and flow rate of 8.2-MGD (25.5-AF/day).
1979	Assessment District 79-1 organized to provide untreated water and encompassed 6,200-acres of agricultural land primarily avocados groves.
1981	Ramona Fire Protection District dissolved and merged with Ramona Municipal Water District on June 2, 1981
1981	Ramona Sanitation District (formed in 1946) dissolved and merged with Ramona Municipal Water District (Santa Maria (800-acres, 8,000 population, 2,400 EDU) and San Vicente (2,400 acres, 8,000 population, 2,600 EDUs) on July 1, 1981
1988	Lake Ramona (13,400-AF can be expanded to 18,400-AF) dedicated for untreated water use on August 27, 1988.

2003	New Poway Pump Station and 30-in Pipeline constructed. Placed in service September 29, 2003. Capacity limited by Water Authority meter to 18.6-MGD.
2003	Construction of San Vicente WWTP expansion to 0.80-MGD and addition of tertiary facilities and pond 3 were completed April 29, 2003.
2015	Replacement of 900 HP pump motor with 900 HP Natural Gas Engine to operate pump at Poway Pump Station

Before 1947, the District and the San Diego region relied on local surface water runoff and groundwater pumped from local aquifers. As the economy and population have grown, local resources have become insufficient to meet the District's water supply needs. The Poway Pump Station was built in 1958 and began delivery of Water Authority treated water to the District. In 1972 the Bargar Water Treatment Plant (BWTP) was placed in service to treat water from Lake Sutherland. In 1978 the untreated water Poway Pump Station and Pipeline was built to deliver Water Authority water to the District. In August 1988 Lake Ramona was dedicated and the Poway Pump Station began delivery of untreated water to the lake. In 2003 an additional Poway Pump Station and 30-inch pipeline were added to the treated water system, bringing the ultimate capacity to 18.6 million gallons per day (MGD). Since 2007 the District's BWTP has been off-line and does not currently provide any water. Currently the Water Authority provides all of the District's treated and untreated water supply.

3.1.2 Description of Existing Facilities

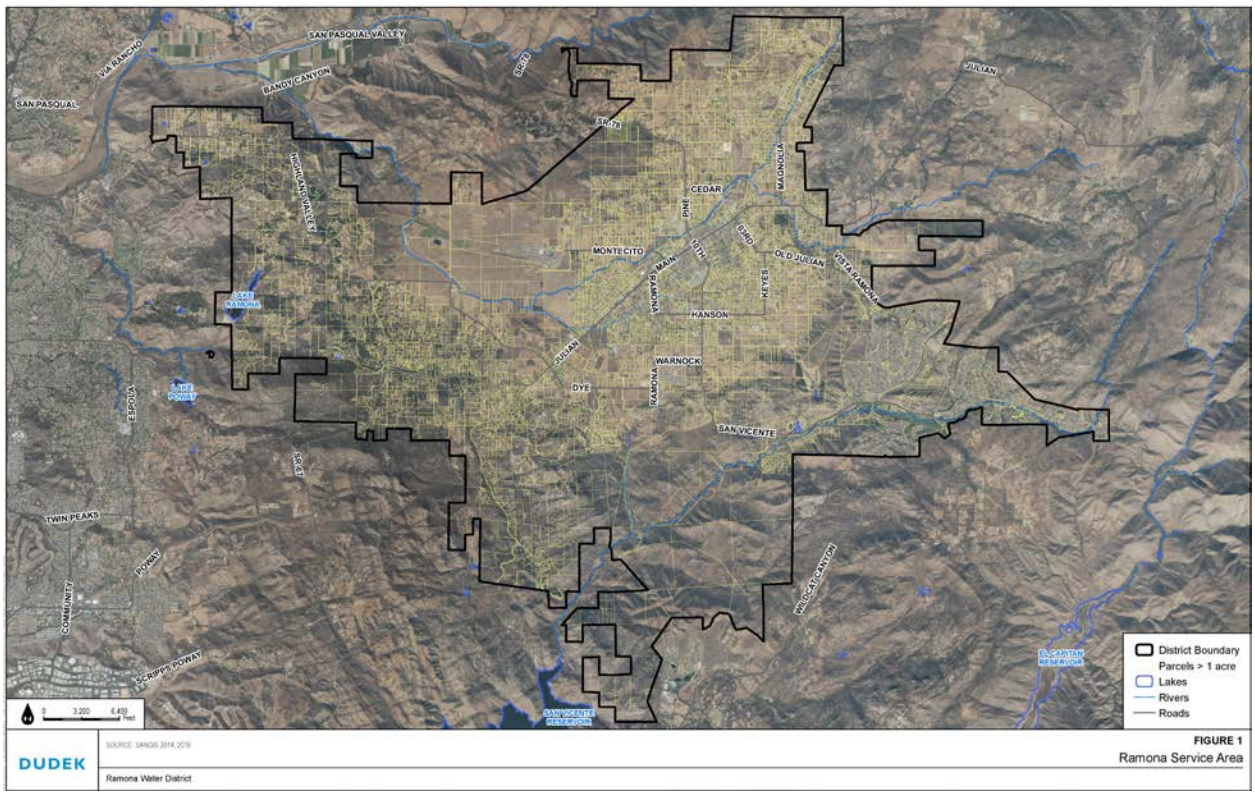
The District purchases treated and untreated water from the Water Authority, delivers recycled water to three recycled water customers, and owns three wells that may be used in an emergency. In 2015, the District delivered approximately 5,167 AF of potable and non-potable water. The District's water delivery system consists of 209-miles of water mains, 15 treated water reservoirs with a capacity of 28 million gallons (MG), and 7 untreated reservoirs with a capacity of 13.5 MG, a 4.0 MGD water treatment plant (currently off-line), and two water reclamation plants producing recycled water at a capacity of 0.35 MGD and 0.50 MGD.

A small but growing share of the District's local supply comes from recycled water. Groundwater does not produce any significant water supply and groundwater recovery projects have not been attempted by the District. Yield from these projects would be considered drought- proof since they are primarily independent of precipitation.

3.2 Service Area Boundary Maps

The District provides water for urban and agricultural uses to unincorporated areas in the central area of San Diego County, including the census designated places of Ramona and San Diego Country Estates. The District's service area covers a total of 45,796-acres (72-square miles) and is the eastern boundary of the Water Authority and Metropolitan. The District encompasses the Santa Maria Valley, San Vicente Valley, and surrounding hillsides with elevations from 840-feet mean sea level (MSL) to over 2,800-feet MSL. Figure 1 shows the District's service area.

Figure 1. District Service Area



The District's service area was primarily agricultural prior to 1970 when the District annexed the San Diego Country Estates and further suburban development began in the region. The County's Multiple Species Conservation Plan (MSCP) has identified large areas of the community of Ramona for grasslands and native habitat preservation. The District provides service to approximately 7,000 urban parcels and 3,000 rural parcels (greater than 1-acre) with average yearly water deliveries to its customers between 2011 and 2015 of 5,795-AF. Table provides a summary of the District's current number of metered connections by customer type.

Table 3-1: CURRENT NUMBER OF CONNECTIONS BY CUSTOMER TYPE

Customer Type	Number of Connections[a]
Single-family Residential	8,539
Multi-family Residential	169
Commercial	432
Industrial	0
Institutional/Governmental	76
Landscape	135
Agricultural	1
Other	94
Total	**9,446**

[a] Number of connections in 2015

3.3 Climate

Climate within the District's service area is comprised of hot summers and mild winters. The District receives an annual average of 16.7-inches of precipitation in the form of rainfall. The majority of precipitation (over 80%) occurs during the months of December through April. On a monthly basis, water requirements tend to increase significantly during the summer months when a decrease in rainfall, combined with an increase in temperatures and evapotranspiration (ET) levels, lead to demands 2-3 times the average day demand. A monthly climate summary for the District's service area is provided as Table 3-2.

Table 3-2: RAMONA MUNICIPAL WATER DISTRICT SERVICE AREA MONTHLY CLIMATE SUMMARY

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Annual
Average Max Temperature (°F)	67	66	68	72	77	83	90	91	88	81	73	66	77
Average Min Temperature (°F)	37	38	40	43	48	51	56	58	54	48	41	36	46
Average Total Precipitation (in.)	2.91	3.46	2.96	1.12	0.31	0.08	0.07	0.10	0.22	0.69	1.50	2.07	15.69
Average Monthly ET (in.)	2.81	2.76	3.78	5.31	6.10	6.97	7.08	6.83	5.67	4.15	3.31	2.56	57.33

Source: "Average weather for Ramona, CA". Weather.com. February 2016. Retrieved 12 February 2016.

3.4 Service Area Population and Demographics

When the District was formed in 1956, the population within the District's service area was approximately 5,600 inhabitants. In 2010, the population within the service area is estimated at 33,600. The average population density is approximately 3.0 persons per household. Over the past ten years the average annual growth rate within the District's service area has been 2.2-percent. The SANDAG 2030 Regional Growth Forecast Update projects an annual growth rate in the unincorporated region of San Diego County of 2.1-percent through the year 2040. The population projection for the District's service area through 2040 is summarized in Table 3-3.

Table 3-3 Retail: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
	36,362	39,005	40,011	41,467	43,416	43,910
NOTES: Source of Information: SANDAG						

3.4.1 Other Demographic Factors

The District's service area is comprised of mostly single family residential connections. With a small number of multi-family residential, commercial and industrial connections domestic water

demand is relatively low. A larger water demand can be seen from the local landscape and agricultural connections which the District serves in this rural portion of the county.

3.5 Capital Improvement Program

The District's water system Water Capital Improvement Program (CIP) (fund 43) consists of projects to improve system capacity and reliability and to be built between FY 15-16 with a total use of funds of $350,000. The District's water Capital Replacement Program (CRP) (funds 10 & 11) consists of replacement and betterment projects required to maintain and enhance the system reliability. The FY 15-16 budget totals $4,091,000 which includes partial cost ($2.8 million) for replacement of pipeline required for the County of San Diego San Vicente Road Realignment Project.

4 SYSTEM WATER USE

This chapter summarizes historic and future water demands within the District's service area. In 2015 the District supplied 4,654-AF to its customers. Future water demand projections will include per capita water use targets developed in Chapter 5. The District's entire water supply, excluding recycled water, is currently imported from the Water Authority.

4.1 Recycled Versus Potable and Raw Water Demand

Recycled water is addressed comprehensively in Section 6.4 of Chapter 6, but a summary of recycled water demand is included in Table 4-3.

Chapter 4 addresses potable water demand and also provides for the reporting of raw water demand for the year 2015. Raw water use in 2015 is reported in Table 4-1.

4.2 Water Uses by Sector

Current and projected water use in five year increments is provided in this section. Water use will be identified by sector to give a better understanding of water use. Water use by sector is provided in Tables 4-1 and 4-2.

Table 4-1 Retail: Demands for Potable and Raw Water - Actual

Use Type (Add additional rows as needed)	2015 Actual		
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	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume
Single Family		Drinking Water	2,468
Multi-Family		Drinking Water	426
Institutional/Governmental		Drinking Water	108
Landscape		Raw Water	1,249
Agricultural irrigation		Raw Water	61
Commercial		Drinking Water	294
Other			48
		TOTAL	4,654
NOTES:			

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type *(Add additional rows as needed)*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
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*		2020	2025	2030	2035	2040-opt
Single Family		3,886	4,091	4,101	4,081	4,108
Multi-Family		671	707	708	705	710
Commercial		463	488	489	486	490
Industrial		0	0	0	0	0
Institutional/Governmental		170	179	180	179	180
Landscape		1,966	2,070	2,075	2,065	2,079
Agricultural irrigation		96	101	101	101	101
Other		76	79	80	79	79
	TOTAL	7328	7715	7734	7696	7747
NOTES: Source San Diego County Water Authority 2015 UWMP						

Table 4-3 Retail: Total Water Demands						
	2015	2020	2025	2030	2035	2040 *(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	4,654	7,328	7,715	7,734	7,696	7,747
Recycled Water Demand *From Table 6-4*	947	947	994	1,017	1,040	1,040
TOTAL WATER DEMAND	5,601	8,275	8,709	8,751	8,736	8,787
NOTES: Source San Diego County Water Authority 2015 UWMP						

Demand projections are estimated based on the expected population growth and current average per capita demand.

4.3 Distribution System Water Losses

Distribution system water losses (also known as "real losses") are the physical water losses from the water distribution system and the District's storage facilities, up to the point of customer consumption. System losses average 6-percent, below the American Water Works Association standard of 12-percent.

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	294
NOTES: Descrepancy between water purchased and water sold	

Table 4-5: ADDITIONAL WATER USES AND LOSSES (AF/YR)

Water Use	2010	2015	2020	2025	2030	2035	2040
Recycled Water	729	947	947	994	1,017	1,040	1,040
System Losses	545	294	294	294	294	294	294

4.4 Estimating Future Water Savings

Water savings from codes, standards, ordinances, or transportation and land use plans are also known as "passive savings". These various factors generally decrease the water use for new and future customers, compared to historical customers.

4.5 Water Use for Lower Income Households

The projected water demand for lower income housing as required by the UWMP Act is described in this section. A lower income household is defined as a household whose income is 80 percent or less of the median income in the District's service area. The number of low income households in the District's service area was forecasted using SANDAG's 2050 Regional Growth Forecast.

Table 4-6 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	No
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc... utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

Table 4-7: LOW INCOME HOUSING WATER DEMAND (2020-2040)

	Water Demand Totals (AF)				
Customer Type	**2020**	**2025**	**2030**	**2035**	**2040**
Total Low Income Housing Water Demand[1]	203	191	181	175	170

[1]SANDAG, 2050 Regional Growth Forecast Estimates 3%/year Reduction

4.6 Current Water Deliveries

Current water deliveries from 2015 are presented in Table 4-8.

Table 4-8: WATER DELIVERIES – ACTUAL, 2015

	2015 Metered	
Water Use Sectors	**# of Accounts**	**Deliveries (AF)**
Single-Family Residential	8,539	2,467
Multi-Family Residential	169	426
Commercial	432	294
Industrial	0	0
Public Agency/Institutional	76	108
Landscape	135	1,249
Agricultural	1	61
General Other	94	48
TOTAL	**9,446**	**4,653**

4.7 Projected Water Deliveries

The District's current demand for water falls into two basic categories: municipal and industrial (M&I), and agricultural. M&I uses constitute about 71% of the District's water consumption and agricultural water, used mostly for irrigating groves and crops, accounts for the remaining demand. Projected demand through 2040 is expected to maintain this balance. The Water

Authority has used its CWA-MAIN model to prepare projections of future water use within the District's service area. The CWA-MAIN model uses input data for population, demographics, climate, economic forecasts, and other variables to estimate future water use. Agricultural demands are developed by the Water Authority in conjunction with its member agencies, SANDAG, County of San Diego Agricultural Weights and Measures, and the California Avocado Commission. The Water Authority's agricultural demand projections include projected demands under the Water Authority's Special Agricultural Water Rate (SAWR) program and agricultural demands serviced by water purchased at the M&I rate [3]. The District has elected to use these forecasts of future water use to maintain consistency with planning work by the Water Authority. Table 4-9 presents projected District water deliveries for 2020.

Table 4-9: WATER DELIVERIES – PROJECTED, 2020

	2020 Metered	
Water Use Sectors	**# of Accounts**	**Deliveries[a] (AF)**
Single-Family Residential	8,956	3,886
Multi-Family Residential	177	671
Commercial	454	463
Industrial	0	0
Public Agency/Institutional	80	170
Landscape	142	1966
Agricultural	3	96
General Other	20	76
TOTAL	**9,832**	**7,328**

[a] Source: Water Authority 2015 UWMP [3]

Table 4-10 presents projected District water deliveries for 2025.

Table 4-10: WATER DELIVERIES – PROJECTED, 2025

	2025 Metered	
Water Use Sectors	**# of Accounts**	**Deliveries[a] (AF)**
Single-Family Residential	9,429	4,091
Multi-Family Residential	187	707
Commercial	478	488
Industrial	0	0
Public Agency/Institutional	84	179
Landscape	149	2070
Agricultural	3	101
General Other	21	80
TOTAL	**10,351**	**7,715**

[a] Source: Water Authority 2015 UWMP [3]

Projected water deliveries for years 2030, 2035 and 2040 are provided in Table 4-11.

Table 4-11: WATER DELIVERIES – PROJECTED 2030, 2035, AND 2040

	2030 Metered		2035 Metered		2040 Metered	
Water Use Sectors	**# of Accounts**	**Deliveries[a] (AF)**	**# of Accounts**	**Deliveries[a] (AF)**	**# of Accounts**	**Deliveries[a] (AF)**
Single-Family Residential	9,452	4,101	9,406	4,081	9,468	4,108
Multi-Family Residential	187	708	186	705	188	710
Commercial	479	489	476	486	480	490
Industrial	0	0	0	0	0	0
Public	84	179	84	179	85	180
Landscape	150	2,075	149	2,065	150	2,079
Agricultural	3	101	3	101	3	102
General Other	21	80	21	79	21	80
TOTAL	**10,377**	**7,734**	**10,326**	**7,696**	**10,394**	**7,747**

[a] Source: Water Authority 2015 UWMP [3]

4.7.1 Sales to Other Water Agencies

The District does not currently participate in water sales to other agencies and does not project to do so through the planning period covered by this UWMP.

4.7.2 Total Water Use

The District's total water use, combining total water deliveries, sales to other agencies and the additional water uses, for 2010 through 2040 is presented in Table 4-12.

Table 4-12: TOTAL WATER USE (AF/YR)

Water Use	2010	2015	2020	2025	2030	2035	2040
Total Water Deliveries	5,856	4,653	7,328	7,715	7,734	7,696	7,747
Sales to Other Water Agencies	0	0	0	0	0	0	0
Additional Water Uses and Losses	1,274	1,241	1,241	1,288	1,311	1,334	1,334
TOTAL	**7,130**	**5,894**	**8,569**	**9,003**	**9,045**	**9,030**	**9,081**

4.8 Water Demand Projections

Projected District water demand from the Water Authority under normal weather conditions is presented in Table 4-13. Projected demand is based on the Water Authority's CWA-MAIN model. Recycled water demands are not included in these projections.

Table 4-13: DISTRICT DEMAND PROJECTIONS PROVIDED TO WHOLESALE SUPPLIER

Wholesaler	Contracted Volume	2015	2020	2025	2030	2035	2040
Water Authority	N/A	4,947	7,622	8,009	8,028	7,990	8,041

5 SBX7-7 BASELINES AND TARGETS

In February 2008, Governor Arnold Schwarzenegger introduced a plan for improving the Sacramento-San Joaquin Delta, a component of which is to achieve a 20-percent reduction in per capita water use statewide by the year 2020. With the adoption of the Water Conservation Act of 2009, also known as the SBX7-7, the State is required to set a goal of reducing urban water use by 20 percent by the year 2020. The District must determine baseline water use during their baseline period and also target water use for the years 2015 and 2020 in order to help the State achieve the 20 percent reduction.

The following methodology was used to determine SBX7-7 compliance goals:

1. Determine the District's Baseline Per Capita Water Use (described in Section 5.2 and Table 12)
2. Determine the 2020 Per Capita Water Use Target by one of four methods (described in Section 5.3)
3. Confirm 2020 Per Capita Water Use Target against target based on minimum amount of conservation (described in Section 5.4 and Table 13)
4. Determine the 2015 Per Capita Water Use Target (described in Section 5.5)

5.1 Updating Calculations from 2010 UWMP

5.1.1 Update of Target Method

In 2010 UWMPs, water agencies calculated a 2020 Urban Water Use Target through the use of a selected target method. In 2015 UWMPs, water agencies may update their 2020 Target and may make this calculation using a different target method than was used in 2010. The District has elected to use the same target method as was used in 2010 but with updated water use data.

5.2 Baseline per Capita Water Use

The determination of baseline per capita water use for the District is summarized in Table 5-1.

The baseline use is the average annual per capita water use calculated over a period of ten years ending between 2004 and 2010. The ten-year baseline was used as recycled water deliveries by the District did not meet 10-percent of the total water deliveries threshold. As seen in Table 5-1, the District's ten-year (1997-2006) baseline per capita water use is 294 gpcd.

Table 5-1: BASELINE PER CAPITA WATER USE – RAMONA MUNICIPAL WATER DISTRICT

Year	Total Water Use[a], AF/YR	Total Water Use[a], MG/yr	Population[b]	Annual Per Capita Water Use[c], gpcd
1997	9,446	3,078	25,162	335
1998	5,345	1,742	25,728	185
1999	6,101	1,988	26,307	207
2000	9,757	3,179	26,898	324
2001	10,801	3,519	27,504	351
2002	12,362	4,028	28,122	392
2003	10,944	3,566	28,755	340
2004	11,601	3,780	29,402	352
2005	10,179	3,317	30,063	302
2006	5,166	1,683	30,739	150
2007	13,009	4,239	31,431	369
2008	9,297	3.029	32,138	258
2009	7,039	2,294	32,861	191
2010	6,047	1,970	33,600	161
Baseline Per Capita Water Use, gpcd: 10-yr = 294				

[a] The District Total Water Use is based on total production during a given year.

[b] District population as provided by the U.S. Census Bureau and calculated average population growth rates.

[c] Annual per capita water use is the total water use divided by the population

5.3 2020 Per Capita Water Use Target

The per capita water use target, which must be met by 2020, must be calculated using one of four methods described in the Guidebook to Assist Urban Water Suppliers to prepare a 2015 Urban Water Management Plan (UWMP Guidebook). The District evaluated all four methods and determined that Methods 1 and 3 are the most appropriate methods to determine the 2020 Per Capita Water Use Target. It is in the District's interest to use the highest target calculated by the four methods in order to minimize impacts to the water users of the District.

The District used Methods 1 and 3 to determine potential per capita water use targets. Using Method 1, the per capita water use target is 80-percent of the baseline per capita water use. The District's per capita water use target would be 235 gpcd using Method 1.

Using Method 3, the per capita water use target is 95 percent of the applicable state hydrologic region target as defined in the draft 20x2020 Water Conservation Plan. The District is located in the South Coast hydrologic region, which has a hydrologic region target of 149 gpcd. The District's per capita water use target, based on Method 3, is therefore 142 gpcd.

The 2020 Per Capita Water Use Target of 235 gpcd calculated by Method 1 is the preferred target.

5.4 Confirm 2020 Per Capita Water Use Target

SBX7-7 requires the District to achieve a minimum amount of conservation regardless of the 2020 Per Capita Water Use Targets calculated by the four methods. This minimum amount of conservation is described in Section 10608.22 of SBX7-7. A water supplier may not use a per capita water use target greater than the water use target described in Section 10608.22.

This maximum water use target is determined using a baseline per capita water use calculated by averaging per capita water use over a five-year period ending between 2007 and 2010. The maximum per capita water use target is 95-percent of this baseline per capita water use. Note that the baseline per capita water use used to determine the maximum per capita water use target is not the same baseline per capita water use used to determine the Method 1 per capita water use target as described in Section 5.2 Table 5-1. The maximum per capita water use target calculation for the District is summarized in Table 5-2.

Table 5-2: MAXIMUM PER CAPITA WATER USE TARGET

Year	Annual Per Capita Water Use, gpcd
2006	150
2007	369
2008	258
2009	191
2010	161
Baseline Per Capita Water Use, gpcd:	226
Maximum Per Capita Water Use Target, gpcd: 215	

As seen in Table , the baseline per capita water use associated with the maximum per capita water use target is 226 gpcd, which corresponds to a maximum per capita water use target of 215 gpcd (95-percent of 226 gpcd). Because this maximum per capita water use target is less than the per capita water use target calculated for 2020 using Method 1 (254 gpcd), the District shall set the 2020 target to 95% of the 5-year base (215 gpcd).

5.5 2015 Interim Per Capita Water Use Target

The interim per capita water use target, which must be met in 2015, is defined as the midpoint between the baseline per capita water use and the 2020 per capita water use target. The District's 2015 interim per capita water use target is 254 gpcd as shown in Table 5-3.

5.6 SBX7-7 Implementation Plan

As described above and summarized Table 5-3, the District's baseline per capita water use is 294 gpcd, the 2015 interim per capita water use target is 254 gpcd, and the 2020 per capita water use target is 215 gpcd. Recent per capita water use in the District has been relatively low due to the District's water conservation efforts. The District expects to be able to meet the per capita water use targets through continued water conservation. The per capita water use in the District is expected to decrease as new development is constructed due to more stringent building requirements such as mandatory measures of the 2010 California Green Building Standards Code. The District also plans to continue water conservation education and measures described in Section 9.

Table 5-3 Baselines and Targets Summary

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*1997*	*2006*	*294*	*254*	*215*
5 Year	*2006*	*2010*	*226*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES:					

Table 5-4 provides the District's actual 2015 per capita water use. The District achieved its target reduction for 2015.

Table 5-4: 2015 Compliance
*Retail Agency or Regional Alliance Only**

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments to 2015 GPCD Enter "0" for adjustments not used *From Methodology 8*					2015 GPCD *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events	Economic Adjustment	Weather Normalization	TOTAL Adjustments	Adjusted 2015 GPCD		
127	254	0	0	0	0	127	127	Yes
**All values are in Gallons per Capita per Day (GPCD)*								
NOTES:								

6 SYSTEM SUPPLIES

This section contains a discussion about existing and planned sources of water including imported water, groundwater, surface water, and recycled water.

6.1 Imported Water

The District purchases treated and untreated water from the Water Authority, which purchases water from Metropolitan. Metropolitan imports water from the Colorado River Aqueduct (CRA) and the facilities of the State Water Project (SWP). Metropolitan's water supplies are further detailed in the Water Authority's 2015 UWMP. In recent years the District is 99-percent dependent on Water Authority water and its efforts to develop and manage a diverse and reliable supply for the region.

6.1.1 Metropolitan Water District

Metropolitan was formed in 1928 to develop, store, and distribute supplemental water in Southern California for domestic and municipal purposes. Metropolitan supplies water to approximately 19 million people in a service area that includes portions of Ventura, Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties. The Water Authority is one of 26 Metropolitan member agencies and is the largest in terms of purchases, purchasing 331,825-AF in fiscal year 2010 [3].

Metropolitan obtains its water from two sources: The Colorado River Aqueduct (CRA), which it owns and operates, and the State Water Project (SWP), with which Metropolitan has a water supply contract through the state of California. Additional discussion of Metropolitan and its water supply sources is provided in Section 6 of the Water Authority's 2010 UWMP.

6.1.2 Water Authority

The District is a member agency of the Water Authority. The Water Authority's 24 member agencies purchase water for retail distribution within their service territories. The Water Authority was established in 1943 to provide supplemental water supply to the San Diego region. The Water Authority is the county's chief source of water, supplying from 75 to 95 percent of the region's needs depending upon weather conditions and yield from surface, recycled, and groundwater projects [3].

After experiencing severe shortages from Metropolitan during the 1987-1992 drought, the Water Authority began aggressively pursuing actions to diversify the region's supply sources by developing water supplies independent of Metropolitan. The Water Authority's 2010 UWMP provides additional information about these projects which include: an agreement

with the Imperial Irrigation District to transfer conserved Colorado River water, up to 200,000-AF by the year 2021, to the Water Authority; lining of the All-American Canal and the Coachella Canal to provide up to 77,700-AF/YR of conserved Colorado River water to the Water Authority; and the Carlsbad Seawater Desalination Project which provides a highly reliable local supply of 56,000-AF/YR to the region [3].

The Water Authority's 2015 UWMP also provides information on the local resources being developed and managed by its member agencies, which include surface water, groundwater, and recycled water, as well as future seawater desalination projects.

The District's sources of treated and untreated water from the Water Authority are the Poway Pump Stations and pipeline discussed in Section 3.2. Existing and planned supplies from the Water Authority are presented in Table 6-1.

Table 6-1: WHOLESALE SUPPLIES – EXISTING AND PLANNED SOURCES OF WATER

Wholesaler	Contracted Volume	2015	2020	2025	2030	2035
Water Authority	N/A	5,492	7,328	7,715	7,734	7,696

Source: San Diego County Water Authority 2015 UWMP

6.2 Groundwater

The District owns three wells with a total capacity of 330-gpm and a potential yield of 200-AF/YR. The District wells are currently not used due to high nitrate concentrations and would require recertification prior to being placed back in service. Groundwater from private wells is used by local landowners. Because the District does not rely on any groundwater for its water supply, the District does not prepare a Groundwater Management Plan.

Due to issues that limit District involvement in groundwater development, which include economic and financial considerations, legal, institutional, regulatory, environmental, and water quality issues, the District has not moved forward with plans to utilize groundwater with its service area. The Santa Maria basin lies within a major portion of the District's service area. The Santa Maria basin has numerous private wells and water rights, which are a major concern that would need to be resolved before groundwater projects could move forward.

Table 6-2 Retail: Groundwater Volume Pumped						
☑	Supplier does not pump groundwater. The supplier will not complete the table below.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2011	2012	2013	2014	2015
Add additional rows as needed						
	TOTAL	0	0	0	0	0
NOTES:						

6.3 Surface Water

There are 25 surface reservoirs with a total capacity of 593,490-AF located in the Water Authority's service area. Figure 2 shows the location of these reservoirs. Additional detail on these reservoirs is available in the Water Authority's 2015 UWMP.

The District has two surface storage reservoirs available for use, Lake Ramona and Lake Sutherland. Storage capacities of the two reservoirs are presented in Table 6-3. Lake Ramona is owned by the District and is filled with untreated water purchased from the Water Authority. Minimal amounts of surface water runoff enter the lake. Lake Ramona is used to supply untreated irrigation water to customers in the agricultural area on the northwest end of the District.

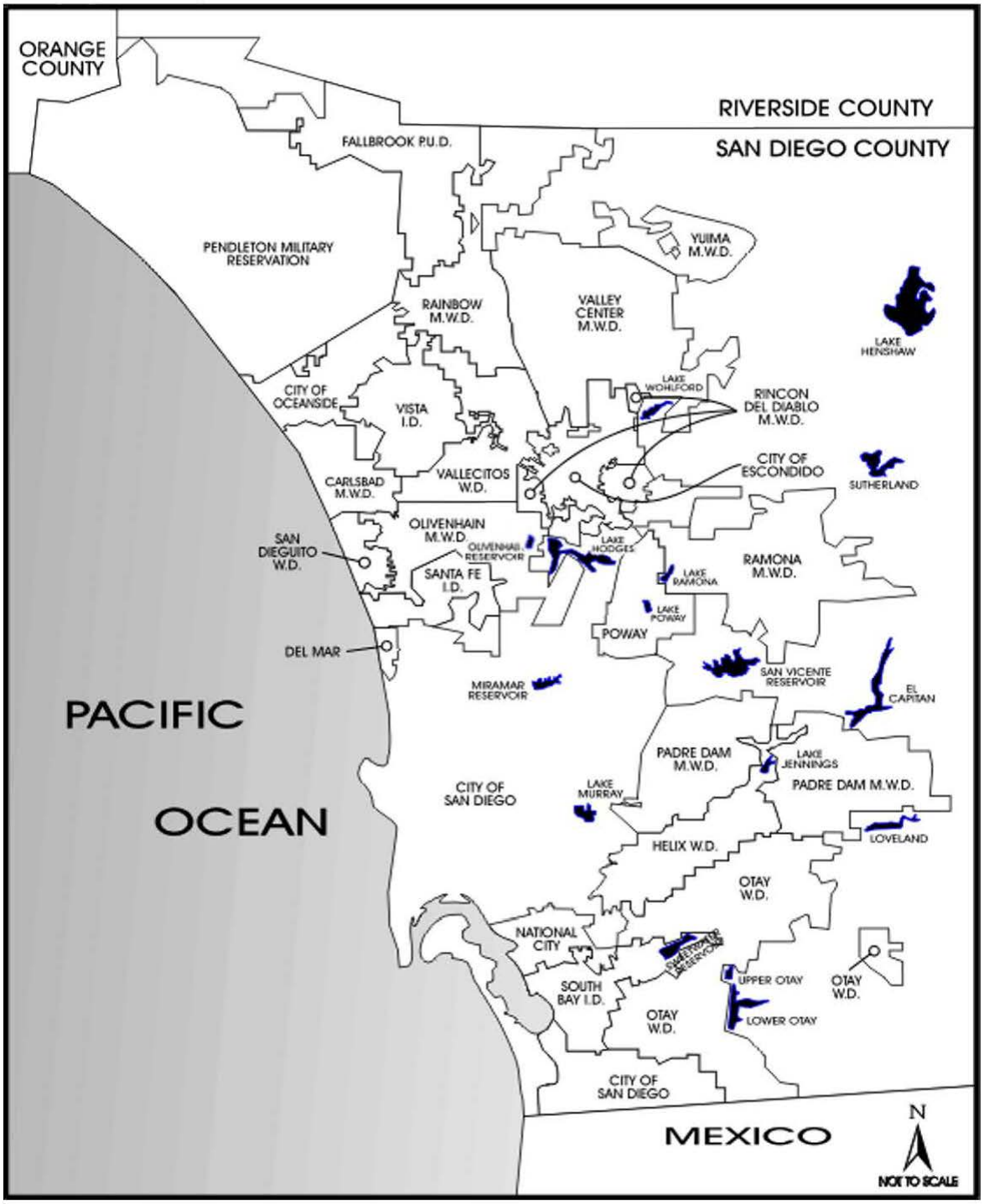
Table 6-3: SURFACE STORAGE RESERVOIRS UTILIZED BY RAMONA MUNICIPAL WATER DISTRICT

Reservoir	Agency	Storage Capacity, AF
Lake Ramona	Ramona Municipal Water District	12,200[a]
Lake Sutherland	City of San Diego	29,685

[a] Capacity at water depth of 228-feet; maximum capacity is 18,200-AF

Lake Sutherland is owned by the City of San Diego; local runoff provides the lake's primary source of untreated water.

Figure 2. Surface Storage Reservoirs within Water Authority Service Area [3]



6.4 Wastewater and Recycled Water

Municipal recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again for a beneficial purpose. The term "recycled water" is defined in the CWC more broadly than "municipal recycled water." For purposes of this UWMP, "recycled water" means only municipal recycled water, that is, water that has been treated and discharged from a municipal wastewater facility.

6.4.1 Recycled Water Coordination

The Ramona Municipal Water District collects, treats, and discharges recycled water within the service area.

6.4.2 Wastewater Collection, Treatment, and Disposal

6.4.2.1 Wastewater Collected Within Service Area

Recycled water which meets Title 22 standards is produced by two wastewater treatment plants operated by the District. The Santa Maria Water Reclamation Plant (SMWRP) produces an effluent which meets secondary treatment standards. This treated effluent is then conveyed to the tertiary treatment facilities located at the Rangeland Road treatment site. The San Vicente Water Reclamation Plant (SVWRP) produces secondary and tertiary level treated effluent. The District currently has a recycled water use of 947-AF/YR. Additional discussion of the District's recycled water system is provided in Section 10.

Table 6-4 Retail: Wastewater Collected Within Service Area in 2015						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2015 service area covered by wastewater collection system *(optional)*					
	Percentage of 2015 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected in 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Add additional rows as needed						
Ramona Municipal Water District	Metered	647	Ramona Municipal Water District	Santa Maria Water Reclamaition Plant	Yes	No
Ramona Municipal	Metered	569	Ramona Municipal	San Vicente	Yes	No
Total Wastewater Collected from		1,216				
NOTES:						

6.4.2.2 *Wastewater Treatment and Discharge within Service Area*

Table 6-5 identifies the volume of treated wastewater either recycled or disposed of within the service area. This may include wastewater that originated from outside the water supplier's area.

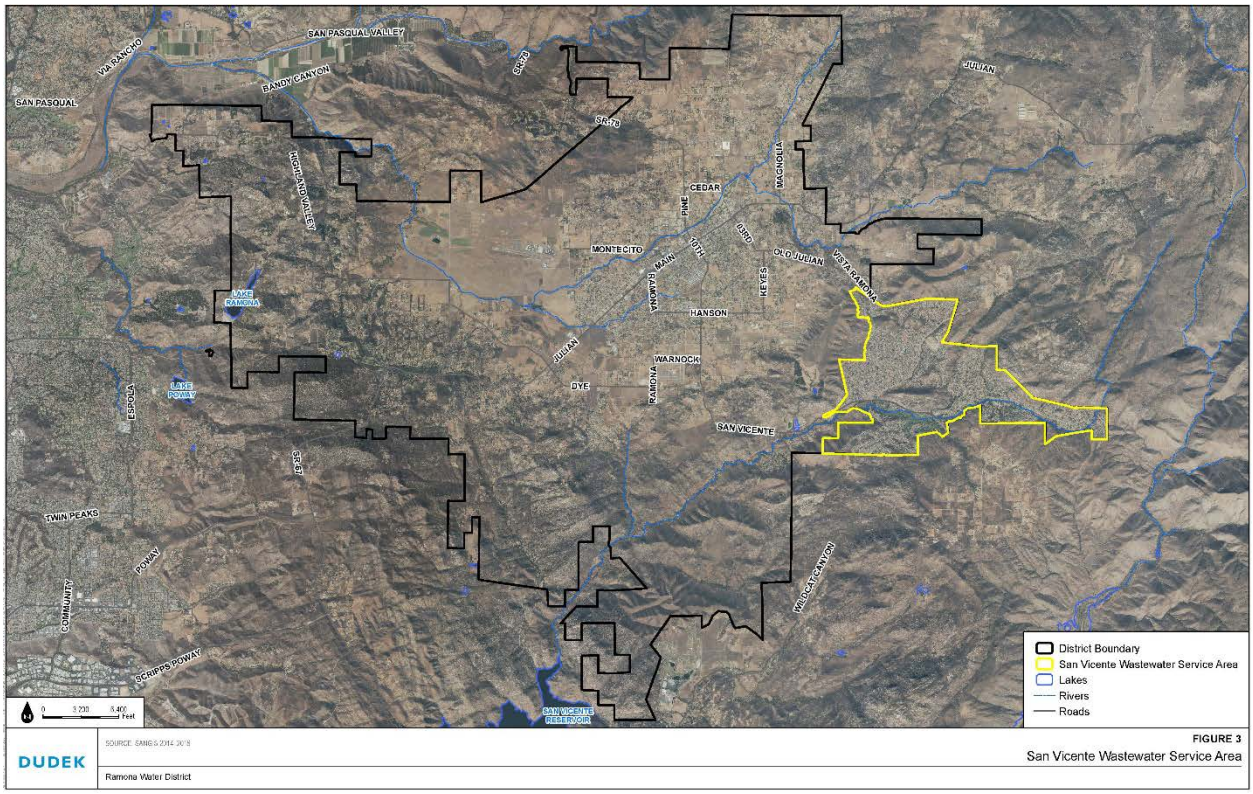
Table 6-5 Retail: Wastewater Treatment and Discharge Within Service Area in 2015										
☐	No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.									
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the	Treatment Level *Drop down list*	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Add additional rows as needed										
Ramona Municipal Water District	Spray fields	Rangeland road spray fields		Land disposal	No	Secondary, Undisinfected	344	344	344	0
Ramona Municipal Water District	Mt. Woodson Golf Course	16422 N. Woodson Dr.		Land disposal	No	Tertiary	178	178	178	0
Ramona Municipal Water District	San Diego Country Estates Golf Course			Land disposal	No	Tertiary	235	235	235	0
Ramona Municipal Water District	Spangler Peak Ranch			Land disposal	No	Secondary, Disinfected - 2.2	190	190	190	0
						Total	947	947	947	0
NOTES:										

6.4.3 Recycled Water System

Recycled water which meets Title 22 standards is produced by two wastewater treatment plants operated by the District, the San Vicente and Santa Maria Wastewater Treatment Facilities. The recycled water system for each facility is described below.

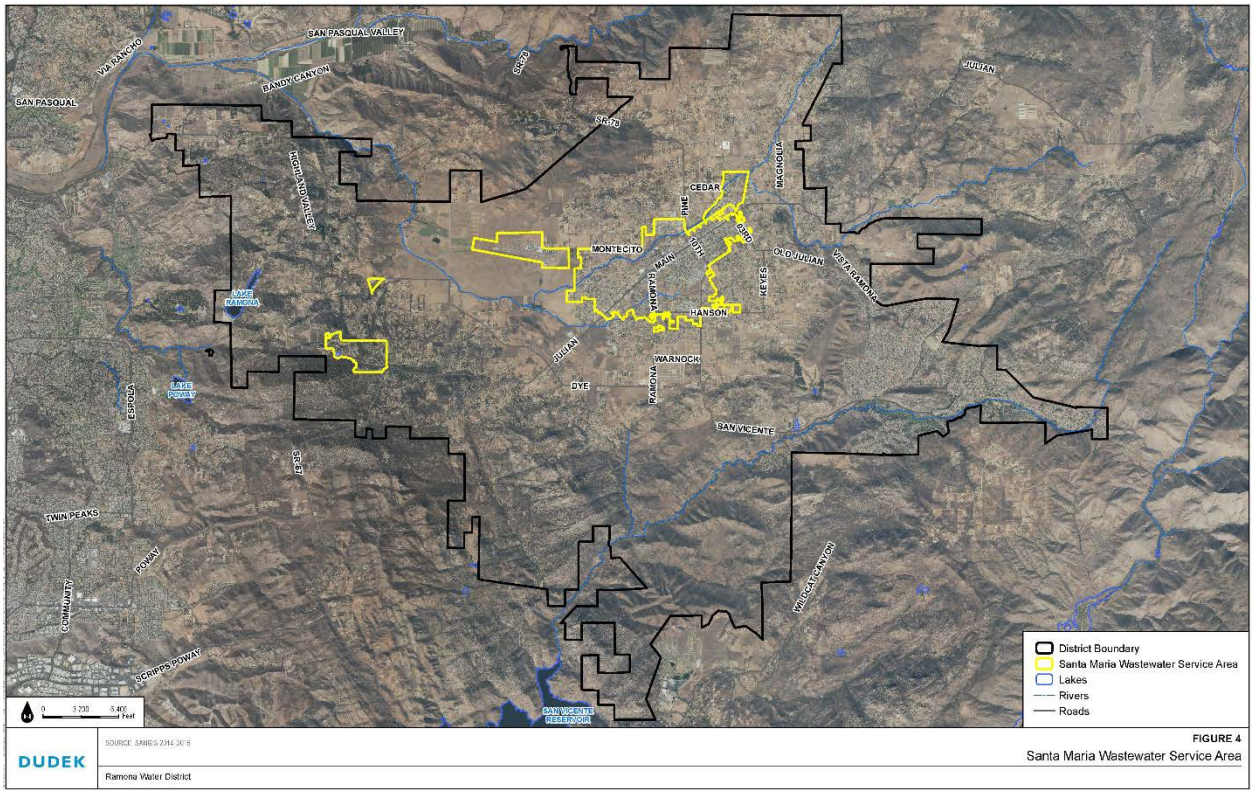
6.4.3.1 San Vicente Wastewater Service Area

Ramona Municipal Water District's San Vicente Wastewater Service Area serves a population of roughly 10,000 located primarily within San Diego Country Estates, a planned community initially developed in the 1970s that includes the San Vicente Resort and Golf Course. Wastewater from this service area is conveyed to the San Vicente Water Reclamation Plant for treatment and effluent disposal. The treatment plant has a current capacity of 0.80 million gallons per day (mgd) of average dry weather flow.



6.4.3.2 Santa Maria Wastewater Service Area

Existing recycled water facilities for the Santa Maria Wastewater Service Area consist of a tertiary treatment plant and a transmission main to a single end user. Reclaimed water is currently produced at the Tertiary Treatment Plant at Rangeland Road. The tertiary plant has an influent capacity of 0.360 mgd with an effluent capacity of 0.342 mgd. Recycled water is conveyed from the Rangeland Road Tertiary Treatment Plant to the Mount Woodson Golf Course. Mount Woodson Golf course is presently the sole end user of recycled water in the Santa Maria Wastewater Service Area.



6.4.4 Recycled Water Beneficial Uses

6.4.4.1 Current and Planned uses of Recycled Water

The District relies on recycled water as a means of disposal for treated wastewater effluent at both wastewater treatment facilities. 100% of the effluent produced by both plants is disposed of as recycled water. The treatment plants produce both secondary and tertiary effluent which is used to provide recycled water to the San Vicente and San Diego Country Estates Golf Courses and for agricultural irrigation. The District currently provides recycled water to its customers under an Effluent Disposal Agreement that details recycled water pricing and each party's responsibilities. Alternative and more beneficial uses of recycled water are currently being evaluated by the District to offset current potable and raw water demands.

Table 6-6 quantifies the amount of recycled water currently being used within the District's service area, as well as projected volumes and uses into the future.

Table 6-6 Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area								
☐	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.							
Name of Agency Producing (Treating) the Recycled Water:		Ramona Municipal Water District						
Name of Agency Operating the Recycled Water Distribution System:		Ramona Municipal Water District						
Supplemental Water Added in 2015								
Source of 2015 Supplemental Water								
Beneficial Use Type *These are the only Use Types that will be recognized by the DWR online submittal tool*	General Description of 2015 Uses	Level of Treatment *Drop down list*	2015	2020	2025	2030	2035	2040 (opt)
Agricultural irrigation	Grove-Orchard Spangler Peak Ranch. Santa Maria Spray fields	Secondary, Disinfected - 2.2	190	234	234	234	234	234
Landscape irrigation (excludes golf courses)	Rangeland spray field SM	Secondary, Undisinfected	344	300	347	370	393	393
Golf course irrigation	Mt. Woodson and San Diego Country Estates Golf Course	Tertiary	413	413	413	413	413	413
Commercial use								
Industrial use								
Geothermal and other energy production								
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR)								
Surface water augmentation (IPR)								
Direct potable reuse								
Other Type of Use								
		Total:	947	947	994	1,017	1,040	1,040
IPR - Indirect Potable Reuse								
NOTES:								

6.4.4.2 Planned Versus Actual Use of Recycled Water

Table 6-7 compares 2010 UWMP recycled water use projections for 2015 to actual 2015 recycled water use.

Table 6-7 Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual			
☐	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.		
Use Type *These are the only Use Types that will be recognized by the WUEdata online submittal tool*		2010 Projection for 2015	2015 actual use
Agricultural irrigation		367	190
Landscape irrigation (excludes golf courses)		0	344
Golf course irrigation		488	413
Commercial use			
Industrial use			
Geothermal and other energy production			
Seawater intrusion barrier			
Recreational impoundment			
Wetlands or wildlife habitat			
Groundwater recharge (IPR)			
Surface water augmentation (IPR)			
Direct potable reuse			
Other	Required for this use		
	Total	855	947
NOTES:			

6.4.5 Actions to Encourage and Optimize Future Recycled Water Use

Currently the District is producing recycled water from virtually all of the collected wastewater in the District. All produced recycled water is being provided to the Mount Woodson and San Diego Country Estates Golf Courses and for agricultural irrigation. The Montecito Ranch Development is currently planning with the District to incorporate recycled water irrigation supply to offset the increase in wastewater produced by the development. Currently the project is projected to increased recycled water demand by 207-AF/YR. In addition, alternative and more beneficial uses of recycled water are currently being evaluated by the District to offset current potable and raw water demands.

Table 6-8 Retail: Methods to Expand Future Recycled Water Use			
☐	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Add additional rows as needed			
Monticito Ranch Development	417 home development	2020	207
		Total	207
NOTES:			

6.5 Desalinated Water Opportunities

Development of desalinated water sources is not included in the District's planning horizon due to the prohibitive costs associated with desalination when compared to supplying the District's demands with water purchased from the Water Authority. The Water Authority has completed the Carlsbad Desalination Project provides a highly reliable local supply of 56,000-AF/YR for the region and its member agencies. Additional information of this project is included in Section 4.4 of the Water Authority's 2015 UWMP.

6.6 Future Water Projects

As previously mentioned, the District's BWTP is a conventional water treatment plant originally constructed in 1974. Several improvements have been implemented since the original construction, including the additions of an inline static mixer (1978), a splitter box (1982), filter-to-waste piping (1998), a chlorine scrubber system (1998), additional sludge drying beds and sludge pumps, and modifications to the chemical feed room.

The BWTP is currently off-line and was last operated in 2007, leaving the District dependent on the Water Authority to meet potable water demands. The District currently has no plans for placing BWTP back in service as a source of potable water.

Table 6-9 Retail: Expected Future Water Supply Projects or Programs						
☑	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List User may select more than one.*	Expected Increase in Water Supply to Agency *This may be a range*
	Drop Down List (y/n)	*If Yes, Agency Name*				
Add additional rows as needed						
NOTES:						

6.7 Summary of Existing and Planned Sources of Water

Actual source and volume of water for the year 2015 are provided in Table 6-10. Projections for the volume of water, by source, that is reasonably available, based on historical deliveries for average years are provided in Table 6-11.

Table 6-10 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2015		
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		Actual Volume	Water Quality *Drop Down List*	Total Right or Safe Yield *(optional)*
Add additional rows as needed				
Purchased or Imported Water		3,727	Drinking Water	
Purchased or Imported Water		94	Drinking Water	
Purchased or Imported Water		1,126	Raw Water	
Recycled Water		947	Recycled Water	
	Total	5,894		0
NOTES:				

Table 6-11 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		2020		2025		2030		2035		2040 *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Add additional rows as needed											
Purchased or Imported Water	Domestic	5,190		5,464		5,477		5,451		5,487	
Purchased or Imported Water	Untreated	2,138		2,251		2,257		2,245		2,260	
Recycled Water		947		994		1,017		1,040		1,040	
	Total	8,275	0	8,709	0	8,751	0	8,736	0	8,787	0
NOTES:											

6.8 Projected Water Supply

The District's current and projected water supplies during normal water years are provided in Table 6-12. The District's projected water supply from the Water Authority is based on the Water Authority's CWA-MAIN model as discussed in the Water Authority's 2015 UWMP.

Table 6-12: WATER SUPPLIES – CURRENT AND PROJECTED (AF)

Water Sources	Supply	Wholesale Supplied Volume	2015	2020	2025	2030	2035	2040
Water Authority		Yes	4,947	7,622	8,009	8,028	7,990	8,041
Recycled Water			947	947	994	1,017	1,040	1,040
	Total		**5,894**	**8,569**	**9,003**	**9,045**	**9,030**	**9,081**

6.9 Quality of Water Supply

The UWMP Act requires the 2015 UWMP include information, to the extent practicable, on the quality of existing water supply sources and the manner in which water quality affects water supply reliability. The District currently imports its entire potable water supply from the Water Authority and based on the Water Authority's 2015 UWMP no changes to water supply reliability as a result of water quality are expected for the next 20 years. Additional information on the Water Authority's water supply quality is detailed in Section 7 of the Water Authority's 2015 UWMP.

7 WATER SUPPLY RELIABILITY ASSESSMENT

As stated in the UWMP Act, every urban water supplier shall include, as part of its plan, an assessment of the reliability of its water supply. The water supply and demand assessment must compare the total projected water use with the expected water supply over the next 20 years in 5-year increments. This reliability assessment is required for normal single dry-year and multiple dry water years.

7.1 Constraints on Water Sources

The District is reliant on the Water Authority's efforts to develop actions to diversify the region's supply sources. The Water Authority's documentation on the existing and projected supply sources being implemented to ensure consistency of their wholesale water supply are provided in the Water Authority's 2015 UWMP. Factors that could result in inconsistency of Water Authority supply to the District are presented in Table 7-1.

Table 7-1: FACTORS RESULTING IN INCONSISTENCY OF SUPPLY

Water Supply Sources	Specific Source Name	Limitation Quantification	Legal & Environmental	Water Quality	Climatic
Water Authority			Current supply from the Delta is occasionally inconsistent due to legal and environmental decisions. Future supply may not be consistent due to delays in construction, legal rulings, or environmental decisions. Legal decisions regarding the Quantification Settlement Agreement could reduce supplies from the Colorado River	None	Drought and climate could result in reduction of imported water supply. Colorado River supply may be reduced due to extended drought period.
Recycled Water			None	None	None

7.2 Reliability by Type of Year

The District currently imports 100-percent of its water supply from the Water Authority, therefore the assessment contained in the District's 2015 UWMP projects reliability through the next 25 years based on the Water Authority draft 2015 UWMP. This section presents a

summary of the water demands and supplies available to the Water Authority and in turn to the District. The Water Authority's basis of water year data for estimating demands is provided in Table 7-2.

Table 7-2: WATER YEAR TYPE BASE YEARS

Water Year Type	Base Year(s)[a]
Average Water Year	1960-2008
Single-Dry Water Year	1990
Multiple-Dry Water Year	1990-1992

[a] Source: Water Authority 2015 UWMP [3]

7.2.1 Types of Year

7.2.1.1 Average Year

A year, or an averaged range of years, that most closely represents the average water supply available to the District. The UWMP Act uses the term "normal" conditions.

7.2.1.2 Single-Dry Year

The single-dry year is the year that represents the lowest water supply available to the District.

7.2.1.3 Multiple-Dry Year Period

The multiple dry year period is the period that represents the lowest average water supply availability to the District for a consecutive multiple year period (three years or more). This is generally considered to be the lowest average runoff for a consecutive multiple year period (three years or more) for a watershed since 1903. DWR has interpreted "multiple dry years" to mean three dry years, however, the District may project its water supplies for a longer time period.

7.2.2 Water Authority Normal Year Assessment

Table 9-2 in the Water Authority's 2015 UWMP shows the normal year assessment, summarizing the total water demands for the Water Authority through the year 2035 along with the supplies necessary to meet demands under normal conditions. If Metropolitan, the Water Authority and member agency supplies are developed as planned, along with

achievement of the SBX7-7 retail conservation target, no shortages are anticipated within the Water Authority's service area in a normal year through 2040 [3].

7.2.3 Water Authority Dry Water Year Assessment

The UWMP Act also requires an assessment to compare supply and demands under single dry and multiple dry water years over the next 20 years, in five-year increments. The single dry-year assessment is presented in Table 9-3 of the Water Authority's 2015 UWMP. The projected groundwater and surface water yields are based on historic 1990 supplies during the 1987-1992 drought years. The supplies available from projected recycling and groundwater recovery projects are assumed to experience little, if any, reduction in a dry-year. The Water Authority's existing and planned supplies are detailed in Section 4 of the Water Authority's 2015 UWMP. For this single dry-year assessment, it was assumed that Metropolitan would have adequate supplies in storage and would not be allocating supplies. With the previous years leading up to the single dry-year being wet or average hydrologic conditions, Metropolitan should have adequate supplies in storage to cover potential shortfalls in core supplies and would not need to allocate [3].

7.2.4 Water Authority Multiple Dry Water Year Assessment

Tables 9-3 through 9-6 in the Water Authority's 2015 UWMP show the multiple dry water year assessments in five-year increments. The member agencies' surface and groundwater yields shown in these tables are reflective of supplies available during the 1987-92 drought, in years 1990, 1991 and 1992. The Water Authority supplies consist of yield from the IID transfer, canal lining projects, and Carlsbad Seawater Desalination project.

For the multi dry-year reliability analysis, the conservative planning assumption is that Metropolitan will be allocating supplies to its member agencies. By assuming allocations in this reliability assessment, it allows the Water Authority to analyze how storage supplies could be utilized and the likelihood of shortages. Currently Metropolitan allocates supplies through its Water Supply Allocation Plan. Under the specific parameters assumed in the multi dry-year analysis, the Water Authority has determined that some level of shortage could potentially be experienced. Under this scenario the items discussed in the Water Authority's and District's shortage contingency analyses, included as Section 8 of this UWMP, would be implemented as necessary [3].

Table 7-3 Retail: Basis of Water Year Data			
Year Type	Base Year	Available Supplies if Year Type Repeats	
		Agency may provide volume only, percent only, or both	
		Volume Available	% of Average Supply
Average Year			100%
Single-Dry Year			100%
Multiple-Dry Years 1st Year			100%
Multiple-Dry Years 2nd Year			100%
Multiple-Dry Years 3rd Year			100%
Multiple-Dry Years 4th Year *Optional*			100%
Multiple-Dry Years 5th Year *Optional*			100%
Multiple-Dry Years 6th Year *Optional*			100%
Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			
NOTES:			

7.3 Supply and Demand Assessment

The District currently imports 100-percent of its water supply from the Water Authority, therefore the assessment contained in the District's 2015 UWMP projects reliability through the next 25 years based on the Water Authority draft 2015 UWMP.

As previously stated the Water Authority has determined that it will be able to meet the District's water demands during normal year, single dry year and multiple dry year conditions through 2035. Projected District demands are based on the Water Authority's CWA-MAIN projections and included SBX7-7 water conservation goals as determined in Section 5. Recycled water supply is considered a "drought-proof" supply and is not expected to reduce during dry year periods. A supply and demand comparison for normal water years is presented as Table 7-4.

Table 7-4 Retail: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill from Table 6-11)*	8,275	8,709	8,751	8,736	8,787
Demand totals *(autofill from Table 4-3)*	8,275	8,709	8,751	8,736	8,787
Difference	0	0	0	0	0
NOTES:					

Projected water supplies compared to demands for single dry years are presented in 7-5.

Table 7-5 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	8,275	8,709	8,751	8,736	8,787
Demand totals	8,275	8,709	8,751	8,736	8,787
Difference	0	0	0	0	0
NOTES:					

Projected water supplies compared to demands for multiple dry years are presented in Table 7-6.

Table 7-6 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	8,275	8,709	8,751	8,736	8,787
	Demand totals	8,275	8,709	8,751	8,736	8,787
	Difference	0	0	0	0	0
Second year	Supply totals	8,275	8,709	8,751	8,736	8,787
	Demand totals	8,275	8,709	8,751	8,736	8,787
	Difference	0	0	0	0	0
Third year	Supply totals	8,275	8,709	8,751	8,736	8,787
	Demand totals	8,275	8,709	8,751	8,736	8,787
	Difference	0	0	0	0	0
Fourth year *(optional)*	Supply totals	8,275	8,709	8,751	8,736	8,787
	Demand totals	8,275	8,709	8,751	8,736	8,787
	Difference	0	0	0	0	0
Fifth year *(optional)*	Supply totals	8,275	8,709	8,751	8,736	8,787
	Demand totals	8,275	8,709	8,751	8,736	8,787
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals	8,275	8,709	8,751	8,736	8,787
	Demand totals	8,275	8,709	8,751	8,736	8,787
	Difference	0	0	0	0	0
NOTES:						

8 WATER SHORTAGE CONTINGENCY PLANNING

Water shortage contingency planning is a strategic planning process to prepare for and respond to water shortages. Good planning and preparation can help agencies maintain reliable supplies and reduce the impacts of supply interruptions. The UWMP Act requires urban water agencies conduct a water shortage contingency analysis as part of their 2015 UWMP. This section addresses the District's analysis of a catastrophic shortage situation and drought management plan that is based on the draft Water Authority 2015 UWMP and includes a summary of the Water Authority analysis.

8.1 Stages of Action

Table 8-1 identifies the water supply conditions associated with each stage of action. The District has identified each stage by the percent supply reduction and the water supply condition.

Table 8-1 Retail
Stages of Water Shortage Contingency Plan

Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition *(Narrative description)*
Add additional rows as needed		
1	Up to 10%	Voluntary Reductions
2	up to 20%	Voluntary Reductions
3	Up to 40%	Mandatory Reductions
4	> 40%	Emergency Mandatory Reductions
[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

Following the major drought in California of 1987 - 1992, which led to severe water supply shortages throughout the state, the Water Authority and its member agencies aggressively developed plans to minimize the impact of potential shortages. In 2006, the Water Authority Board of Directors adopted the Water Shortage and Drought Response Plan (WSDRP), to serve as a comprehensive plan in the event that the region faced supply shortages due to drought or other water shortage conditions [3].

8.1.1 Water Authority Water Shortage and Drought Response Plan

The WSDRP was developed by the Water Authority in coordination with its member agencies to provide a balanced, flexible, systematic approach to identifying regional actions necessary to

reduce the impacts from shortages. It includes all aspects of drought planning, from steps to avoid rationing, to drought response stages, allocation methodology, pricing, tracking actual reductions in water use, and a communication strategy. Multiple actions are identified to manage shortage situations, including both supply augmentation measures and demand reductions up to 50-percent in water supply. Conservation savings is an essential component of meeting the need for water in a time when available supplies are limited.

The UWMP Act requires information on the stages of action to be undertaken in response to water supply shortages, including up to a 50-percent reduction in water supply. To meet the requirements, the District is dependent on the Water Authority. The Water Authority, with input from the member agencies, developed a regional drought response matrix. The matrix, presented in Table 8-2, summarizes the three stages: voluntary supply management; supply enhancement; and mandatory cutbacks including a supply allocation methodology; detailed in the WSDRP.

Table 8-2: WATER AUTHORITY DROUGHT RESPONSE MATRIX – FIRM DEMANDS

	Stages		
Potential Water Authority Drought Actions	**Voluntary**	**Supply Enhancement**	**Mandatory Cutbacks**
Ongoing BMP implementation	X	X	X
Communication strategy	X	X	X
Monitoring supply conditions and storage levels	X	X	X
Call for voluntary conservation	X	X	X
Draw from Water Authority carryover storage	X	X	X
Secure transfer option contracts	X	X	X
Buy phase 1 spot transfers (cost at or below Tier 2 rate)		X	X
Call transfer options		X	X
Buy phase 2 spot transfers (cost at or below Tier 2 rate)		X	X
Implement allocation methodology			X
Utilized ESP Supplies			X

Source: Water Authority 2015 UWMP [3]

Additional details of the WSDRP are provided in Section 11 of the Water Authority's 2015 UWMP.

8.1.2 District Drought Response Conservation Program

On May 12, 2009 The District's Board of Directors adopted the District's Drought Response Conservation Program, included in Appendix C. The Drought Conservation Program establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions ("Drought Response Levels") to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies. Drought Response Level 1 drought condition response measures are voluntary and will be reinforced through local and regional public education and awareness measures that may be funded in part by the District. During Drought Response Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals. Violations of this Chapter are subject to criminal, civil, and administrative penalties and remedies specified in this District's legislative code and as provided by law.

Table 8-3: WATER SHORTAGE CONTINGENCY – RATIONING STAGES TO ADDRESS WATER SUPPLY SHORTAGES

Stage No.	Water Supply Conditions	% Shortage
Drought Response Level 1 – 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 of up to 10 percent required in order to ensure that sufficient supplies be available to meet anticipated demands. The General Manager may declare the existence of a Response Level 1 and take action to implement the Level 1 conservation practices identified in the Drought Response Conservation Program.	Up to 10% Voluntary Restrictions
Drought Response Level 2 – Drought Alert Conditions	A Drought Response Level 2 condition is also referred to as a "Drought Alert" condition. A Level 2 condition applies when the Water Authority notifies agencies that due to cutbacks caused by drought or other reduction of supplies, a consumer demand reduction of up to twenty percent (20%) is required in order to have sufficient supplies available to meet anticipated demands. The District Board of Directors may	Up to 20% Voluntary Restrictions

	declare the existence of a Drought Response Level 2 condition and implement the Level 2 conservation measures identified in the Drought Response Conservation Program.	
Drought Response Level 3	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 of up to forty percent (40%) is required in order to have sufficient supplies available to meet anticipated demands. The District Board of Directors may declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in the Drought Response Conservation Program.	Up to 40% Mandatory Restrictions
Drought Response Level 4 – Drought Emergency Condition	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 of more than forty percent (40%) in order for the Authority to have maximum supplies available to meet anticipated demands. Upon declaration by the Authority of a Drought Emergency Condition, the District may declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350 et seq.	Above 40% Mandatory Restrictions

Table 8-4: WATER SHORTAGE CONTINGENCY – CONSUMPTION REDUCTION METHODS AND MANDATORY PROHIBITIONS

Examples of Prohibitions	Level when Prohibition Becomes Mandatory	Projected Reduction
Stop washing down paved surfaces, including but not limited to sidewalks, driveways, parking lots, tennis courts, or patios, except when it is necessary to alleviate safety or sanitation hazards.	Level 2	Up to 10%
Stop water waste resulting from inefficient landscape irrigation, such as runoff, low head drainage, or overspray, etc. Similarly, stop water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.	Level 2	Up to 10%
Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.	Level 2	Up to 10%
Use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.	Level 2	Up to 10%
Irrigate nursery and commercial grower's products before 10 a.m. and after 6 p.m. only. Watering is permitted any time with a hand-held hose equipped with a positive shut-off nozzle, a bucket, or when a drip/micro-irrigation system/equipment or rotating nozzles are used.	Level 2	Up to 10%
Limit residential and commercial landscape irrigation to no more than three (3) assigned days per week on a schedule established by the General Manager.	Level 2	Up to 20%
Limit lawn watering and landscape irrigation using sprinklers to no more than ten minutes per watering station per assigned day.	Level 2	Up to 20%
Repair all leaks within seventy-two (72) hours of notification by the District unless other arrangements are made with the	Level 2	Up to 20%

General Manager.		
Stop operating ornamental fountains or similar decorative water features unless recycled water is used.	Level 2	Up to 20%
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.	Level 3	Up to 40%
Stop filling or re-filling ornamental lakes or ponds, except to the extent 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.	Level 3	Up to 40%
Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.	Level 3	Up to 40%
Repair all leaks within forty-eight (48) hours of notification by the District unless other arrangements are made with the General Manager.	Level 3	Up to 40%
Stop all landscape irrigation, except crops and landscape products of commercial growers and nurseries and as specified in the DRCP.	Level 4	Above 40%
Repair all water leaks within twenty-four (24) hours of notification by the District unless other arrangements are made with the General Manager.	Level 4	Above 40%

8.2 Prohibitions on End Uses

The District has made its own determination as to which prohibitions, and which stage for each prohibition, are most appropriate for its service area. Table 8-5 reports the prohibitions that the District places on end uses in each stage.

Table 8-5 Retail Only: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? *Drop Down List*
Add additional rows as needed			
1	Other - Prohibit use of potable water for washing hard surfaces		No
1	Landscape - Restrict or prohibit runoff from landscape irrigation		No
1	Landscape - Limit landscape irrigation to specific times		No
1	Landscape - Other landscape restriction or prohibition		No
1	Water Features - Restrict water use for decorative water features, such as fountains		No
1	Other - Require automatic shut of hoses		No
1	CII - Restaurants may only serve water upon request		No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		No
2	Landscape - Limit landscape irrigation to specific days		No
2	Landscape - Prohibit certain types of landscape irrigation		No
2	CII - Lodging establishment must offer opt out of linen service		No
3	Pools - Allow filling of swimming pools only when an appropriate cover is in place.		Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water		Yes
4	Landscape - Prohibit all landscape irrigation		Yes
NOTES:			

Table 8-6: WATER SHORTAGE CONTINGENCY – CONSUMPTION REDUCTION METHODS AND MANDATORY PROHIBITIONS

Penalties or Charges	Stage when Penalty Takes Effect
Following the effective date of the water allocation as established by the District, any person that uses the water in excess of the allocation shall be subject to a penalty equal to two (2) times the District's billing rate for each billing unit of water in excess of the allocation. The penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of the DRCP. Each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.	Level 3
Following the effective date of the water allocation as established by the District, any person that uses the water in excess of the allocation shall be subject to a penalty equal to three (3) times the District's billing rate for each billing unit of water in excess of the allocation. The penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of the DRCP. Each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.	Level 4

8.3 Consumption Reduction Methods

Consumption reduction methods are actions that are taken by the District to reduce water demand within the service area, whereas the prohibitions, addressed in Section 8.2, limit specific uses of water.

Table 8-7 Retail Only: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	Additional Explanation or Reference *(optional)*
Add additional rows as needed		
1	Expand Public Information Campaign	
2	Other	Restrict New Service Installations
2	Implement or Modify Drought Rate Structure or Surcharge	
3	Implement or Modify Drought Rate Structure or Surcharge	
4	Implement or Modify Drought Rate Structure or Surcharge	
NOTES:		

8.4 Determining Water Shortage Reductions

Determination of actual water savings made from implementing the stages of the water shortage contingency plan is estimated based upon recording the production and consumption of water as monitored through service meters.

8.5 Revenue and Expenditure Impacts

Well-designed drought rate structures can reduce the potential financial effects of water shortages and enable the supplier to recover its purchase, treatment, and delivery costs, as well as the additional costs related to the water shortage response program. The District has taken significant steps to reduce potential revenue impacts resulting from fluctuating water sales. In 2002, the District created a Rate Stabilization Fund (RSF) to provide funds that would mitigate the need for rate increases in the event of an unexpected decline in water sales.

On January 1, 2003, the Water Authority implemented a new rate structure that substantially increased the percentage of water revenues generated from fixed charges. This increase replaced the previous variable "postage stamp" rate, which historically generated as much as 80-percent of total annual revenues, with two fixed charges, and one variable rate. These new

fixed charges - Customer Service, Infrastructure Access Charge and Storage - are key components to the Water Authority's future revenue stability [3].

8.6 Resolution or Ordinance

Water agencies are required to develop a water shortage contingency resolution or ordinance for submittal with the UWMP. The approved/adopted water conservation resolution is included as Appendix C of this UWMP.

8.7 Catastrophic Supply Interruption

Chapter 7.40 of the RMWD Legislative Code entitled Water Conservation is included as Appendix C of this UWMP.

8.7.1 Emergency Response Plan

Interruption and/or damage to the water supply system and/or the sewage system will require immediate emergency response by District staff to direct repairs of the system and restore essential services to the community.

The purpose of the District's ERP manual is to provide a response plan to conduct and manage emergency response operations of the District in the event of such interruption and/or damage. The guidelines set forth in the ERP address the immediate phase of emergency operations and are based on the assumed impacts of a worst-case scenario. Minor emergencies are those incidents, which generally affect only a small number of customers, last less than one day and are managed by District personnel. Major emergencies and disasters such as floods, wars, drinking water contamination, earthquakes, droughts, terrorist acts, etc., may affect large service areas beyond normal District capabilities.

The ERP can be considered multi-hazard, as most of the emergency response functions and responsibilities are standard regardless of the nature or the intensity of the emergency. The ERP plan does not attempt to describe in detail every step necessary to handle a particular emergency, but relies upon the individual expertise of District staff under the direction of District management.

The ERP is integrated with the Water Authority ICP the County of San Diego ERP, the Unified San Diego County Emergency Services Organization and the procedures for emergency response and recovery for the State of California and Federal Emergency Management Agency.

The ERP includes:

- Authorities, policies, and procedures associated with emergency response activities;

- Emergency Operations Center (EOC) activities - including EOC activation and deactivation guidelines;
- Multi-agency and multi-jurisdictional coordination, particularly between the District and Water Authority;
- Emergency staffing, management, and organization required to assist in mitigating any significant emergency or disaster;
- Mutual Aid Agreements and covenants that outline the terms and conditions under which mutual aid assistance will be provided;
- Pre-emergency planning and emergency operations procedures.

In addition, the ERP Manual provides a step-by-step approach to emergency response planning by providing action checklists, resource and information lists, personnel rosters, and listings of established policies and procedures.

8.7.2 Water Authority Emergency Storage Project

In 1998, the Water Authority's Board authorized implementation of the ESP to reduce the risk of potential catastrophic damage that could result from a prolonged interruption of imported water due to earthquake, drought, or other disasters. The ESP is a system of reservoirs, pipelines, and other facilities located throughout San Diego County that will work together to store and move water around the county in the event of a natural disaster. When completed, the ESP will provide 90,100-AF of stored water for emergency purposes to meet the county's needs through at least 2030. The Water Authority Board of Directors may also authorize that supplies from the ESP be used in a prolonged drought or other water shortage situation where imported and local supplies do not meet 75-percent of the Water Authority's member agencies Municipal and Industrial (M&I) demands [3].

In sizing the ESP, the Water Authority assumed a 75-percent level of service to all Water Authority member agencies during an outage and full implementation of the water conservation best management practices. The following steps from the Water Authority's August 2002 Emergency Water Delivery Plans show the methodology for calculating the allocation of ESP supplies to member agencies in a prolonged outage situation without imported supplies:

1. Estimate the duration of the emergency (i.e., time needed to repair damaged pipelines).
2. Determine each member agency's net demand during the emergency period by adding M&I water demands and agricultural water demands and then subtracting recycled water supplies.

3. Determine each member agency's useable local supplies during the emergency period (local supplies include surface water and groundwater).
4. Determine each member agency's level of service based on usable local supplies and net demand.
5. Adjust the allocation of ESP supplies based on a member agency's participation in an interruptible agricultural program (e.g., Metropolitan Interim Agricultural Water Program or Water Authority Special Agricultural Water Rate). Interruptible agricultural program customers will be required to take a reduction in deliveries during a water shortage due to an emergency at double the system-wide reduction up to a maximum of 90-percent. Water not delivered to interruptible agricultural program customers will be redistributed to member agencies based on the "system-wide" level of service targets.
6. Determine the amount of local supplies that can be transferred between member agencies, with transfers occurring only after a member agency has a level of service greater than 75-percent based on their usable local supplies.
7. Allocate delivery of useable ESP storage supplies along with available Water Authority and Metropolitan supplies to member agencies with the goal of equalizing the level of service among the member agencies.

8.8 Minimum Supply Next Three Years

The District must provide an estimate of the minimum water supply available during each of the next three years, 2016, 2017, and 2018. This will reflect the combined availability of all water sources and will assume the same hydrology as was noted during the historical multiple-dry year period. The estimate of the minimum supply for the next three years is based on data that is reasonably available to the water supplier at the time the 2015 UWMP is written.

The minimum available water supply for the next three years is given in Table 8-8.

Table 8-8 Retail: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply	5,657	5,826	6,001

NOTES: San Diego County Water Authority 2015 UWMP

8.9 Summary

The shortage contingency analysis included in this section demonstrates that the District, in conjunction with the Water Authority and its other member agencies, through the District's ERP and the Water Authority's ICP, ESP and WSDRP, are taking actions to prepare for and

appropriately handle a catastrophic interruption of water supplies to the District's service area and customers.

9 DEMAND MANAGEMENT MEASURES

The goal of the Demand Management Measures (DMM) chapter is to provide a comprehensive description of the water conservation programs that the District has implemented, is currently implementing, and plans to implement in order to meet its urban water use reduction targets. Demand management, or water conservation, is frequently the lowest-cost resource available to the District. Water conservation is a critical part of the 2015 UWMP for meeting water supply needs of the Ramona area. The goals of the District water conservation program are to (1) reduce demand for water imported from the Water Authority; (2) demonstrate continued commitment to the Best Management Practices (BMPs) and Agricultural Efficient Water Management Practices (EWMPs); (3) ensure a reliable future water supply; and (4) reduce consumption during periods of high treated-water demand.

9.1 Demand Management Measure for Retail Agencies

The proceeding sections describe the planned efforts of the District in implementing each of the following DMM categories to meet water use targets.

9.1.1 Water Waste Prevention Ordinances

The District's legislative code, Chapter 7.40: Water Conservation, explicitly states that the waste of water is to be prohibited, and prohibits specific actions that waste water, such as excessive runoff from landscape irrigation, and use of a hose outdoors without a shut off nozzle. This legislative code is in place at all times and is not dependent upon a water shortage for implementation.

9.1.2 Metering

The District is a fully metered agency. Currently ever meter in the District is replaced every ten years to ensure accuracy and calibration. The district is currently in the process of converting all meters to Advanced Metering Infrastructure (AMI), or Automatic Meter Reading (AMR) units which will increase accuracy and frequency of meter reading.

9.1.3 Public Education and Outreach

The District supports and participates in county-wide programs established by the Water Authority including sponsored 4th grade poster contests and conservation outreach programs. The District also includes public outreach information regarding water conservation on customer bills.

9.1.4 Programs to Assess and Manage Distribution System Real Loss

Currently the District closely monitors variations in water usage between customers to determine potential sources of water loss in the system.

9.1.5 Water Conservation Program Coordination and Staffing Support

Water conservation program coordination is handled by a single staff member of the District. This staff member coordinates the outreach efforts described in section 9.1.4 and is also responsible for reporting required information to the State Water Resource Control Board on behalf of the District

9.2 Members of the California Urban Water Conservation Council

CUWCC members have the option of submitting their 2013-2014 Best Management Practice (BMP) annual reports in lieu of, or in addition to, describing the DMMs in their UWMP. The option of submitting the CUWCC BMP report in lieu of describing the DMMs is only available if the supplier is in full compliance with the CUWCC's Memorandum of Understanding (MOU). The submitted reports must include documentation from the CUWCC that the supplier has met the MOU coverage requirements and is in full compliance with the MOU. The District is in full compliance of the MOU and has opted to not submit an annual BMP report as part of this UWMP.

9.3 Future Water Conservation Savings

Projected water savings and effectiveness provided in the 2015 UWMP are based on industry standard methodologies for calculating savings, as defined by the CUWCC. The Water Authority assists the CUWCC in conducting pilot programs and analyzing ways to increase the accuracy of savings calculation methodologies.

This conservation target is appropriate to implement the BMPs and fulfill the District's commitment to the MOU. Additionally, this target coincides with the availability of anticipated funds from the District, Water Authority, and/or Metropolitan. The estimates of future water savings are based on savings projections from implementing various conservation measures and the result of state and national efficiency standards. The savings are a projection of the amount of water that will be conserved based on the best information available at this time.

Future water conservation savings are based on historical activity for Residential Surveys, Residential Retrofits, High-Efficiency Clothes Washer Incentives, and Toilet Incentives. Efficiency Standards include water-saving devices installed in new residential construction as part of state-required codes, as well as toilets replaced through natural replacement outside of the toilet incentive. Updated SANDAG demographic information helps determine savings for

new construction through BMP implementation, and this data has been incorporated into the District's revised demand forecast as discussed in Section 4.

Water savings in the Commercial, Industrial, and Institutional (CII) sectors are based on both historical activity and anticipated new water-efficient products that will experience expanded use. These products include multi-load commercial HEWs, food steamers, commercial dishwashers, and waterless urinals.

A number of financial assistance programs available to San Diego County agencies include: the Water Authority's Financial Assistance Program (FAP) and Reclaimed Water Development Fund (RWDF); Metropolitan's Local Resources Program (LRP); the United States Bureau of Reclamation (USBR) Title XVI Grant Program; and the State Water Resources Control Board (SWRCB) low interest loan programs. Together, these programs offer funding assistance for all project phases, from initial planning and design to construction and operation. District staff periodically reviews the financial assistance programs available to determine if any of them are appropriate for District activities.

10 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

This chapter provides guidance for addressing the CWC requirements for a public hearing, the UWMP adoption process, submitting an adopted UWMP, plan implementation, and the process for amending an adopted UWMP.

10.1 Inclusion of all 2015 Data

This UWMP includes comprehensive water use and planning data for the entire year of 2015.

10.2 Notice of Public Hearing

The district provided notice of a public hearing in the local newspaper, the Ramona Sentinel. The posting stipulated the subject matter of the public hearing, date, time, UWMP revision schedule, contact information of the preparer, location of the hearing, and location to view or obtain a copy of the plan. Because the District is neither a City or a County they are not required to uphold the 60-day notification requirement. A copy of the public notice is included in Appendix D of this UWMP.

10.3 Public Hearing and Adoption

The public hearing and adoption will take place at the same meeting on June 14, 2016. The meeting agenda includes the public hearing as an agenda item. The public hearing portion of the meeting will take place prior to the adoption portion of the meeting. If necessary, the District's Board may modify the UWMP in response to public input prior to adoption. During the public hearing, the District will provide information on their baseline values, water use targets, and implementation plan required in the Water Conservation Act of 2009. Before the UWMP is submitted to the DWR the District will formally adopt the plan, and the adoption resolution will be included as an appendix of the final version of the UWMP.

10.4 Plan Submittal

The following sections provide guidance for submitting UWMPs to DWR, the State library, and cities and counties.

10.4.1 Submitting a UWMP to DWR

2015 UWMPs must be submitted to DWR within 30 days of adoption and by July 1, 2016. UWMP submittal will be done electronically through WUEdata, an online submittal tool that will be available in adequate time for UWMP submittal.

After the UWMP has been submitted, DWR will review the plan utilizing the provided checklist (Appendix A) and make a determination as to whether or not the UWMP addresses the requirements of the CWC. The DWR reviewer will contact the District as needed during the review process. Upon completion of the Plan review, DWR will issue a letter to the District with the results of the review.

10.4.2 Electronic Data Submittal

DWR is in the process of developing an online submittal tool, WUEdata, which will be used for the 2015 UWMPs. The tool will accept complete UWMPs, as well as tabular data from all the data tables. The WUE data online submittal tool is online at https://wuedata.water.ca.gov.secure/.

The availability of the toll will be announced to the Guidebook Advisory Committee, the Urban Stakeholder Committee, DWR's UWMP list serve, the Water Plan ENews, and posted on the DWR Urban Water Management webpage at http://www.dwr.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

10.4.3 Submitting a UWMP to the California State Library

No later than 30 days after adoption, the water agency shall submit a CD or hardcopy of the adopted 2015 UWMP to the California State Library at:

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

If delivered by courier or overnight carrier to the State Library, use the following street address instead of the PO Box:

California State Library
Government Publications Section
914 Capitol Mall
Sacramento, California 95814

10.5 Public Availability

The adopted UWMP will be made available for public review at the front desk of the District office during normal business hours.

10.6 Amending an Adopted UWMP

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

11 REFERENCES

[1] Ramona Municipal Water District, 2010 Urban Water Management Plan, December 2010

[2] California Department of Water Resources, Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan, March 2011.

[3] San Diego County Water Authority, Draft 2015 Urban Water Management Plan, May 2015.

APPENDIX A

URBAN WATER MANAGEMENT PLAN CHECKLIST

APPENDIX A
Urban Water Management Plan Checklist

Table 1-2 Urban Water Management Plan checklist, organized by subject

No.	UWMP Requirement	California Water Code Reference	Additional Clarification	UWMP Location
PLAN PREPARATION				
4	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	10620(d)(2)		Section 2.5 UWMP Coordination
6	Notify, at least 60 days prior to the public hearing on the plan required by Section 10642, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Any city or county receiving the notice may be consulted and provide comments.	10621(b)		Section 2.5 UWMP Coordination
7	Provide supporting documentation that the UWMP or any amendments to, or changes in, have been adopted as described in Section 10640 et seq.	10621(c)		Section 2.6 Plan Adoption; Appendix B.
54	Provide supporting documentation that the urban water management plan has been or will be provided to any city or county within which it provides water , no later than 60 days after the submission of this urban water management plan.	10635(b)		Section 2.5 UWMP Coordination; Appendix B
55	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	10642		Section 2.5 Public Outreach; Appendix B

56	Provide supporting documentation that the urban water supplier made the plan available for public inspection and held a public hearing about the plan. For public agencies , the hearing notice is to be provided pursuant to Section 6066 of the Government Code. The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water. Privately-owned water suppliers shall provide an equivalent notice within its service area.	10642		Section 2.5 Plan Adoption ; Appendix B
57	Provide supporting documentation that the plan has been adopted as prepared or modified.	10642		Appendix B
58	Provide supporting documentation as to how the water supplier plans to implement its plan.	10643		Section 2.7 Plan Implementation
59	Provide supporting documentation that, in addition to submittal to DWR, the urban water supplier has submitted this UWMP to the California State	10644(a)		Section 2.6 Plan Adoption
60	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the urban water supplier has or will make the plan available for public review during normal business hours	10645		Section 2.6 Plan Adoption
SYSTEM DESCRIPTION				
8	Describe the water supplier service area.	10631(a)		Section 3.2 Service Area;
9	Describe the climate and other demographic factors of the service area of the supplier	10631(a)		Section 3.3 Climate
10	Indicate the current population of the service area	10631(a)	Provide the most recent population data possible.	Section 3.4 Population and Demographics; Table 3-1

11	Provide population projections for 2015, 2020, 2025, and 2030, based on data from State, regional, or local service area population projections.	10631(a)		Section 3.4 Population and Demographics; Table 3-1
12	Describe other demographic factors affecting the supplier 's water management planning.	10631(a)		Section 3.4 Population and Demographics
	Provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates , including references to supporting data.	10608.2		Section 5 and subsections
2	Wholesalers: Include an assessment of present and proposed futuremeasures, programs, and policies to help achieve the water usereductions. Retailers: Conduct at least one public hearing that Includesgeneral discussion of the urban retail water supplier's implementation planfor complying with the Water Conservation Bill of 2009.	10608.3610608.26(a)		Section 8.1 Conservation Plan
3	Report progress in meeting urban water use targets using the standardized form.	10608.4		Section 5 Baseline Water use and Targets
25	Quantify past, current, and projected water use, identifying the uses among water use sectors, for 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, conjunctive use, and (I) agriculture.	10631(e)(1)		Section 4.6 Current Water Deliveries; Section 4.7 Projected Water Deliveries
33	Provide documentation that either the retail agency provided the wholesale agency with water use projections for at least 20 years, if the UWMP agency is a retail agency, OR, if a wholesale agency, it provided its urban retail customers with future planned and existing water source available to it from the wholesale agency during the required water-year types	10631(k)		Section 4.8 Water Demand Projections; Table 11

34	Include projected water use for single-family and multifamily residential housing needed for lower income households , as identified in the housing element of any city , county, or city and county in the service area of the supplier.	10631.1(a)		Section 4.7 Projected Water Deliveries
SYSTEM SUPPLIES				
13	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, and 2030.	10631(b)		Section 6 System Supplies
14	Indicate whether groundwater is an existing or planned source of water available to the supplier. If yes, then complete 15 through 21 of the UWMP Checklist. If no, then indicate "not applicable" in lines 15 through 21 under the UWMP location column.	10631(b)		The District does not utilize groundwater as a supply source; Section 6.3 Groundwater
15	Indicate whether a groundwater management plan been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	10631(b)(1)		N/A
16	Describe the groundwater basin.	10631(b)(2)		N/A
17	Indicate whether the groundwater basin is adjudicated? Include a copy of the court order or decree.	10631(b)(2)		N/A
18	Describe the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. If the basin is not adjudicated , indicate "not applicable" in the UWMP location column.	10631(b)(2)		N/A
19	For groundwater basins that are not adjudicated , provide information as to whether DWR has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the Condit ion of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition. If the basin is adjudicated , indicate "not applicable" in the UWMP location column.	10631(b)(2)		N/A

20	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	10631(b)(3)		N/A
21	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	10631(b)(4)		N/A
24	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	10631(d)		N/A the district does not have the ability to transfer water
30	Include a detailed description of all water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years, excluding demandmanagement programs addressed in (f)(1). Include specific projects,describe water supply impacts, and provide a timeline for each project.	10631(h)		Section 6.6 FutureWater Projects
31	Describe desalinated water project opportunities for long-term supply, including, but not limited to, ocean water, brackish water, and groundwater.	10631(i)		Section 6.5 Desalinated Water Opportunities
44	Provide information on recycled water and its potential for use as a water source in the service area of the urban water supplier. Coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	10633		Section 6.4 Wastewater and Recycled Water
45	Describe 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.	10633(a)		Section 6.4 Wastewater and Recycled Water
46	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.	10633(b)		Section 6.4 Wastewater and Recycled Water

47	Describe the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.	1063(C.)		Section 6.4 Wastewater and Recycled Water
48	Describe and quantify 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.	10633(d)		Section 6.4 Wastewater and Recycled Water
49	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.	10633(e.)		Section 6.4 Wastewater and Recycled Water
50	Describe the 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 .	10633(f)		Section 6.4 Wastewater and Recycled Water
51	Provide 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.	10633(g)		Section 6.4 Wastewater and Recycled Water
WATER SHORTAGE RELIABILITY AND CONTINGENCY PLANNING				
5	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	10620(f)		Section 7 Water Supply Reliability Assessment
22	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage and provide data for (A) an average water year, (B) a single dry water year , and (C) multiple dry water years.	10631(c)(1)		Section 7 Water Supply Reliability Assessment

23	For any water source that may not be available at a consistent level of use - given specific legal, environmental, water quality, or climatic factors - describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.	10631(c)(2)		Section 7 Water Supply Reliability Assessment
35	Provide an urban water shortage contingency analysis that specifies stages of action, including up to a 50-percent water supply reduction, and an outline of specific water supply conditions at each stage	10632(a)		Section 8 Water Shortage Contingency Planning
36	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply .	10632(b)		Section 7.5 Projected Supplies and Demands
37	Identify actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.	10632(c.)		Section 8 Water Shortage Contingency Plan
38	Identify additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.	10632(d)		Section 8 Water Shortage Contingency Plan
39	Specify consumption reduction methods in the most restrictive stages . Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area , and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.	10632		Section 8 Water Shortage Contingency Plan

40	Indicated penalties or charges for excessive use, where applicable.	10632(f)		Section 8 Water Shortage Contingency Plan
41	Provide an analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.	10632(g)		Section 8.5 Revenue and Expenditure Impacts
42	Provide a draft water shortage contingency resolution or ordinance.	10632(h)		Appendix C Drought Response Conservation Plan
43	Indicate a mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.	10632(i)		Section 8.4 Determining Water Shortage Reductions
52	Provide information , to the extent practicable , relating to the quality of existing sources of water available to the supplier over the same five-year increments, and the manner in which water quality affects water management strategies and supply reliability	10634	For years 2010, 2015, 2020, 2025 , and 2030	Section 6.9 Quality of Water Supply
53	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years . Base the assessment on the information compiled under Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier .	10635(a)		Section 7.2 Reliability by Type of Year

DEMAND MANGEMENT MEASURES				
26	Describe how each water demand management measure is being implemented or scheduled for implementation. Use the list provided.	10631(f)(1)		Section 9 Demand Management
27	Describe the methods the supplier uses to evaluate the effectiveness of DMMs implemented or described in the UWMP.	10631(f) (3)		N/A BMP Reports included in Lieu of DMM
28	Provide an estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the ability to further reduce demand.	10631(f)(4)		N/A MOU Signer who submits annual report
29	Evaluate each water demand management measure that is not currently being implemented or scheduled for implementation. The evaluation should include economic and non-economic factors, cost-benefit analysis, available funding, and the water suppliers' legal authority to implement the work.	10631(g)		N/A MOU Signer who submits annual report
32	Include the annual reports submitted to meet the Section 6.2 requirements, if a member of the CUWCC and signer of the December 10, 2008 MOU.	10631(j)	Signers of the MOU that submit the annual reports are deemed compliant with Items 28 and 29.	Section 9 Demand Management
a	The UWMP Requirement descriptions are general summaries of what is provided in the legislation. Urban water suppliers should review the exact legislative wording prior to submitting its UWMP.			
b	The Subject classification is provided for clarification only. It is aligned with the organization presented in Part I of this guidebook. A water supplier is free to address the UWMP Requirement anywhere with its UWMP, but is urged to provide clarification to DWR to facilitate review.			

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APPENDIX B

RMWD Board of Directors Resolution

RESOLUTION NO. 16-1507

RESOLUTION OF THE BOARD OF DIRECTORS OF THE RAMONA MUNICIPAL WATER DISTRICT TO ADOPT THE 2015 URBAN WATER MANAGEMENT PLAN

WHEREAS, California Water Code Section 10610, et seq., known as the Urban Water Management Planning Act mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan ("Plan"), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the Ramona Municipal Water District (RMWD) delivers water supplies to a population of over 36,000; and

WHEREAS, the Ramona Municipal Water District has implemented conservation measures consistent with the Urban Water Management Plan; and

WHEREAS, The Plan shall be periodically reviewed at least once every five years, and that RMWD shall make any amendment or changes to its Plan which are indicated by the review; and

WHEREAS, The Plan must be adopted after public review and hearing and filed with the California Department of Water Resources by July 1, 2016; and

WHEREAS, RMWD has therefore prepared and circulated for public review a draft 2015 Urban Water Management Plan ("2015 Plan"), and a properly noticed Public Hearing regarding said 2015 Plan was held by RMWD on June 14, 2016; and

WHEREAS, RMWD did prepare and shall file said 2015 Plan with the California Department of Water Resources.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Ramona Municipal Water District as follows:

1. That the above recitals are true and correct.
2. RMWD's 2015 Plan is hereby adopted and the General Manager is hereby authorized and directed to file the 2015 Plan with the California Department of Water Resources by the July 1, 2016 due date.

PASSED, APPROVED AND ADOPTED by the Board of Directors of the Ramona Municipal Water District at a regular Board meeting held on the 14th day of June 2016.

Thomas Ace
President, Board of Directors
Ramona Municipal Water District

ATTEST:

Joseph Zenovic
Secretary, Board of Directors
Ramona Municipal Water District

APPENDIX C

RMWD Drought Response Conservation Program

Chapter 7.40

WATER CONSERVATION

Contents:

Section 7.40.010 Declaration of Policy.
Section 7.40.020 Findings.
Section 7.40.030 Voluntary Guidelines.
Section 7.40.040 Drought Response Conservation Program.
Section 7.40.041 Violations and Penalties.
Section 7.40.042 Variance.

Section 7.40.010 Declaration of Policy.

California Water Code Sections 375 et seq. and 71640 et seq., authorizes municipal water districts to adopt water conservation measures in a comprehensive water conservation program to reduce the quantity of water used by the people for the purposes of conserving the water supplies of the District and of the State, 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 District 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. The District may also prohibit use of water during designated periods and for specific uses that it finds to be nonessential. Understanding that the community of Ramona wishes to utilize its limited water resources as efficiently as possible, all members of the Ramona community are encouraged to take steps to voluntarily reduce water consumption throughout the year regardless of whether drought conditions exist. The Board has established an effective cooperative Water Conservation program to provide resources and education to the public. Information about the program can be obtained by contacting the District office, or through the District's website.

The policy established herein is part of the Ramona Municipal Water District's comprehensive Water Conservation program pursuant to California Water Code Sections 375 et seq. and 71640 et seq., based upon the need to conserve water supplies and to avoid or minimize the effects of any future shortage. The Board fully anticipates, encourages and appreciates the joint efforts between the District and the public to conserve water to protect water supplies.

This policy also establishes regulations to be implemented during times of declared water shortages, or declared water shortage emergencies. It establishes four levels of drought response actions (“Drought Response Levels”) to be implemented in times of shortage, with increasing restrictions on water use in response to worsening drought conditions and decreasing available supplies. Drought Response Level 1 drought condition response measures are voluntary and will be reinforced through local and regional public education and awareness measures that may be funded in part by the District.

During Drought Response Levels 2 through 4, all conservation measures and water-use restrictions are mandatory and become increasingly restrictive in order to attain escalating conservation goals. Violations of this Chapter are subject to criminal, civil, and administrative penalties and remedies specified in this Chapter 7.40 and as provided by law.

Section 7.40.020 Findings.

The District finds and determines the conditions prevailing in the Ramona Municipal Water District service area require water resources be put to maximum beneficial use, to every extent possible. The waste or unreasonable use of water must be prevented, and the conservation of water encouraged. The District's objective is to obtain the maximum reasonable and beneficial use of its water resources, to best serve the members of the community and to ensure public health, safety and welfare.

Section 7.40.030 Voluntary Guidelines.

A. The following voluntary water conservation guidelines have been established to reduce overall water consumption, and preserve the District's water supply. The District encourages all customers to incorporate water conservation practices into their daily lifestyle, for enhancing the beneficial use of water resources.

1. Acknowledging that landscape irrigation is the single highest usage of water in single-family homes - about 60% of water used, the District establishes the following guidelines to conserve water for landscape and other outside use:

a. Water lawn and landscaping only during the cool parts of the day. Early morning is best, as it helps prevent the growth of fungus (watering may be done at any time with a bucket, a hand-held hose equipped with a positive shut-off nozzle, with drip irrigation or rotating nozzles);

b. Water lawn only when it needs it - step on the grass, if it springs up underfoot, it does not need water;

c. When watering the lawn, water it long enough to seep down into the roots, as surface watering will simply evaporate and be wasted;

d. Practice water-wise gardening by using drought tolerant and California-Friendly plants and trees;

e. Put a layer of mulch around trees and plants to slow the evaporation of moisture;

f. Delay new plantings until the cooler fall months, when plants need less water;

g. Water for several short periods instead of one long period, so the soil can absorb the moisture, without wasteful runoff;

h. Use a broom to clean off sidewalks, driveways, parking areas, tennis courts, patios or other paved areas;

i. Check for leaks in pipes, hoses, faucets and couplings; repair as soon as possible;

j. Use a hand-held bucket or a hand-held hose equipped with a positive shut-off nozzle when washing autos, trucks, trailers, boats, airplanes and other types of mobile equipment; and

k. Use untreated or recycled water for grading, if possible.

2. To conserve indoor water use:

a. Check toilet(s) for leaks. Put a few drops of food coloring in the toilet tank. If, without flushing, the coloring begins to appear in the bowl, the tank has a leak that may be wasting up to 100 gallons of water a day. Install a high-efficiency or an ultra low-flush toilet;

b. Take shorter showers. Limit showers to the time it takes to wash and rinse;

c. Install water-saving shower heads or flow restrictors;

d. Take baths instead of showers. A partially filled tub uses less water than a shower;

e. Turn off the water while brushing teeth and shaving;

f. Check faucets and pipes for leaks;

g. Use automatic dishwashers only for full loads, as every load uses about 25 gallons of water;

h. Use automatic clothes washers only for full loads, as every load uses 30 to 35 gallons a cycle. Consider purchasing a High-Efficiency Washer (HEW), when replacing your clothes washer;

i. Do not let the faucet run while cleaning vegetables or when washing dishes, as rinsing can be done in a sink full of clean water;

j. Do not leave water running for rinsing when washing dishes by hand;

k. Serve water to restaurant customers only when specifically requested.

Section 7.40.040 Drought Response Conservation Program.

A. Definitions

1. The following words and phrases whenever used in this chapter shall have the meaning defined in this section:

   a. "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 Water Authority Special Agricultural Rate programs.

   b. "Water Authority" means the San Diego County Water Authority.

   c. "DMP" means the Water Authority's Drought Management Plan in existence on the effective date of this Chapter 7.40 and as readopted or amended from time to time, or an equivalent plan of the Water Authority to manage or allocate supplies during shortages.

   d. "Metropolitan" means the Metropolitan Water District of Southern California.

   e. "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 District.

   f. "SAWR" means the Special Agricultural Water Rate program available from Metropolitan that is administered by the Water Authority.

B. Application

1. The provisions of Chapter 7.40 apply to any person in the use of any water provided by the District and proposed users of District water, as applicable.

2. Chapter 7.40 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.

3. Nothing in Chapter 7.40 is intended to affect or limit the ability of the District to declare and respond to an emergency, including an emergency that affects the ability of the District to supply water.

4. The provisions of Chapter 7.40 do not apply to use of water from private wells or to recycled water.

5. Unless otherwise specifically authorized in this Legislative Code, nothing in Chapter 7.40 shall apply to use of water that is subject to a special supply program. Violations of the conditions of special supply programs are subject to the penalties established under the applicable program.

C. Drought Response Level 1: Drought Watch Condition

1. 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 of up to 10 percent is required in order to ensure that sufficient supplies will be available to meet anticipated demands. The General Manager may declare the existence of a Drought Response Level 1 and take action to implement the Level 1 conservation practices identified in this Section.

2. During a Level 1 Drought Watch condition, District will increase its public education and outreach efforts to emphasize increased public awareness of the need to implement the following water conservation practices:

   a. Stop washing down paved surfaces, including but not limited to sidewalks, driveways, parking lots, tennis courts, or patios, except when it is necessary to alleviate safety or sanitation hazards.

   b. Stop water waste resulting from inefficient landscape irrigation, such as runoff, low head drainage, or overspray, etc. Similarly, stop water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.

   c. Irrigate residential and commercial landscape before 10 a.m. and after 6 p.m. only.

   d. Use a hand-held hose equipped with a positive shut-off nozzle or bucket to water landscaped areas, including trees and shrubs located on residential and commercial properties that are not irrigated by a landscape irrigation system.

   e. Irrigate nursery and commercial grower's products before 10 a.m. and after 6 p.m. only. Watering is permitted at any time with a hand-held hose equipped with a positive shut-off nozzle, a bucket, or when a drip/micro-irrigation system/equipment or rotating nozzles are used. Irrigation of nursery propagation beds is permitted at any time. Watering of livestock is permitted at any time.

   f. Use re-circulated water to operate ornamental fountains.

g. Wash vehicles using a bucket and a hand-held hose with positive shut-off nozzle, mobile high pressure/low volume wash system, or at a commercial site that re-circulates (reclaims) water on-site. Avoid washing during hot conditions when additional water is required due to evaporation.

h. Serve and refill water in restaurants and other food service establishments only upon request.

i. Offer guests in hotels, motels, and other commercial lodging establishments the option of not laundering towels and linens daily.

j. Repair all water leaks within five (5) days of notification by the District unless other arrangements are made with the General Manager.

k. Use recycled or non-potable water for construction purposes when available and feasible.

D. Drought Response Level 2: Drought Alert Condition

1. A Drought Response Level 2 condition is also referred to as a "Drought Alert" condition. A Level 2 condition applies when the Water Authority notifies its member agencies, including the District, that due to cutbacks caused by drought or other reduction in supplies, a consumer demand reduction of up to twenty percent (20%) is required in order to have sufficient supplies available to meet anticipated demands. The District's Board of Directors may declare the existence of a Drought Response Level 2 condition and implement the mandatory Level 2 conservation measures identified in this Chapter 7.40.

2. All District water use 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:

a. Limit residential and commercial landscape irrigation to no more than two (2) days per week. During the months of November through May, landscape irrigation is limited to no more than once per week. This section shall not apply to commercial growers or nurseries.

b. Limit lawn watering and landscape irrigation using sprinklers to no more than ten (10) minutes per watering station per watering 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 rotating nozzles.

c. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by Section D(2)(a) above, on the same schedule set forth in Section D(2)(a) above, by using a bucket, hand-held hose with positive shut-off nozzle, or low-volume non-spray irrigation.

d. Repair all leaks within seventy-two (72) hours of notification by the District unless other arrangements are made with the General Manager.

e. Stop operating ornamental fountains or similar decorative water features unless recycled water is used.

f. No irrigating outdoors during and within 48 hours following measurable rainfall.

g. Irrigation with potable water of ornamental turf on public street medians is prohibited.

3. During a Drought Response Level 2 condition, the District Board of Directors may find that drought conditions are such that an emergency condition exists and may take additional action to declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350. In the event of a declared Drought Emergency, no applications for new potable metered water service or upsizing of metered water service shall be accepted, no new temporary meters or permanent meters shall be provided and no new statements of ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability, commitment letters, agency clearance forms, out-of-district potable water service agreements) shall be issued, except under the following circumstances:

a. A valid, unexpired building permit has been issued for the project; or

b. The project is necessary to protect the public's health, safety, and welfare; or

c. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District, in its sole discretion.

This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore services that have been interrupted for less than a year.

4. The District may establish a water allocation for property served by the District using a method that does not penalize persons for the prior implementation of conservation methods or the installation of water saving devices. If the District establishes a water allocation, the District shall provide notice of the allocation by including the allocation in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Any penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of this Chapter. For the purpose of assessing

administrative fines pursuant to Chapter 7.40.041, each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.

E. Drought Response Level 3: Drought Critical Condition

1. 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 of up to forty percent (40%) is required in order to have sufficient supplies available to meet anticipated demands. The District Board of Directors may declare the existence of a Drought Response Level 3 condition and implement the Level 3 conservation measures identified in this policy.

2. All District water use shall comply with Level 1 Drought Watch and Level 2 Drought Alert water conservation practices and measures during a Level 3 Drought Critical condition and shall also comply with the following additional mandatory conservation measures:

   a. 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. 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 District. This section shall not apply to commercial growers or nurseries.

   b. Water landscaped areas, including trees and shrubs located on residential and commercial properties, and not irrigated by a landscape irrigation system governed by Section E(2)(a), on the same schedule set forth in Section E(2)(a) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation.

   c. Stop filling or re-filling ornamental lakes or ponds, 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 Chapter 7.40.

   d. Stop washing vehicles except at commercial carwashes that re-circulate water, or by high pressure/low volume wash systems.

   e. Repair all leaks within forty-eight (48) hours of notification by the District unless other arrangements are made with the General Manager.

3. During a Drought Response Level 3 condition, the District Board of Directors may find that drought conditions are such that an emergency condition exists and may declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350. In the event of a declared Drought Emergency, no new potable water service shall be provided, no new temporary meters or permanent meters shall be provided and no applications for new potable metered water service or upsizing of metered water service shall be accepted, no new temporary meters or permanent meters shall be provided and no new statements of ability to serve or provide potable water service (such as, will serve letters, certificates, or letters of availability, commitment letters, agency clearance forms, out-of-district potable water service agreements) shall be issued, except under the following circumstances:

   a. A valid, unexpired building permit has been issued for the project; or

   b. The project is necessary to protect the public's health, safety, and welfare; or

   c. The applicant provides substantial evidence of an enforceable commitment that water demands for the project will be offset prior to the provision of a new water meter(s) to the satisfaction of the District, in its sole discretion.

   This provision shall not be construed to preclude the resetting or turn-on of meters to provide continuation of water service or to restore services that has been interrupted for less than a year.

4. The District may establish a water allocation for property served by the District using a method that does not penalize persons for the prior implementation of conservation methods or the installation of water saving devices. If the District establishes a water allocation, the District shall provide notice of the allocation by including the allocation in the regular billing statement for the fee or charge or by any other mailing to the address to which the District customarily mails the billing statement for fees or charges for on-going water service. Any penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed for violation of this Chapter. For the purpose of assessing administrative fines pursuant to Chapter 7.40.041, each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.

F. Drought Response Level 4: Drought Emergency Condition

1. 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 of more than forty

percent (40%) percent in order for the Authority to have maximum supplies available to meet anticipated demands. Upon declaration by the Authority of a Drought Emergency Condition, the District may declare a Drought Emergency in the manner and on the grounds provided in California Water Code section 350 *et seq.*

2. All District water use shall comply with conservation practices and 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:

   a. 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 District has determined that recycled water is available and may be lawfully applied to the use.

      i. Maintenance of trees and shrubs that are watered on the same schedule set forth in Section E(2)(a) by using a bucket, hand-held hose with a positive shut-off nozzle, or low-volume non-spray irrigation;

      ii. 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;

      iii. Maintenance of existing landscaping for erosion control;

      iv. Maintenance of plant materials identified to be rare or essential to the well being of rare animals;

      v. Maintenance of landscaping within active public 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 E(2)(a) above;

      vi. Watering of livestock; and

      vii. Public works projects and actively irrigated environmental mitigation projects.

   b. Repair all water leaks within twenty-four (24) hours of notification by the District unless other arrangements are made with the General Manager.

The District may establish a water allocation for property served by the District. If the District establishes 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 District customarily mails the billing statement for fees or charges for on-going water service. Any penalty for excess water usage shall be cumulative to any other remedy or penalty that may be imposed

for violation of this Chapter. For the purpose of assessing administrative fines pursuant to Chapter 7.40.041, each billing period in which an allocation is exceeded shall count as a separate violation. Subsequent violations that occur during a calendar year shall count cumulatively for the purpose of assessing administrative fines for second violations and additional violations.

G. Correlation Between Drought Management Plan and Drought Response Levels

1. The correlation between the Water Authority's Drought Management Plan ("DWP") stages and the District Drought response levels identified in this Chapter is described herein. Under DMP Stage 1, the District may implement Drought Response Level 1 actions. Under DMP Stage 2, the District would implement Drought Response Level 1 or Level 2 actions. Under DMP Stage 3, the District may implement Drought Response Level 2, Level 3, or Level 4 actions.

The Drought Response Levels identified in this Chapter 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	Up to 10%	Stage 1 or 2
2 - Drought Alert	Mandatory	Up to 20%	Stage 2 or 3
3 - Drought Critical	Mandatory	Up to 40%	Stage 3
4 - Drought Emergency	Mandatory	Above 40%	Stage 3 or 4

H. Procedures for Determination and Notification of Drought Response Level

1. 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 District and provided to the District 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 District. The District may also post notice of the condition on their website.

2. The existence of Drought Response Level 2 or Level 3 conditions may be declared by resolution of the District Board of Directors adopted at a regular or special public meeting held in accordance with State law, including but not limited to Water Code section 350 *et seq.* The mandatory conservation measures applicable to Drought Response Level 2 or Level 3 conditions shall become effective as stated in the Board Resolution. Within ten (10) days following the declaration of the response level, the District shall publish a copy of the resolution in a newspaper used for publication of official notices.

3. 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 become effective as stated in the Board Resolution. Within ten (10) days following the declaration of the response level, the District shall publish a copy of the resolution in a newspaper used for publication of official notices. If the District 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 District customarily mails the billing statement for fees or charges for on-going water service. Water allocation shall become effective as stated in the Board Resolution.

4. The General Manager may declare the end of Drought Response Level 1. The District Board of Directors may declare an end to a Drought Response Level by the adoption of a resolution at any regular or special meeting held in accordance with State law.

Section 7.40.041 Violations and Penalties.

A. Violation of Chapter 7.40. Any person, who uses, causes to be used, or permits the use of water in violation of this Chapter 7.40 is guilty of an offense punishable as provided herein.

B. Separate Offense. Each day that a violation of this Chapter 7.40 occurs is a separate offense.

C. Administrative Fines. Administrative fines may be levied for each violation of a provision of this Chapter 7.40 as follows:

1. One hundred dollars ($100) for a first violation.

2. Two hundred dollars ($200) for a second violation of any provision of this ordinance within one (1) calendar year.

3. Five hundred dollars ($500) for each additional violation of this ordinance within one (1) calendar year.

D. Administrative Procedures for Imposing Fines.

1. Notice of Violation. If the District General Manager determines to impose a fine on a person ("violator") who has violated any provision of Chapter 7.40, he or she shall cause a written notice of the violation to be sent to the violator. The notice shall provide in sufficient detail the violation(s), the amount of the penalty being imposed, and the date or times by which the penalty shall be paid to the District. The notice shall notify the violator that the fine will be imposed in the violator's next water bill and that the violator may appeal the District's imposition of the fine in writing within ten (10) calendar days of the date of said notice. Service of any notice required under this Section shall be made by the following means:

a. Personal service in the same manner as a summons in a civil action; or

b. Registered United States mail, which service shall be completed at the time of deposit into the United States mail.

2. Appeal. Within ten (10) calendar days of the date of such notice from the District, the customer may appeal the proposed fine to the District General Manager in writing, setting forth a description of the violation, any cure measures undertaken, the amount of the fine, the basis for the appeal, and the remedy sought. The General Manager shall consider the appeal and shall issue a written decision to the appellant customer. If the customer fails to appeal the ten (10) calendar days period specified in the District's notice to the customer, the customer shall lose its right to appeal the District's fine.

3. Appeals to District Board of Directors. An applicant may appeal a decision of the General Manager on an appeal of an administrative fine to the District Board of Directors within ten (10) days of the decision upon written request for a hearing. The request 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 de novo (granting no deference to the prior decision of the General Manager). The decision of the District Board of Directors is final. The violator shall not be permitted to seek a variance pursuant to Section 7.40.042.

E. Flow-Restricting Devices. Violation of a provision of the mandatory provisions of this Chapter 7.40 is subject to enforcement through installation of a flow-restricting device in the meter.

F. Misdemeanor. Each violation of the mandatory provisions of this Chapter 7.40 may be prosecuted as a misdemeanor punishable by imprisonment in the county jail for not more than thirty (30) days.

G. Discontinuation of Service. Willful violations of the mandatory conservation measures and water use restrictions applicable during a declared Drought Emergency condition during either drought Response Levels 3 or 4 may be enforced by discontinuing service to the property at which the violation occurs as provided by Water Code section 356.

H. Cumulative Remedies. All remedies provided for herein shall be cumulative and not exclusive.

Section 7.40.042 Variance.

A. If a District conservation measure disproportionately impacts a District customer, 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 by the Board, only upon a written finding of the existence of facts demonstrating that the application of this Section 7.40 impacts a District customer in a manner that is disproportionate to

the impacts to District 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 the District.

2. Supporting Documentation. The application shall be accompanied by documentation, such as but not limited to, water bills, invoices and receipts, photographs, maps, drawings, and other information, including a written statement of the applicant demonstrating those water conservation measures undertaken by the applicant.

3. Required Findings for Variance. An application for a variance may be denied if it is found that, 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 District, all of the following:

   a. That the variance does not constitute a grant of special privilege inconsistent with the limitations upon other District customers.

   b. That because of special circumstances applicable to the property or its use, the strict application of Chapter 7.40 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 District 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 10 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. The variance shall specify the duration for which the variance applicable to the subject property shall apply.

C. Appeals to District Board of Directors. An applicant may appeal a decision or condition of the General Manager on a variance application to the District Board of Directors within ten (10) days of the decision upon written request for a hearing. The request 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 de novo (granting no deference to the prior decision of the General Manager) by following the variance procedure delineated in Section 7.40.042(A) through (B), (1)-(4) above. The decision of the District Board of Directors is final.

APPENDIX D

Proof of Publication;
UWMP Public Hearing

PROOF OF PUBLICATION (2015.5 C.C.P.)

State Of California,
County of San Diego

I am a citizen of the United States and a resident of the County aforesaid: I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am an authorized representative of
Ramona Sentinel
a newspaper of general circulation, printed and published weekly in the County of San Diego, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of San Diego, State of California, under the date of April 23, 1927, Case Number 51489; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of the said newspaper and not in any supplement thereof on the following
Dates, to-wit:

May 26, Jun. 2, 2016

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Dated: Jun. 2, 2016
At: Poway, California

Signature
Monica Perea
UT Community Press

Proof of Publication

RAMONA MUNICIPAL WATER DISTRICT

NOTICE OF PUBLIC HEARING

Notice is hereby given that on the **14th day of June, 2016, at the hour of 2:00 p.m.** at the Ramona Community Center, 434 Aqua Lane, Ramona, California 92065, the Board of Directors of the Ramona Municipal Water District will conduct a Public Hearing. The purpose of the hearing will be to take public input on:

Adoption of the 2015 Urban Water Management Plan

Prior to this meeting, copies of the appropriate documents related to the 2015 Urban Water Management Plan will be available for review at the District Office. Written comments can be addressed to the District Office at 105 Earlham Street, Ramona, California 92065 Attn: UWMP 2015 and sent any time prior to the day set for the public hearing or at the Community Center at the time of the hearing.

At the time stated above, the Board of Directors shall hear and consider all comments, if any, to the 2015 Urban Water Management Plan; and at the conclusion of the hearing, the Board may adopt, revise, change, or amend the Plan.

Ramona Municipal Water District
105 Earlham Street
Ramona, CA 92065-1599
Phone: (760) 789-1330

Date: May 20, 2016
R3466. 5.26.16, 6.2.16