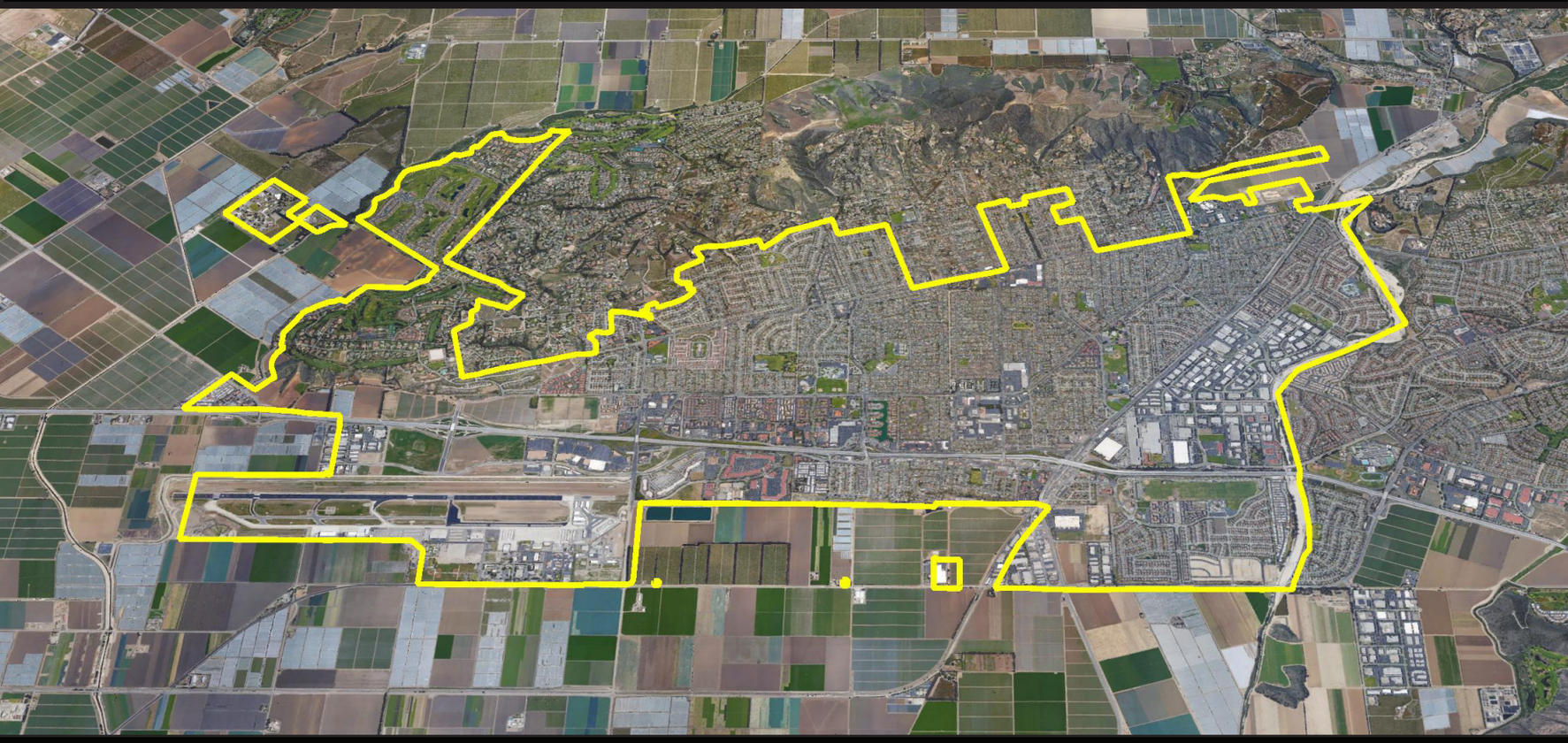
2015 Urban Water Management Plan-Final

for the City of Camarillo



• October 2016 •

Final

2015 Urban Water Management Plan

for the

City of Camarillo

Prepared by

WSC
WATER SYSTEMS CONSULTING, INC.

October 2016

Adopted by City Council on 10/12/2016

TABLE OF CONTENTS

Table of Contents i

List of Tables v

List of Figures vi

List of Abbreviations, Terms & Acronyms vii

1 Introduction and Overview 1-1

2 Plan preparation 2-1

2.1 Coordination 2-2

2.2 Plan Adoption, Submittal, and Implementation 2-3

3 System Description 3-1

3.1 Service Area Description and Boundaries 3-1

3.2 Service Area Climate 3-3

3.3 Service Area Population 3-3

3.4 Service Area Demographics 3-4

4 Baselines and Targets 4-1

4.1 Baseline Water Use 4-1

4.2 Target Water Use 4-3

4.2.1 Method 1 - Baseline Reduction Method 4-3

4.2.2 Method 2 - Efficiency Standard Method 4-3

4.2.3 Method 3 - Hydrologic Region Method 4-4

4.2.4 Method 4 - BMP Based Method 4-4

4.3 Minimum Water Use Reduction Requirement 4-5

4.4 Summary of Baseline and Target Water Use 4-5

5 System Water Use 5-1

5.1 Water Demands 5-1
5.1.1 Low-Income Demands 5-4
5.1.2 Sales to Other Water Agencies 5-5
5.1.3 Additional Water Uses and Losses 5-5
5.1.4 Total Water Use 5-5
5.2 Water Use Reduction Plan 5-5
6 System Supplies 6-1
6.1 Water Sources 6-1
6.2 Groundwater 6-2
6.2.1 Groundwater Management 6-4
6.2.2 Groundwater Quality 6-4
6.2.3 Groundwater Levels and Historical Trends 6-5
6.2.4 Sources of Recharge and Discharge 6-5
6.2.5 Groundwater Pumping 6-5
6.2.6 Basin Overdraft 6-6
6.3 Transfer Opportunities 6-6
6.4 Desalinated Water Opportunities 6-6
6.4.1 Brackish Water and/or Groundwater Desalination 6-7
6.4.2 Seawater Desalination 6-7
6.5 Recycled Water Opportunities 6-7
6.5.1 Wastewater Treatment Facilities 6-8
6.5.2 Wastewater Flow Projections 6-8
6.5.3 Water Recycling Facilities 6-9
6.5.4 Potential Uses of Recycled Water 6-10
6.6 Future Water Projects 6-11

6.6.1 Projects Planned by MWDSC 6-11

6.6.2 Projects Planned by CMWD 6-12

6.6.3 Projects Planned by the City 6-12

7 Water Supply Reliability 7-1

7.1 Water Supply Reliability 7-1

7.1.1 Basis of Water Year Data 7-1

7.1.2 Projected Normal Year Supply/Demand 7-2

7.1.3 Projected Single Dry Year Supply/Demand 7-3

7.1.4 Projected Multiple Dry Year Supply/Demand 7-3

7.1.5 Resource Maximization and Import Minimization 7-4

7.2 Factors Affecting Supply Reliability 7-4

8 Water Shortage Contingency Planning 8-1

8.1 Stages of Action and Reduction Objectives 8-1

8.2 Mandatory Prohibitions on Water Wasting 8-3

8.3 Penalties 8-4

8.4 Mechanism for Determining Water Use Reductions 8-4

8.5 Revenue and Expenditure Impacts 8-5

8.6 Actions during a Catastrophic Interruption 8-5

8.7 Projected Three Year Minimum Supply 8-5

9 Demand Management Measures 9-1

9.1 Demand Management Measures 9-2

9.1.1 DMM – Water Waste Prevention 9-2

9.1.2 DMM – Metering 9-3

9.1.3 DMM – Conservation Pricing 9-3

9.1.4 DMM – Public Information Programs 9-4

9.1.5 DMM – Water Loss Control 9-5

9.1.6 DMM – Conservation Coordinator and Staffing Support 9-5

9.2 Other Demand Management Measures 9-5

9.2.1 Water Survey Program 9-5

9.2.2 Water Retrofit Program 9-5

9.2.3 School Education Program 9-6

9.2.4 Conservation Programs for Commercial, Industrial, and Institutional Accounts 9-6

10 References 10-1

Appendix A. DWR Checklist ..... A

Appendix B. Notification and Outreach ..... B

Appendix C. Resolution of Adoption C

Appendix D. AWWA Water Loss Audit ..... D

Appendix E. Water Conservation Ordinances ..... E

Appendix F. FCGMA Groundwater Management Plan & Emergency Ordinance E ..... F

LIST OF TABLES

Table 2-1 DWR Schedule 2-1

Table 2-2 Summary of Changes in the UWMP Act Since 2010 2-1

Table 2-3 Agency Coordination 2-3

Table 3-1 Camarillo Climate Data 3-3

Table 3-2 Camarillo Climate Data (continued) 3-3

Table 3-3 City of Camarillo Annual Growth Rate Projections 3-4

Table 3-4 Population Historical, Current, & Projected 3-4

Table 3-5 Population Profile 3-5

Table 3-6 Employment Characteristics 3-5

Table 4-1 Ten-Year Baseline Period 4-2

Table 4-2 Five-Year Baseline Period 4-2

Table 4-3 Water Use Targets for each Method 4-6

Table 4-4 Interim and Baseline Targets 4-6

Table 5-1 Water Deliveries, 2010, AFY 5-1

Table 5-2 Water Deliveries, 2015, AFY 5-2

Table 5-3 Projected Water Deliveries, 2020, AFY 5-2

Table 5-4 Projected Water Deliveries, 2025-2030, AFY 5-3

Table 5-5 Projected Water Deliveries 2035, AFY 5-3

Table 5-6 Cumulative Low-Income Water Deliveries, AFY 5-5

Table 5-7 Non-Revenue Water, AFY 5-5

Table 5-8 Projected Total Water Use, AFY 5-5

Table 6-1 Historic and Projected Water Supplies, AFY 6-2

Table 6-2 Historic Volume Pumped, AFY 6-5

Table 6-3 Projected Groundwater Pumping, AFY 6-6

Table 6-4 Desalinated Water Opportunities 6-7

Table 6-5 Wastewater Flow Projections, AFY 6-8

Table 6-6 2010 UWMP Recycled Water Use Projected for 2015 and Actual 2015 Recycled Water Use, AFY 6-10

Table 6-7 Projected Recycled Water Use, AFY 6-11

Table 7-1 Basis of Water Year Data 7-2

Table 7-2 Historical Water Supply Conditions, AFY 7-2

Table 7-3 Supply and Demand – Normal Year, AFY 7-2

Table 7-4 Supply and Demand Comparisons – Single Dry Year, AFY 7-3

Table 7-5 Supply and Demand Comparison - Multiple Dry Year Events, AFY 7-3

Table 7-6 Factors Resulting in Inconsistency of Supply 7-5

Table 8-1 Water Shortage Contingency - Rationing Stages 8-2

Table 8-2 City's Projected Three-year Minimum Water Supplies, AFY 8-5

Table 9-1 Demand Management Measures 9-1

Table 9-2 Residential Conservation Pricing Rate Structure 9-4

Table 9-3 Multi-family and CII Water Rates 9-4

Table 9-4 Base Fees for Meter Size 9-4

LIST OF FIGURES

Figure 3-1 City of Camarillo Water Service Area 3-2

Figure 3-2 Historical, Current and Projected Population 3-4

Figure 4-1 Historic Population and Per Capita Water Use 4-3

Figure 4-2 Historical, Baseline, Targets, and Projected GPCDs 4-6

Figure 5-1 Past, Current and Projected Water Deliveries 5-4

Figure 6-1 Percent Water Deliveries in 2015 6-1

Figure 6-2 Groundwater Basin Map 6-3

LIST OF ABBREVIATIONS, TERMS & ACRONYMS

Abbreviation, Term or Acronym	Definition
AFY	acre feet per year
AWWA	American Water Works Association
BMP	Best Management Practices
CII	commercial, industrial, and institutional
CIMIS	California Irrigation Management Information System
CMWD	Calleguas Municipal Water District
CRA	Colorado River Aqueduct (CRA)
CSD	Camarillo Sanitary District
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
CWD	Camrosa Water District
DMM	Demand Management Measures
DWR	California Department of Water Resources
EA	Environmental Assessment
EIR	Environmental Impact Report
FCGMA	Fox Canyon Groundwater Management Agency
ft-msl	feet above mean sea level
gpcd	gallons per capita per day
GSP	Groundwater Sustainability Plan
HCF	Hundred Cubic Feet
IRWMP	Integrated Regional Water Management Plan
ITP	Independent Technical Panel
MCL	Maximum Contaminant Level
MOU	Memorandum of Understanding

Abbreviation, Term or Acronym	Definition
MWDSC	Metropolitan Water District of Southern California
NRW	non-revenue water
RHNA	Regional Housing Needs Assessment
SB7 Guidebook	*Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use*
SCAG	Southern California Association of Governments
SGMA	Sustainable Groundwater Management Act
SMP	Salinity Management Pipeline
SWP	State Water Project
TDS	Total Dissolved Solids
TEA	Temporary Extraction Allocation
UWMP	Urban Water Management Plan
UWMP Guidebook	*Guidebook to Assist Water Suppliers in the Preparation of a 2015 Urban Water Management Plan*
WRCC	Western Regional Climate Center
WRP	Water Reclamation Plant
WSCP	Water Shortage Contingency Plan

1 INTRODUCTION AND OVERVIEW

The California Water Code requires urban water suppliers within the state to prepare and adopt Urban Water Management Plans (UWMPs) for submission to the California Department of Water Resources (DWR). The UWMPs, which are required to be filed every five years, must satisfy the requirements of the Urban Water Management Planning Act (UWMP Act) of 1983, including amendments that have been made to the Act and other applicable regulations. The UWMP Act requires urban water suppliers servicing 3,000 or more connections, or supplying more than 3,000 acre-feet (AF) of water annually, to prepare an UWMP.

The purpose of the UWMP is for water suppliers to evaluate their long-term resource planning and establish management measures to ensure adequate water supplies are available to meet existing and future demands. The UWMP provides a framework to help water suppliers maintain efficient use of urban water supplies, continue to promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a mechanism for response during water drought conditions.

The UWMP is a valuable planning tool used for multiple purposes including:

- Serves as a valuable resource to the community and other interested parties regarding water supply and demand, conservation and other water related information
- Meets a statutory requirement of the California Water Code
- Provides a key source of information for Water Supply Assessments (WSAs) and Written Verifications of Water Supply
- Supports regional long-range planning documents including City and County General Plans
- Provides a standardized methodology for water utilities to assess their water resource needs and availability
- Serves as a critical component of developing Integrated Regional Water Management Plans (IRWMPs)
- Provides a resource for regional involvement in the California Water Plan

This plan, which was prepared in compliance with the California Water Code, and as set forth in the 2015 guidelines and format established by the DWR, constitutes the City of Camarillo's (City) 2015 UWMP.

2 PLAN PREPARATION

This plan was prepared based on guidance from DWR's *Guidebook to Assist Water Suppliers in the Preparation of a 2015 Urban Water Management Plan* (UWMP Guidebook) (1), DWR Urban Water Management Plans Public Workshops and Webinars, *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (SB7 Guidebook) (2), and the 2015 DWR Review Sheet Checklist (Appendix A).

Water Purveyors must submit their 2015 UWMPs to DWR by July 1, 2016. Usually, UWMPs are due on December 31 of years ending in '0' and '5', but a six-month extension has been granted for submittal of the 2015 UWMPs. The draft 2015 UWMP Guidebook became available in November 2015 and was finalized in March 2016. DWR's 2015 UWMP schedule is summarized in Table 2-1.

Table 2-1 DWR Schedule

Date	Event/Task
November, 2015	Draft Guidebook released
December, 2015	Workshops
January, 2016	Final Draft Guidebook released
March, 2016	Final Guidebook, materials and tools released
July, 2016	UWMPs due to DWR

A DWR Review Sheet checklist is provided in Appendix A as a reference for the various sections within this UWMP that address the requirements of the UWMP Act.

Table 2-2 summarizes changes to the UWMP Act since 2010 that have been addressed in this UWMP.

Table 2-2 Summary of Changes in the UWMP Act Since 2010

Change	CWC Section	Legislative Bill	Summary
Demand Management Measures	10631 (f)(1) and (2)	AB 2067, 2014	Requires water suppliers to provide narratives describing their water demand management measures, as provided. Requires retail water suppliers to address the nature and extent of each water demand management measure implemented over the past 5 years and describe the water demand management measures that the supplier plans to implement to achieve its water use targets.
Submittal Date	10621 (d)	AB 2067, 2014	Requires each urban water supplier to submit its 2015 plan to the Department of Water Resources by July 1, 2016.
Electronic Submittal	10644 (a) (2)	SB 1420, 2014	Requires the plan, or amendments to the plan, to be submitted electronically including any standardized forms, tables, or displays specified by the department.
Standardized Forms	10644 (a) (2)	SB 1420, 2014	Requires the plan, or amendments to the plan, to include any standardized forms, tables, or displays specified by the department.

Change	CWC Section	Legislative Bill	Summary
Water Loss	10631 (e) (1) (J) and (e) (3) (A) and (B)	SB 1420, 2014	Requires a plan to quantify and report on distribution system water loss.
Estimating Future Water Savings	10631 (e) (4)	SB 1420, 2014	Provides for water use projections to display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans, when that information is available and applicable to an urban water supplier.
Voluntary Reporting of Energy Intensity	10631.2 (a) and (b)	SB 1036, 2014	Provides for an urban water supplier to include certain energy related information, including, but not limited to, an estimate of the amount of energy used to extract or divert water supplies.
Defining Water Features	10632	AB 2409, 2010	Requires urban water suppliers to analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.

2.1 COORDINATION

To prepare this UWMP, the City coordinated with multiple neighboring and stakeholder agencies. The coordination efforts were conducted to: 1) inform the agencies of the City's efforts and activities; 2) gather high quality data for use in developing this UWMP; and 3) coordinate planning activities with other related regional plans and initiatives. The coordination activities conducted by the City are summarized in Table 2-3. The notification letters can be found in Appendix B.

Table 2-3 Agency Coordination

Agency / Organization	Participated in developing the plan	Commented on the draft	Attended public meetings	Was contacted for assistance	Was sent a link to a copy of the draft plan	Was sent a notice of intention to adopt
Camarillo Sanitary District				X		
Fox Canyon Groundwater Management Agency					X	X
Camrosa Water District					X	X
Cal-American Water Company					X	X
Calleguas Municipal Water District					X	X
Pleasant Valley Mutual Water Company					X	X
Pleasant Valley Company Water District					X	X
Crestview Mutual Water Company					X	X
Ventura County Public Works Agency					X	X

2.2 PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

To fulfill the requirements of Water Code Section 10621(c), the City sent letters of notification of preparation of the 2015 UWMP to all neighboring water agencies and Ventura County 60 days prior to the public hearing. Copies of the 60-day notification letters are attached in Appendix B.

To fulfill the requirements of Water Code Section 10642 of the UWMP Act, the City made the draft 2015 UWMP available for public review and held a public hearing on September 28, 2016, which was continued to the October 12, 2016 City Council meeting. The public hearing was noticed at least two weeks prior to the public hearing and the hearing notice is attached in Appendix B. In addition, the City sent a link to the draft UWMP to the agencies shown in Table 2-3 and maintained a copy of the draft UWMP in its office prior to the public hearings.

The Final 2015 UWMP was formally adopted by the City Council on October 12, 2016. A copy of the Adoption Resolution is included in Appendix C. A copy of the Final 2015 UWMP was sent to the California State Library, DWR (electronically using the WUEdata reporting tool), and other appropriate agencies within 30 days of adoption. The City will make the 2015 UWMP available for public review in

its offices during normal hours no later than 30 days after the adoption of the plan by the City Council and filing with DWR.

The implementation of this plan shall be carried out as described unless significant changes occur between the adoption of this plan and the 2020 plan. If such significant changes do occur, the City will amend and readopt the plan as required by the California Water Code.

3 SYSTEM DESCRIPTION

The City's existing water distribution system consists of approximately 190 miles of 6-inch through 20-inch diameter pipelines, which include eight (US 101) freeway crossings. Other components of the City's water distribution system include: six reservoirs (four above ground and two underground) with a total combined capacity of 13.4 million gallons (MG), four groundwater wells, eight connections for importing water from Calleguas Municipal Water District (CMWD), three pumping stations, and 11 pressure reducing valve locations.

3.1 SERVICE AREA DESCRIPTION AND BOUNDARIES

Camarillo is located on Highway 101 in the Pleasant Valley portion of the Oxnard Plain, 9 miles inland from the Pacific Ocean, and 45 miles northwest of the City of Los Angeles. Camarillo is situated in the southern portion of Ventura County and is surrounded by open hills, mountains, and agricultural lands. The majority of the City is approximately 150 feet above mean sea level (ft-msl) while the northern foothill regions are as high as 360 ft-msl. The City's location is shown in Figure 3-1.

The City's water service area consists of approximately 9,100 acres, about 75 percent of the City's total incorporated area of 12,186 acres. Figure 3-1 shows the City's water service area in relation to the City boundary. The Camrosa Water District, Pleasant Valley County Water District, Pleasant Valley Mutual Water Company, and Crestview Mutual Water Company serve the remaining 3,100 acres. As shown on Figure 3-1, the City's water service area extends outside the City Limits to serve some small areas to the west and north of the City.

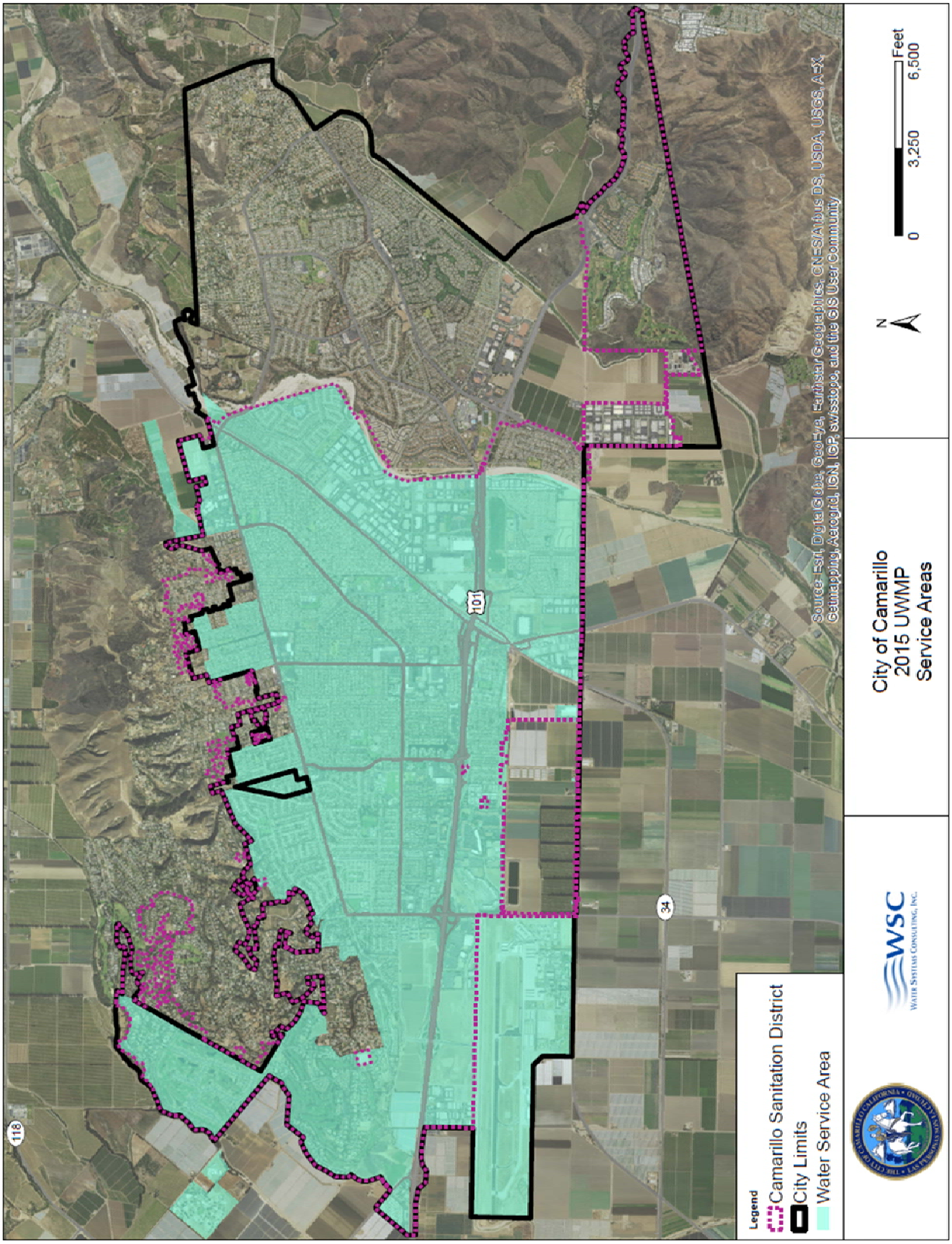


Figure 3-1 City of Camarillo Water Service Area

3.2 SERVICE AREA CLIMATE

The City's service area climate is a semi-arid environment with mild winters, warm summers and moderate rainfall, consistent with coastal Southern California. The climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or dry hot Santa Ana winds. Table 3-1 and Table 3-2 summarize the standard monthly average evapotranspiration (ETo) rates, rainfall, and temperature. The City's average monthly temperature ranges from 55.4 to 67.6 degrees Fahrenheit (°F), with an annual average temperature of 61.05°F. The daily extreme low and high temperatures have been measured to be 31°F and 100°F, respectively. ETo averages a total of 47.04 inches per year. As shown in Table 3-2, the historical annual average precipitation is approximately 14.17 inches. Most of the rainfall occurs during the period of November through April.

Table 3-1 Camarillo Climate Data

	January	February	March	April	May	June
Standard Average ETo, in[1]	2.48	2.66	3.84	4.52	5.22	5.20
Average Rainfall, in[2]	2.89	3.42	2.01	1.21	0.41	0.03
Average Temperature, °F[2]	56.4	55.8	56.8	58.0	61.2	64.2

[1]Data from California Irrigation Management Information System (CIMIS), (period of record is from January 2000 through December 2015) http://wwwcimis.water.ca.gov/cimis/data.jsp

[2] Western Regional Climate Center (WRCC) Station 046572 – Oxnard WSFO, California (WRCC, 2010). Represents monthly average data from May 1998 to January 2015.

Table 3-2 Camarillo Climate Data (continued)

	July	August	Sept.	Oct.	Nov.	Dec.	Annual
Standard Average ETo, in[1]	5.66	5.32	4.21	3.25	2.60	2.09	47.04
Average Rainfall, in[2]	0.0	0.0	0.07	0.85	1.16	2.12	14.17
Average Temperature, °F[2]	67.4	67.6	66.7	63.7	59.5	55.4	61.05

[1]Data from California Irrigation Management Information System (CIMIS), (period of record is from January 2000 through December 2015) http://wwwcimis.water.ca.gov/cimis/data.jsp

[2] Western Regional Climate Center (WRCC) Station 046572 – Oxnard WSFO, California (WRCC, 2010). Represents monthly average data from May 1998 to January 2015.

3.3 SERVICE AREA POPULATION

The City grew slowly prior to World War II, but the war effort saw the construction of the Oxnard Army Air Field (later Oxnard Air Force Base in 1951, now Camarillo Airport) to the west of town. The community grew further as nearby Naval Air Station Point Mugu and a Seabee base at Port Hueneme brought many workers and their families to the area. The grounds of Camarillo State Hospital, which opened in 1936 south of town, are now the campus of California State University, Channel Islands.

Population projections, shown in Table 3-4 and Figure 3-2 , were used to forecast water requirements for the City. The population projections were calculated using the DWR population tool based on 2010

census block data as well as calculated growth rates from the Southern California Association of Governments' (SCAG) population projections.

Table 3-3 City of Camarillo Annual Growth Rate Projections

	2015-2020[2]	2021-2025[2]	2026-2030[2]	2031-2035[2]
Growth Rates[1]	0.86%	0.39%	0.39%	0.39%

[1] Southern California Association of Governments Draft 2015 RTP/SCS Invalid source specified.
[2] Represents annual growth rate; the 5-year cumulative growth rate is 0.86% to 2020 and 0.39% for 2021-2035.

Table 3-4 Population Historical, Current, & Projected

	2005	2010	2015	2020	2025	2030	2035
Camarillo	38,667	42,311	42,869	44,744	45,624	46,520	47,435

Note: Population figures based on DWR population tool and 2010 Census Block data and the growth rates in Table 3-3.

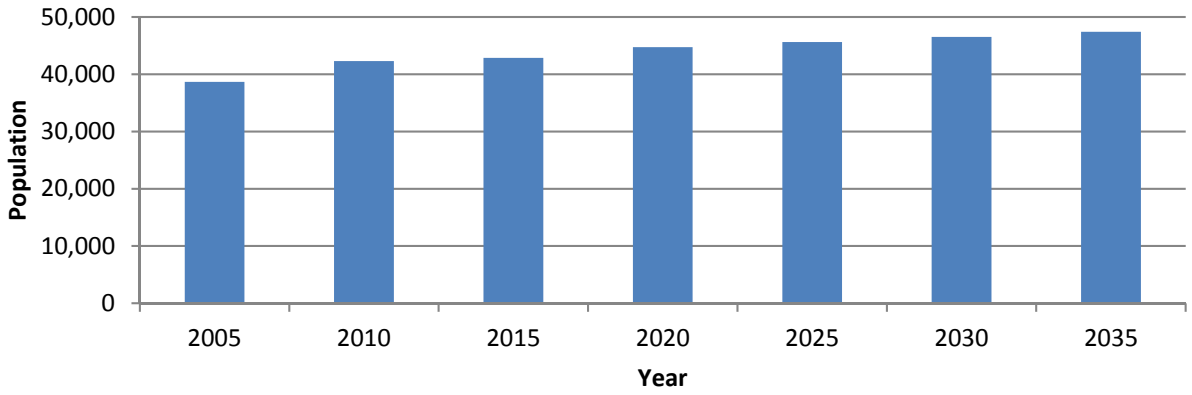


Figure 3-2 Historical, Current and Projected Population

3.4 SERVICE AREA DEMOGRAPHICS

Since population demographics and employment characteristics of the community can influence water demand in the future, the following section looks at current trends in these areas.

The City of Camarillo is a predominately residential community. The City's water service area consists of approximately 9,100 acres, about 75 percent of the City's total incorporated area of 12,186 acres. Residential land uses comprise about 40% of the City's total area. The City's population is somewhat older than the County's with seniors (65 years and over) representing 17 percent of the City compared to only 12 percent of the County. The City's median age also exceeds the County's by five years (41 vs. 36). Table 3-5 is the population profile for the City and Table 3-6 summarizes the City's employment characteristics.

Table 3-5 Population Profile

Age Group	Persons	Percent
Under 18 years	15,115	23.2%
18-24 years	5,164	7.9%
25-44 years	15,895	24.4%
45-64 years	17,825	27.3%
65-74 years	5,195	8.0%
75-84 years	3,783	5.8%
85 and over	2,224	3.4%
Total	**65,201**	**100%**
Median Age	**40.8**	
Source: City of Camarillo 2014 Housing Element		

Table 3-6 Employment Characteristics

Industry	Jobs	Percent
Management, Business, Science, and Arts	13,015	43.3%
Service	3,939	13.1%
Sales and Office	8,701	28.9%
Natural Resources, Construction and Maintenance	2,120	7.1%
Production, Transportation and Material Moving	2,296	7.6%
Source: City of Camarillo 2014 Housing Element		

4 BASELINES AND TARGETS

Senate Bill x 7-7 (SB7), which was incorporated into the UWMP Act in 2009, requires that all water suppliers increase water use efficiency with the overall goal to decrease per-capita water consumption within the state by 20 percent by the year 2020. SB7 required DWR to develop certain criteria, methods, and standard reporting forms through a public process that could be used by water suppliers to establish their baseline water use and determine their water conservation targets. SB7 and the SB7 Guidebook specify methodologies for determining the baseline water demand, 2015 interim urban water use target and the 2020 urban water use target for the City, as described in the following sections.

4.1 BASELINE WATER USE

The first step in developing the baseline water use for the City is determining the applicable range of years to calculate the baseline average. The UWMP Act stipulates an agency may use either a 10 or 15-year average to determine their baseline. If 10 percent of total urban retail water deliveries in 2008 were from recycled water, then the agency can use a 15-year average baseline if it chooses. The City's recycled water use was less than 10 percent of its 2008 retail water delivery. Consequently, the first baseline period will consist of a continuous 10- year period that can be selected between 1995 and 2010.

As shown in Table 4-1, the selected 10-year base period begins in the year 1999 and ends in the year 2008. In addition to the 10-year baseline, a 5-year baseline is also calculated, which is used to establish the minimum criteria for the City's use reduction targets. The UWMP Act requires the use of a continuous 5-year range, ending between December 31, 2007 and December 31, 2010 to determine the baseline. As shown in Table 4-2, the selected 5-year base period begins in the year 2004 and ends in the year 2008. The City's historical per capita water use, measured in gallons per capita per day (gpcd), for the period of 1995 through 2010 is shown in Figure 4-2.

Table 4-1 Ten-Year Baseline Period

Calendar Year	Distribution System Population	System Gross Water Use (AFY)[1]	Annual Daily Per Capita Water Use (gpcd)[2]	10-year running average
1995	34,118	6,871	180	
1996	34,298	7,166	187	
1997	34,479	7,936	205	
1998	34,660	7,338	189	
1999	34,841	8,762	225	
2000	35,022	9,329	238	
2001	35,751	8,756	219	
2002	36,480	9,885	242	
2003	37,209	8,888	213	
2004	37,938	9,645	227	
2005	38,667	9,457	218	216
2006	39,395	9,567	217	219
2007	40,124	10,429	232	222
2008	40,853	10,258	224	225
2009	41,582	9,605	206	224
2010	42,311	8,585	181	218
Base Daily Per Capita Water Use				**225**

Table 4-2 Five-Year Baseline Period

Calendar Year	Distribution System Population	System Gross Water Use (AFY)	Annual Daily Per Capita Water Use (gpcd)	5 year running average
2003	37,209	8,888	213	
2004	37,938	9,645	227	
2005	38,667	9,457	218	
2006	39,395	9,567	217	
2007	40,124	10,429	232	221
2008	40,853	10,258	224	224
2009	41,582	9,605	206	220
2010	42,311	8,585	181	212
Base Daily Per Capita Water Use				**224**

[1] Acre feet per year (AFY)
[2] Gallons per capita per day (gpcd)

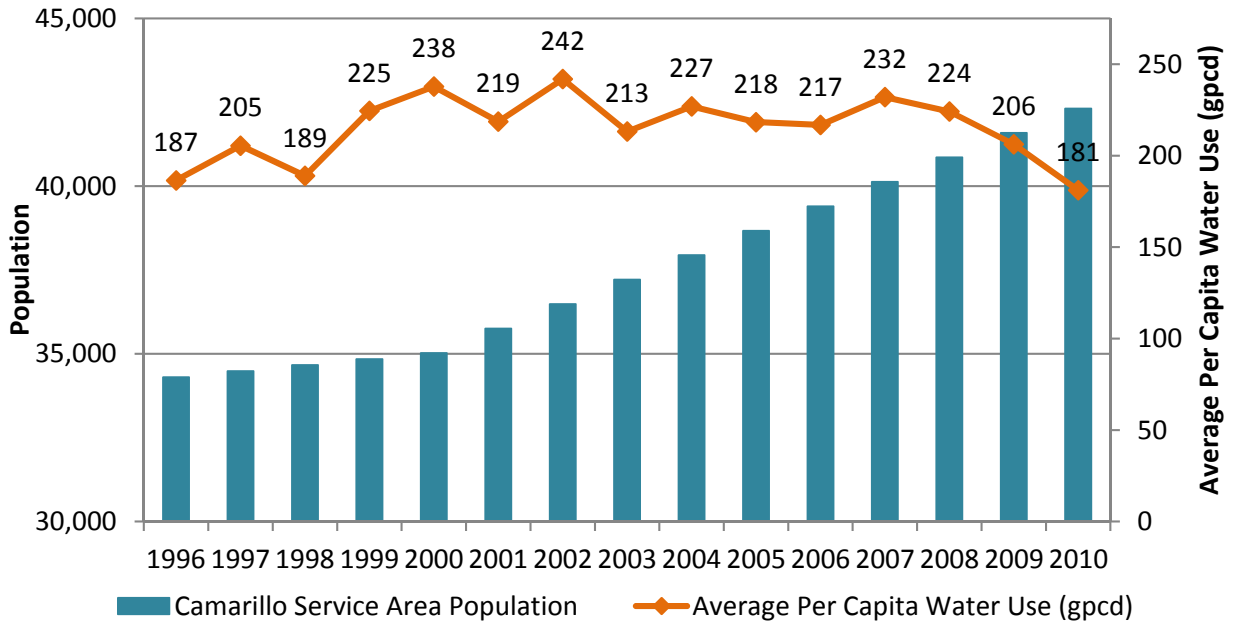


Figure 4-1 Historic Population and Per Capita Water Use

4.2 TARGET WATER USE

DWR provided four different methods to establish water conservation targets. These four methods are summarized in the following sections.

4.2.1 Method 1 - Baseline Reduction Method

The Method 1 2020 water conservation target is defined as a 20 percent reduction of average per-capita water use from the 10-year continuous baseline period. Based on the baseline daily per capita use of 225 gallons per capita per day (gpcd) determined previously, the target use for Method 1 is 180 gpcd. The 2015 interim water use target is simply the midpoint of the baseline and the 2020 water conservation target, or 203 gpcd for Method 1 in the City's case.

4.2.2 Method 2 - Efficiency Standard Method

The 2020 water conservation target using this method is determined by calculating efficiency standards for indoor use separately from outdoor use for residential sectors, and applying an overall reduction of 10 percent for commercial, industrial, and institutional (CII) sectors. The aggregated total of the efficiency standards in each area is then used to create a conservation target.

Very few agencies within the State have the data necessary to determine a target water use using Method 2. It is not feasible for the City to use this methodology since the City lacks the detailed landscaped area estimates to calculate the landscaped area water use.

4.2.3 Method 3 - Hydrologic Region Method

This method uses the ten regional urban water use targets for the State. Based on the water supplier's location within these regions, a static water use conservation target for 2020 is assigned.

Urban water use targets (2020 conservation goals) for the hydrologic regions in California are included in the *DWR Guidebook to Assist Urban Water Suppliers to Prepare a 2015 UWMP*. To determine the target using Method 3, 95 percent of the region-specific conservation goal is calculated. Based on a 2020 target of 149 gpcd for the South Coast region, the City's Method 3 target is 142 gpcd for 2020. The City's 2015 interim water use target for Method 3 is calculated to be 184 gpcd.

4.2.4 Method 4 - BMP Based Method

Method 4 identifies water savings obtained through identified practices and subtracts them from the baseline daily per capita water use value identified for the water supplier. The water savings identified that can be used to reduce the baseline daily per capita water use value include:

- Indoor residential use savings;
- Commercial, industrial, and institutional savings;
- Landscape and water loss savings; and
- Metered savings.

The Method 4 per capita water use target was calculated using the City's 10-year baseline period (1999 to 2008). A discussion of each of the savings components and the subsequent calculated savings specifically for the City is included below.

- **Indoor Residential Savings.** Since indoor and outdoor water use is delivered through a single meter, an assumption of 70 gpcd has been provided by DWR for standard residential indoor water use. To determine indoor residential savings potential, the draft provisional method outlines two methodologies. First, a best management practices (BMP) calculator has been developed to sum the savings for four conservation elements including single and multi-family residential housing toilets, residential washers, and showerheads. The City will use what has been termed the "default option" to determine these savings. Based on the provisional method, this default value is 15 gpcd reduction in indoor water use.
- **Commercial, Industrial, and Institutional Savings.** Baseline CII water use can be established for the City based on data provided in the City's DWR Public Water Systems Statistics Sheet for years 1996 to 2005. Based on this data, the baseline per capita CII water use is 33.8 gpcd. The draft provisional method estimates a default value for CII savings of 10 percent. The CII water savings are therefore 3.4 gpcd.

- **Landscape and Water Loss Savings.** The landscape and water loss water use is determined by subtracting the default indoor water use of 70 gpcd and CII water use of 33.8 gpcd from the calculated year's 1996 to 2005 baseline per capita use. Based on a 1996 to 2005 baseline per capita water use of 225 gpcd, the landscape and water loss use is 121.2 gpcd. The draft provisional method estimates a default value for landscape and water loss savings of 21.6 percent. The landscape and water loss savings are therefore 26.2 gpcd.
- **Metered Savings.** Metered savings are considered in addition to the savings attributed to the three sectors previously discussed. Because the City was fully metered in the midpoint year of 2005 (based on the methodology established by DWR) and no unmetered deliveries occurred, the unmetered per capita use was zero gpcd. Therefore, no savings from metering was calculated.

The City's 2020 target water use is calculated as the baseline water use minus the total savings (residential indoor, CII, landscape, and water loss, and meter savings). In the City's case, the total water savings accounts for 44.6 gpcd, which equates to a 2020 target water use of 180.4 gpcd in 2020, and a corresponding interim water use target for Method 4 of 202.7 gpcd in 2015.

4.3 MINIMUM WATER USE REDUCTION REQUIREMENT

The final step in determining the applicability of the water use target for the City is to confirm the water use targets meet the minimum reduction requirements as defined by DWR. To confirm the chosen 2020 per capita target, the 5-year average baseline previously determined in Table 4-2 is used. The chosen target (calculated using one of the four methods described above) must be less than 95 percent of the 5-year baseline. In order to meet this minimum criteria, the City's 2020 target per capita water use must be less than or equal to 212 gpcd, which it is.

4.4 SUMMARY OF BASELINE AND TARGET WATER USE

Based on the 2020 water use targets calculated using the four methodologies described previously, the 2020 urban water use target for the City is 180 gpcd. The 2015 interim water use target is 203 gpcd. This target was determined using Method 4. This method gave the City the most flexibility in meeting the state mandated water reduction requirement. According to the DWR guidelines, this target is valid since it is less than the minimum 5-year baseline target confirmation criteria.

Table 4-3 summarizes the baseline water use, the target per capita use determined by each of the four methods, and the selected target and interim target. Figure 4-2 displays the baseline and targets as well as historical and projected per capita water use. Table 4-4 summarizes the baseline, interim and 2020 targets.

Table 4-3 Water Use Targets for each Method

Calculation Method	Water Use Target (gpcd)
Method 1: 80% of Baseline Per Capita Water Use	180
Method 2: Performance Standards	Not calculated
Method 3: 95% of Regional Target	142
Method 4: DWR Approach	180
Selected Urban Water Use Target	**180**

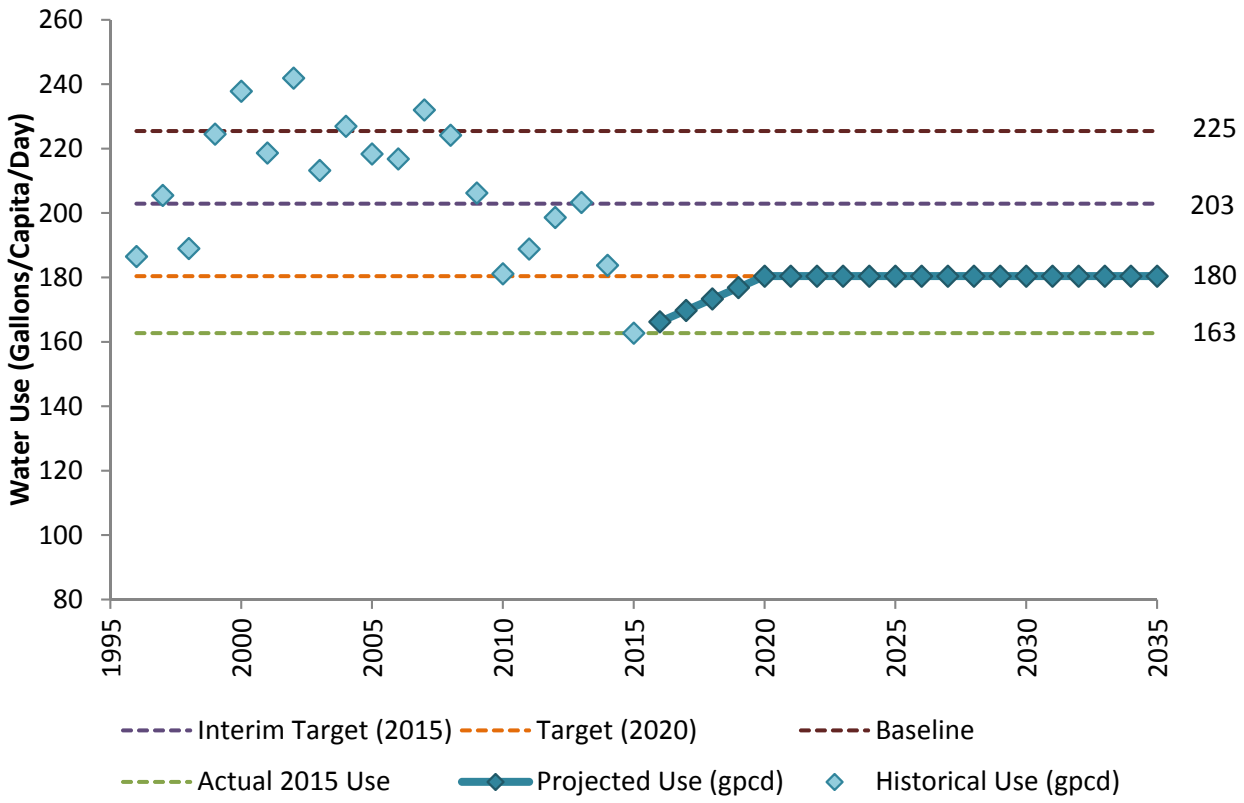


Figure 4-2 Historical, Baseline, Targets, and Projected GPCDs

Table 4-4 Interim and Baseline Targets

Parameter	Water Use (gpcd)
Base Daily Per Capita Water Use	225
2015 Daily Per Capita Water Use	163
2015 Interim Urban Water Use Target	203
2020 Urban Water Use Target	180

5 SYSTEM WATER USE

This section describes and quantifies the City's current and projected water use through the year 2035. Accurately tracking and reporting current water demands allows the City to properly analyze the use of its resources in order to conduct good resource planning. Estimating future demand as accurately as possible allows the City to manage its water supply and appropriately plan for infrastructure investments. Assessments of future growth and related water demand, done in coordination with the City's General Plan, provides essential information for developing demand projections to meet the City's build-out goals.

5.1 WATER DEMANDS

The following tables (Table 5-1, Table 5-2, Table 5-3, Table 5-4, and Table 5-5) show the past, current, and projected water deliveries for the City based on historical water use. Future water demands are projected using the per capita water use reductions associated with the SB7 targets (Table 4-4) and projected population (Table 3-4). A summary of the past, current and project water deliveries is shown in Figure 5-1.

Table 5-1 Water Deliveries, 2010, AFY

2010					
	Metered		Not Metered		Total
Water use sectors	# of Connections	Volume	# of Connections	Volume	Volume
Single family	11,211	4,213	0	0	4,213
Multi-family	379	660	0	0	660
Commercial/ Institutional	889	1,133	0	0	1,133
Industrial	18	59	0	0	59
Landscape	623	1,791	0	0	1,791
Agriculture	11	337	0	0	337
Other	15	14	0	0	14
Total	**13,146**	**8,207**	**0**	**0**	**8,207**

Table 5-2 Water Deliveries, 2015, AFY

2015					
	Metered		Not Metered		Total
Water use sectors	# of Connections	Volume	# of Connections	Volume	Volume
Single family	11,287	3,691	0	0	3,691
Multi-family	421	710	0	0	710
Commercial/ Institutional	910	1,023	0	0	1,023
Industrial	16	50	0	0	50
Landscape	625	1,758	0	0	1,758
Agriculture	9	226	0	0	226
Other	16	50	0	0	50
Total	**13,284**	**7,508**	**0**	**0**	**7,508**

Table 5-3 Projected Water Deliveries, 2020, AFY

2020					
	Metered		Not Metered		Total
Water use sectors	# of Connections	Volume	# of Connections	Volume	Volume
Single family	11,781	4,276	0	0	4,276
Multi-family	439	822	0	0	822
Commercial/ Institutional	950	1,185	0	0	1,185
Industrial	17	58	0	0	58
Landscape	652	2,036	0	0	2,036
Agriculture	9	262	0	0	262
Other	17	58	0	0	58
Total	**13,865**	**8,698**	**0**	**0**	**8,698**

Table 5-4 Projected Water Deliveries, 2025-2030, AFY

	2025		2030	
	Metered		Metered	
Water use sectors	# of Connections	Volume	# of Connections	Volume
Single family	12,012	4,356	12,248	4,442
Multi-family	448	837	457	854
Commercial/ Institutional	968	1,207	988	1,231
Industrial	17	59	17	61
Landscape	665	2,074	678	2,115
Agriculture	10	267	10	272
Other	17	59	17	60
Total	**14,138**	**8,860**	**14,415**	**9,034**

Table 5-5 Projected Water Deliveries 2035, AFY

	2035	
	Metered	
Water use sectors	# of Connections	Volume
Single family	12,489	4,529
Multi-family	466	871
Commercial/ Institutional	1,007	1,255
Industrial	18	62
Landscape	692	2,157
Agriculture	10	277
Other	18	61
Total	**14,699**	**9,212**

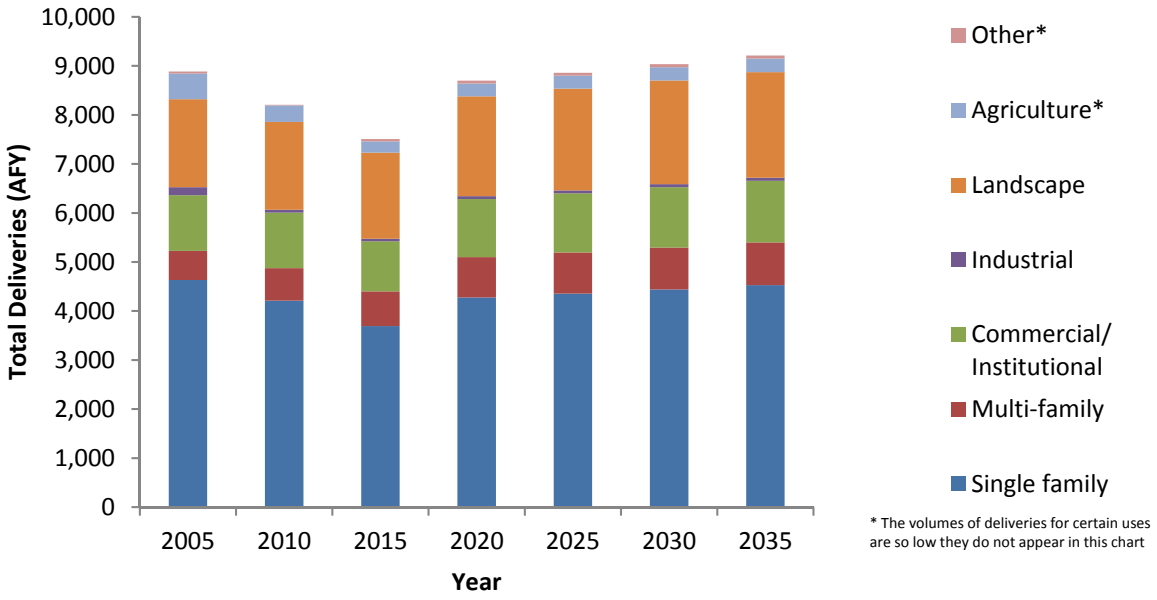


Figure 5-1 Past, Current and Projected Water Deliveries

5.1.1 Low-Income Demands

Changes to the California Water Code section 10631.1 since 2005 require demand projections to include projected water use for single-family and multi-family residential housing needed for lower income households. Low-income households are defined as households making less than 80% of median household income. The Regional Housing Needs Assessment (RHNA) determines the housing needs in each jurisdiction over the planning period. Southern California Association of Governments (SCAG) current RHNA planning period is from January 1, 2014, through October 31, 2021. For this planning period, 905 new low-income units are projected to be needed in the City by 2021. It is important to note that the RHNA requirement is to have land zoned for the projected low income housing need but not necessarily build the units.

For the purposes of this UWMP, the low-income deliveries projections are included in the City's total projected water deliveries shown in Table 5-1 through

Table 5-5. The estimated water use for the projected number of low income housing units is calculated by applying the average water usage factor per connection. The projected demand for the low-income residential units is shown in Table 5-6.

Table 5-6 Cumulative Low-Income Water Deliveries, AFY

Low-income Water Demands	2015	2016	2017	2018	2019	2020	2021
Single-Family Residential	70	94	117	139	162	184	206
Multi-Family Residential	12	15	19	23	27	31	35
Total	**82**	**109**	**136**	**162**	**189**	**215**	**241**

5.1.2 Sales to Other Water Agencies

The City does not sell water to other water agencies in the area.

5.1.3 Additional Water Uses and Losses

Table 5-7 shows the past, current and projected amount of non-revenue water (NRW) for the City. NRW is defined as the water losses plus authorized unbilled (metered and unmetered) water consumption. A detailed description of water losses and NRW is provided in Appendix D, however the current NRW water rate is under 4% and is not expected to change significantly over the planning horizon of the document.

Table 5-7 Non-Revenue Water, AFY

Water use	2015	2020	2025	2030	2035
Non-revenue water (NRW)	306	344	359	366	374

5.1.4 Total Water Use

Table 5-8 shows the past, current, and projected total water use for the City. Total water use includes water delivered to customers and non-revenue water.

Table 5-8 Projected Total Water Use, AFY

Water Use	2015	2020	2025	2030	2035
Total water deliveries	7,508	8,698	8,860	9,034	9,212
Sales to other water agencies	0	0	0	0	0
Non-revenue water (NRW)	306	344	359	366	374
Total	**7,813**	**9,042**	**9,219**	**9,401**	**9,585**

5.2 WATER USE REDUCTION PLAN

Per capita water use for 2015 was 163 gpcd, which is below the 180 gpcd water use target of SB7 and the interim target of 203 gpcd. Based on water use trends and water supply projections, it is assumed the City will meet or exceed the projected water use targets by maintaining its current water conservation strategy and programs.

6 SYSTEM SUPPLIES

6.1 WATER SOURCES

The City's water system supplies potable water from two sources: groundwater and imported water. The City pumps groundwater from the Pleasant Valley Basin. The City's imported water supplier is Calleguas Municipal Water District (CMWD), a member of the Metropolitan Water District of Southern California (MWDSC). MWDSC's imported water originates from the Colorado River Aqueduct and the State Water Project (SWP); however, the City's imported supply from MWDSC has historically been from the SWP due to its location in the MWDSC supply system.

Total demands for the City from 2011 to 2015 averaged 8,952 acre feet per year (AFY). In 2015, 3,259 AFY came from groundwater sources (i.e., Pleasant Valley Basin) and 4,554 AFY from imported water supplies (i.e., MWDSC's SWP supply via CMWD). Figure 6-1 shows the breakdown of deliveries in 2015.

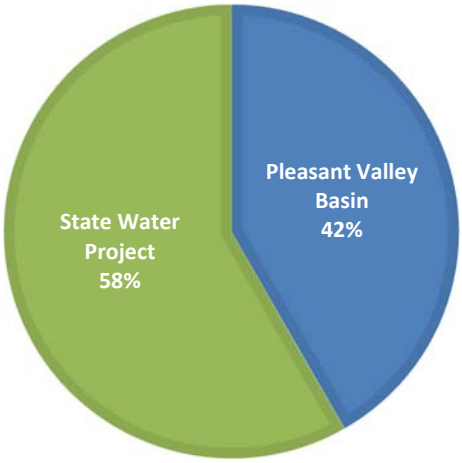


Figure 6-1 Percent Water Deliveries in 2015

Between 2000 and 2015, the City's local groundwater supply, on average, met about 42 percent of the overall demand with 58 percent met by imported water. These numbers vary from year to year depending upon weather conditions, groundwater recharge rates, and groundwater blending requirements due to groundwater quality. On April 11, 2014, the Fox Canyon Groundwater Management Agency (FCGMA) adopted Emergency Ordinance E in response to the State's mandated water use reduction targets. For the duration of the emergency ordinance, groundwater allocations are replaced with a Temporary Extraction Allocation (TEA) based on average annual reported extraction from 2003 to 2012. Beginning on July 1, 2014, the City's TEA was equal to 90% of the averaged extraction from 2003 to 2012. On January 1, 2015, the City's TEA was further reduced to 85% and then finally to 80% of the averaged 2003-2012 extraction starting on July 1, 2015. The City's current TEA from the Pleasant Valley Basin is equal to 3,196.6 AFY. For the purposes of the supply projection, it is

assumed that the City's TEA will remain in effect into the foreseeable future. The rest of the City's water supply will be met by imported water. Table 6-1 shows the historic and projected supplies for the City. The projected supply available from CMWD from Table 6-1 was provided to CMWD during the preparation of this UWMP (Appendix B).

In the 2010 Urban Water Management Plan, the City projected future supply being provided by the Camarillo Regional Groundwater Desalter (Desalter). The Desalter would allow the City to pump brackish groundwater from the North Pleasant Valley Basin, in excess of the City's existing allocation. The Desalter is designed to treat 9,000 AFY of brackish water and produce 7,500 AFY of potable water. While the project is still active, as the City is currently seeking approval on the project, it has not been included as a future supply source.

Table 6-1 Historic and Projected Water Supplies, AFY

Water Use	2015	2020	2025	2030	2035
Pleasant Valley Basin	3,259	3,197	3,197	3,197	3,197
CMWD	4,554	5,845	6,023	6,204	6,389
Total	**7,813**	**9,042**	**9,219**	**9,401**	**9,585**

6.2 GROUNDWATER

The City and the surrounding area rest on an alluvial deposit approximately 1,000 feet thick, which is comprised of several aquifers interbedded with gravel, sand, and clay lenses. The clay lenses preclude any significant groundwater movement from one aquifer to the next. The City's water service area lies almost entirely in the Pleasant Valley Basin as shown in Figure 6-2, but there are also several separate groundwater basins in the area, separated by a series of faults or folds, which also reduce groundwater movement from one basin to another. Groundwater in the region generally flows southwest.

The Pleasant Valley Basin historically has been replenished by subsurface inflows from the Oxnard Plain Basin, East and West Las Posas Basins, and the Santa Rosa Basin. Subsurface inflow over the past several years has been limited to only the Oxnard Plain and the East Las Posas Basins. Over pumping in the other basins has lowered water tables and prevented subsurface inflows into the Pleasant Valley Basin.

Most of the groundwater within the basin is contained within alluvial deposits and within the Fox Canyon and Grimes Canyon aquifers. The Fox Canyon Aquifer is the major water bearing unit in the Pleasant Valley Basin. The upper strata of the basin are alluvial deposits, which average 400 feet in thickness and consist of water bearing sands and gravels separated by clay lenses. The Fox Canyon aquifer is within the bottom of the San Pedro formation, which underlies the alluvial deposits. It varies in thickness from 400 feet to 1,500 feet and is effectively sealed from percolation of water from above by impervious materials located at the bottom of the alluvial deposits. Beneath the San Pedro formation lies the Santa Barbara formation containing the Grimes Canyon aquifer.

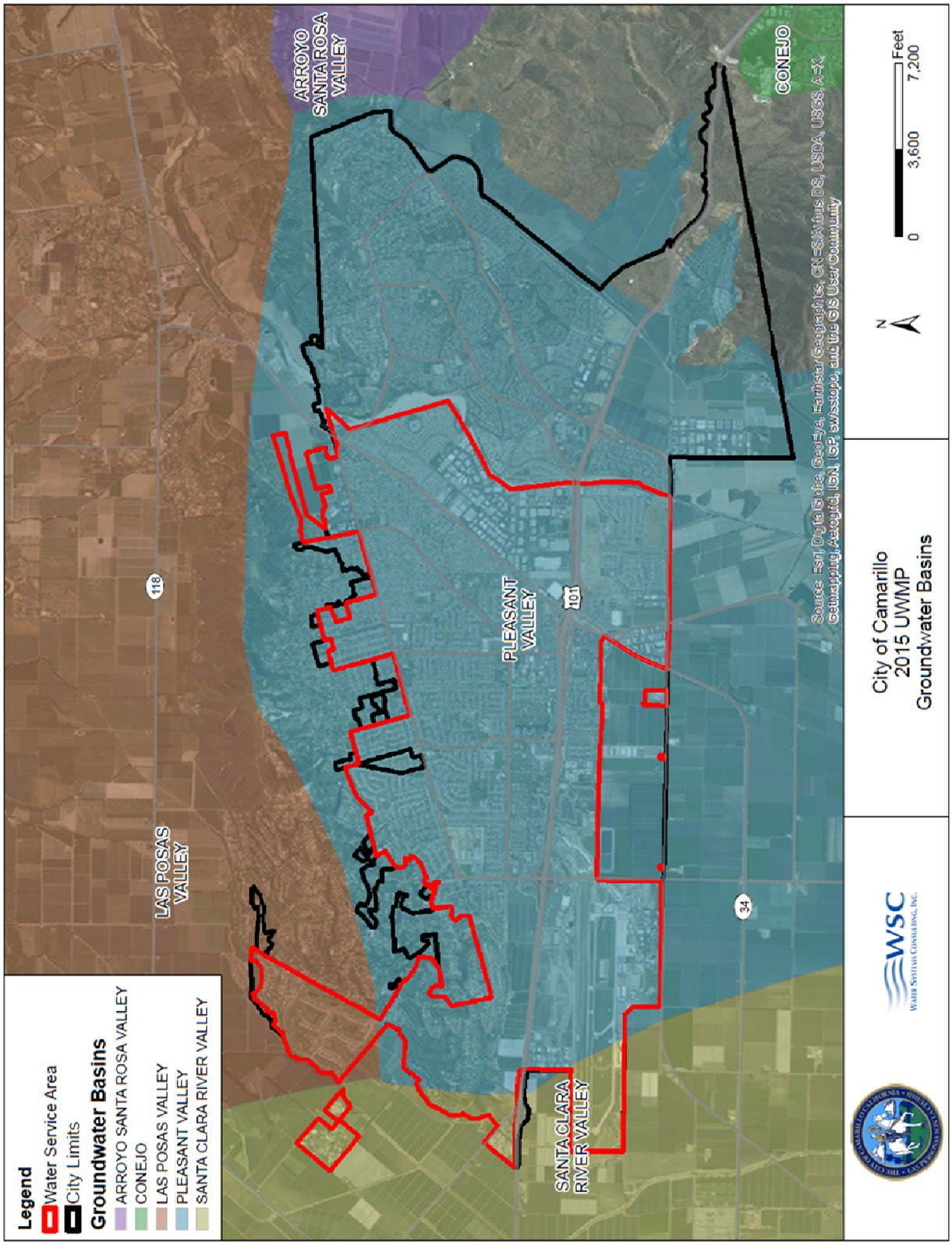


Figure 6-2 Groundwater Basin Map

6.2.1 Groundwater Management

The FCGMA was initially created in 1982 to manage the groundwater in both over-drafted and potentially seawater-intruded areas within Ventura County. The prime objectives and purposes of the FCGMA are to preserve groundwater resources for agricultural, municipal, and industrial uses in the best interest of the public and for the common benefit of all water users. Protection of water quality and quantity along with maintenance of long-term water supply are included in those goals and objectives.

In May 2007, the FCGMA prepared a groundwater management plan in order to set specific, measurable management objectives for each basin, identify strategies to reach these goals, and set future FCGMA policy to help implement these strategies. The groundwater management plan discusses and reviews a number of aspects of groundwater management including: Background information of the groundwater basins; water quality issues, both generally and basin-by-basin; the yield of the groundwater basins; current and in-development management strategies; and recommended actions to be taken by the FCGMA.

In 2014, the State of California enacted the Sustainable Groundwater Management Act (SGMA) to provide a legislative framework for the sustainable management of groundwater supplies by local authorities. As the local authority charged with managing groundwater, FCGMA must adopt a Groundwater Sustainability Plan (GSP) for submission to DWR. The purpose of the GSP is to provide measureable objectives and sustainable goals, within a 20-year timeframe, for the following effects:

1. Groundwater levels and storage
2. Seawater intrusion
3. Degradation of water quality
4. Land subsidence
5. Surface water depletions that have significant adverse impacts on beneficial uses

The FCGMA began the development of a GSP in late 2015. While the State is calling for plan adoption and implementation by 2020, the FCGMA is targeting 2017 for completion of its GSP.

6.2.2 Groundwater Quality

Over the last 20-years, the City began observing a distinct change in groundwater quality, especially in the northern part of the Pleasant Valley Basin where Total Dissolved Solids (TDS) levels are in excess of 2,000 mg/L. During this same period, the northern part of the basin experienced a rapid rise in groundwater levels of over 200 feet, likely due to recharge of poor quality water from the Arroyo Las Posas (3). The City did not observe a similar rise in TDS in wells located in the southern part of the Pleasant Valley Basin over the same time period.

Due to the high TDS concentrations in the City's northern well field, the City must blend groundwater with imported water from CMWD. However, the continued rise in TDS concentrations in the northern part of the basin is hindering the City's ability to blend groundwater with imported water and still serve

the product water within the TDS secondary Maximum Contaminant Level (MCL). The City has forecasted that in the near future, the City will have to abandon the northern well field and rely solely on the southern well field to supply groundwater.

6.2.3 Groundwater Levels and Historical Trends

Historically, it was assumed that the lower aquifer system of the Pleasant Valley Basin was confined and received little overall recharge across the fault that extends from the Camarillo Hills to Port Hueneme. However, since the early 1990s, water levels began to rise in the northern adjacent basins. Rising water levels in City wells in the northern part of the Pleasant Valley Basin have led to the confirmation that the northern adjacent basins directly impact recharge rates, water quality, and water levels in the Pleasant Valley Basin area (3). Recharge in the area may be the result of uplift and folding of lower aquifer units that allow rapid stream flow percolation.

The portion of the Pleasant Valley Basin east of the City is not well understood because there are not very many wells. Along Calleguas Creek near California State University, Channel Islands, water has been produced historically from aquifer depths that are shallower than the typical lower aquifer well, suggesting that water bearing strata are not limited to the lower aquifers in that area.

6.2.4 Sources of Recharge and Discharge

As mentioned in Section 6.2.3, much of Pleasant Valley Basin's recharge originates with the Las Posas Basin to the north. As water makes its way southwest through the watershed, Las Posas Basin, as well as Pleasant Valley Basin, receive recharge water. CMWD supplements natural groundwater recharge in the area through the use of groundwater injection. Some of the SWP water imported by CMWD is stored in the Las Posas Groundwater Basin.

6.2.5 Groundwater Pumping

Table 6-2 shows how much groundwater the City has pumped annually from the Pleasant Valley Groundwater Basin to serve its customers since 2011.

Table 6-2 Historic Volume Pumped, AFY

Groundwater Type	Groundwater Basin	2011	2012	2013	2014	2015
Alluvial Basin	**Pleasant Valley Groundwater Basin**	3,916	4,005	4,496	3,722	3,259
	Total groundwater pumped	3,916	4,005	4,496	3,722	3,259
	Percent of total water supply	**44%**	**42%**	**46%**	**42%**	**42%**

As described earlier, the City expects the TEA established by the FCGMA's Emergency Ordinance E will remain in effect for the foreseeable future. The projected groundwater pumping in Table 6-3 reflects the expected allocation.

Table 6-3 Projected Groundwater Pumping, AFY

Water Use	2020	2025	2030	2035
Pleasant Valley Basin	3,197	3,197	3,197	3,197

6.2.6 Basin Overdraft

Although the Pleasant Valley Basin, the basin which the City overlies and from which the City draws from, is managed by the FCGMA, the basin is not adjudicated. The FCGMA was created to moderate the use of groundwater within the area. In 1985, the FCGMA summed all water inputs and outputs to determine how much could be extracted from the basins in the region. Since that initial analysis, basin yield in the area has been recalculated several times. It has been found that many of the inland basins which do not adjoin the coastline are hydrologically connected to the coastal basins, as evidenced by the continuity of groundwater elevation contours across their boundaries.

The Oxnard Plain, the hydrologic region just south of the City, began experiencing saltwater intrusion into its groundwater supply as early as 1930. In the Port Hueneme area, seawater in the aquifer system reached its farthest point inland in the early 1980s. Following the high rainfall in year 1983, chloride levels began to decrease in many of the area's wells. This improving trend was accelerated in the 1990s as aquifer pressures were restored and seawater was pushed back towards the coast.

The lower aquifer system, of which the Fox Canyon Aquifer is a part of, did not drop below sea level until the late 1950s. The over pumping of the aquifers that led to seawater intrusion also led to land subsidence of up to 2.2 feet in the Pleasant Valley area as dewatered clay layers between aquifer zones collapsed from reduced hydrostatic pressures. This subsidence is permanent, as refilling the sand and gravel aquifers does not force water back into the dry clay layers.

6.3 TRANSFER OPPORTUNITIES

The City does not, at this time, pursue separate water transfer or exchange opportunities with other agencies or suppliers. Such an arrangement could occur in the future.

6.4 DESALINATED WATER OPPORTUNITIES

The California Water Code requires that the UWMP address the opportunities for development of desalinated water, including ocean water, brackish water, and groundwater. Table 6-4 summarizes the City's opportunities for the various types of desalinated water supply.

Table 6-4 Desalinated Water Opportunities

Sources of Water	Existing Desalinated Water	Opportunities for Desalinated Water
Ocean Water	None	None
Brackish Ocean Water	None	None
Brackish Groundwater	None	Camarillo North Pleasant Valley Desalter
Other	None	None

6.4.1 Brackish Water and/or Groundwater Desalination

Currently, high TDS levels are found within the groundwater basin underlying the City's water service area, primarily in the northern portion of the Pleasant Valley Basin. The City blends pumped groundwater with imported water to lower the TDS prior to introduction to the potable water system. This has caused the City to shift groundwater pumping to the City's wells located in the south Pleasant Valley Basin near the airport.

Over the last several years, the City has invested considerable resources into planning for a groundwater treatment plant, referred hereafter as the North Pleasant Valley Desalter, that will treat TDS in City groundwater, allowing an increase in the City's groundwater use and lowering the amount of imported water required for blending. In June 2016, the City certified the Supplemental Final Environmental Impact Report / Environmental Assessment (EIR/EA) for the project. The Supplemental EIR was developed in response to changes to the project after the Final EIR/EA was originally certified and adopted in May 2015. The project would increase groundwater pumping from the groundwater basin by 9,000 AFY and produce 7,500 AFY of treated water to be served to customers. This additional groundwater pumping would be considered a project specific allocation and would not add to the City's TEA described earlier. The City is currently seeking approval from regulatory agencies for the project.

6.4.2 Seawater Desalination

Development of desalinated seawater is not being considered for the current planning period due to the availability of imported and groundwater supplies to meet the current and projected demand and the City's proximity (distance) to the ocean, which makes it cost prohibitive to consider desalination as a viable water supply alternative.

6.5 RECYCLED WATER OPPORTUNITIES

The UWMP Act requires that the UWMP address the opportunities for development of recycled water: including the description of existing recycled water applications, quantities of wastewater currently being treated to recycled water standards, limitations on the use of available recycled water, an estimate of projected recycled water use, the feasibility of projected uses, and practices to encourage the use of recycled water (RW).

6.5.1 Wastewater Treatment Facilities

The Camarillo Sanitary District (CSD) provides wastewater collection and treatment for the City's water service area as shown in Figure 3-1. CSD also treats wastewater for areas within the City boundary but outside the water service area and areas north of the City served by Cal American Water Company, Pleasant Valley Mutual Water Company, Crestview Mutual Water Company, and Pleasant Valley County Water District.

CSD treats the wastewater collected within its service area at the Camarillo Water Reclamation Plant (Camarillo WRP), which is located in the southeast portion of the City adjacent to Conejo Creek. Camarillo WRP was initially designed with a capacity of 2.75 mgd and currently treats an average of 3.77 mgd or 4,220 AFY of wastewater and has a peak capacity of 7.25 mgd (4). Tertiary treatment processes were added as a part of the Camarillo WRP's most recent expansion in 2005.

CSD also maintains approximately 158 miles of underground sewer lines and four lift stations as a part of its wastewater collection system. The CSD currently recycles a portion of its wastewater through agricultural irrigation of nearby farmlands and landscape irrigation in the vicinity of Camarillo WRP. RW not used for agricultural and landscape purposes is discharged into Conejo Creek.

6.5.2 Wastewater Flow Projections

Table 6-5 presents the current and projected wastewater collected from the City's water service area along with the CSD's service area. The table shows that the City currently treats all incoming wastewater to recycled water standards and will continue to do so. At a peak plant capacity of 7.25 mgd (8,141 AFY equivalent), the Camarillo WRP has sufficient capacity to continue treating wastewater from its service area through the planning horizon for this plan.

Table 6-5 Wastewater Flow Projections, AFY

Type of Wastewater	2015[3]	2020	2025	2030	2035
Wastewater collected & treated in City's water service area[1]	3,513	3,666	3,739	3,812	3,887
Wastewater collected & treated in CSD's service area[2]	3,982	4,291	4,497	4,755	5,013
Volume that meets recycled water standard	3,982	4,291	4,497	4,755	5,013

[1] Estimated by dividing the total wastewater collected in 2015 by the CSD's estimated population of 48,590 using DWR's population tool to arrive at an estimated per capita sewer flow of 73 gal/day. That per capita flow multiplied by the City's water service area population was used to estimate 2015 and future wastewater collection.
[2]Estimated by adding the projected increase in future CSD population of 12,585 persons in the 2014 Recycled Water Report to the current estimated population. The future projection population is then multiplied by the per capita sewer flow of 73 gal/day.
[3] Actual wastewater collected and treated in the CSD service area. The wastewater collected and treated in the City's water service area is an estimate based on [1] above.

6.5.3 Water Recycling Facilities

The CSD has served discharged treated wastewater from its Camarillo WRP to users since the plant's original construction in 1955. The CSD entered into an Agreement with Mary Smith Properties (Mary Smith) in 1955, which was subsequently revised in 1977, to serve treated wastewater to Mary Smith for agricultural irrigation purposes. In 1995, land owned under Mary Smith was sold to four parties: Brucker Family Trust, Conejo Mountain Memorial Park, CSD, and Margaret Howard. The Mary Smith properties are entitled to recycled water deliveries proportionate to the size of the parcel; therefore, CSD's total obligation to deliver treated wastewater was reduced proportionally by the amount of land to sold to CSD. While now separate entities, all land served as part of the original Mary Smith Properties is still referenced as Mary Smith for this UWMP. RW is pumped from the CSD's effluent pump station to a storage pond with a volume of approximately 1.95 MG. From the storage pond, water is pumped to nearby agricultural fields and the Conejo Mountain Memorial Park. The CSD's Agreement with Mary Smith endeavors the City to deliver 2,302 AF on an annual basis and no more than 307 AF in any given month, however no minimum flow is guaranteed. Historically, the CSD has delivered 1,428 AFY to Mary Smith. Mary Smith was the City's only customer until March 2015.

In the Fall of 2014, the City began construction on a large diameter RW transmission pipeline to serve identified customers along Pleasant Valley Road. Following the completion of the pipeline, the City began serving the Village at the Park Community, which includes parkway landscape and a large sports complex, Marz Farm, and the Camarillo Family YMCA. The RW effluent pump station consists of four effluent pumps that pump to either Conejo Creek or to the RW system, and a dedicated pump that serves Mary Smith. No onsite storage currently exists; however, the City is pursuing the construction of a 1 MG reservoir capable of meeting daily demand.

Around the same time, the City also began using RW for the CSD's sewage vacuum trucks and City's landscape irrigation trucks. With the addition of these users, the City added an estimated 259 AFY for landscape irrigation to serve the Village at the Park Community and 453 AFY to serve the Marz Farm to the City's RW demand (4).

Table 6-6 compares the amount of RW anticipated to be used in 2015 compared to the projection from the 2010 UWMP.

Table 6-6 2010 UWMP Recycled Water Use Projected for 2015 and Actual 2015 Recycled Water Use, AFY

Use Type	2010 Projection for 2015	2015 Actual Use
Agricultural irrigation	2,401	1,598
Landscape irrigation	292	104
Commercial irrigation	0	0
Golf course irrigation	0	0
Wildlife habitat	0	0
Wetlands	0	0
Industrial reuse[1]	55	55
Groundwater recharge	0	0
Seawater barrier	0	0
Geothermal/Energy	0	0
Indirect potable reuse	0	0
Unspecified[2]	1,620	0
Total	**4,368**	**1,757**
Use within City Service Area[3]	***239***	***179***

[1] Camarillo WRP Plant process use
[2] The 2010 UWMP projected 1,620 AF to be supplied to either Camrosa Water District (CWD) and Pleasant Valley Water District. The City is scheduled to construct Phase 2 of the effluent diversion pipeline, allowing for the City to supply the CWD and discharge excess treated wastewater to the CMWD salinity management pipeline in Fall 2016.
[3] While all wastewater collected from the water service area is treated to tertiary standards, a majority of recycled water usage is within the CSD service area, but not the City water service area. Recycled water used within the City water service area is for landscape and agricultural irrigation.

6.5.4 Potential Uses of Recycled Water

With the City's current and projected RW availability, without necessitating a supplemental water source to meet peak demand months, the City has connected most of the users identified in the 2014 RW Report. Additional agricultural and industrial users have been identified; however, the City does not have future supply availability to serve these customers. At the time of the preparation of this UWMP, the City has plans to connect the Daily and Hiji farms to the RW system. Those connections are dependent on the City constructing the RW storage facility previously discussed. While there is sufficient daily RW production to serve the Daily and Hiji farms, there is insufficient instantaneous RW capacity to meet peak demands.

Table 6-7 shows the City's projected recycled water use. The City anticipates that the RW tank will be online before 2020 and that the Daily and Hiji farms will be connected shortly thereafter. It is also expected that any remaining RW not used by existing and future customers will be supplied to the Camrosa Water District.

Table 6-7 Projected Recycled Water Use, AFY

User type	Description	2020	2025	2030	2035
Agricultural irrigation	Title 22	3,574	3,574	3,574	3,574
Landscape irrigation	Title 22	259	259	259	259
Commercial irrigation	N/A	0	0	0	0
Golf course irrigation	N/A	0	0	0	0
Wildlife habitat	N/A	0	0	0	0
Wetlands	N/A	0	0	0	0
Industrial reuse	Title 22	55	55	55	55
Groundwater recharge	N/A	0	0	0	0
Seawater barrier	N/A	0	0	0	0
Geothermal/Energy	N/A	0	0	0	0
Indirect potable reuse	N/A	0	0	0	0
Transfer Opportunity[2]	Title 22	403	609	867	1,125
Total		**4,291**	**4,497**	**4,755**	**5,013**
Use within City Service Area[1]	***Title 22***	***1,531***	***1,531***	***1,531***	***1,531***

[1] While all wastewater collected from the water service area is treated to tertiary standards, a majority of recycled water usage is within the CSD service area, but not the City water service area. Recycled water used within the City water service area is for landscape and agricultural irrigation.
[2]The CSD is currently negotiating a RW agreement with the CWD to serve excess RW to CWD that would otherwise be sent to the CMWD's Salinity Management Pipeline.

6.6 FUTURE WATER PROJECTS

The two agencies who bear primary responsibility for providing water supplies to the City are CMWD (a member agency of MWDSC) and the City itself. This section outlines the future supply projects and programs planned by these three agencies.

6.6.1 Projects Planned by MWDSC

As described in its 2015 UWMP, MWDSC plans to meet its supply reliability goal based on various rationales detailed in Appendix 3 of the MWDSC UWMP. A summary of sections from MWDSC's UWMP providing descriptions of expected future supply projects and programs to meet projected water use is provided below:

- *Section 3.1 (pages 3-2 through 3-9) describes plans for banking, exchange and transfer opportunities along the Colorado River and Aqueduct.*
- *Section 3.2 (pages 3-10 through 3-23) describes plans for banking, exchange and transfer opportunities within the State Water Project.*
- *Section 3.3 (pages 3-24 through 3-29) describes plans for banking, exchange and transfer opportunities within the Central Valley/State Water Project.*

- *Section 3.6 (pages 3-63 through 3-66) describes plans for banking, exchange and transfer opportunities within the local region.*
- *Further details are provided in Appendix 3, particularly Table A.3-7 on pages A.3-48 through A.3-60.*
- *See Appendix 10, DWR Table 6-7.*

6.6.2 Projects Planned by CMWD

While not a project that will provide a source of supply for CMWD, expansion of the Salinity Management Pipeline (SMP) will enable local agencies to expand and maximize use of local water resources. The SMP will provide local agencies a conveyance system for brine disposal generated by groundwater desalting facilities and excess recycled water. The SMP is expected to facilitate the development of an estimated 40,000 AF of local water supplies through the construction of groundwater desalting facilities, including the City's North Pleasant Valley Desalter (5).

CMWD intends to revisit water supply alternatives in 2017, but no new sources were included in CMWD's Final 2015 UWMP.

6.6.3 Projects Planned by the City

The City 's only planned water supply project is the North Pleasant Valley Desalter, described earlier in Section 6.4.1. If the project does not proceed, the City would continue to rely on groundwater pumped from existing wells and imported water from CMWD.

7 WATER SUPPLY RELIABILITY

7.1 WATER SUPPLY RELIABILITY

This section considers the City's water supply reliability during three climate-related water scenarios: normal water year, single dry water year, and multiple dry water years. These scenarios are defined by DWR as follows:

- **Normal Year**: A year, or an averaged range of years, that most closely represents the median water supply available to the agency. The supply quantities for this condition are derived from historical average yields.
- **Single Dry Year**: The single-dry year is the year, or an averaged range of years, that represents the lowest water supply available to the agency. The supply quantities for this condition are derived from the minimum historical annual yield.
- **Multiple Dry Years**: The multiple dry years is the period that represents the lowest average water supply availability to the agency for a consecutive multiple year period (three years or more). The supply quantities for this condition are derived from the minimum historical three consecutive years' annual average yields.

7.1.1 Basis of Water Year Data

In identifying historical supply reliability conditions throughout dry year and multiple dry year events, the chosen years are consistent with the years in MWDSC's 2015 UWMP for imported water and the FCGMA's Groundwater Management Plan and Emergency Ordinance E (Appendix F).

As summarized in Table 7-1, MWDSC has identified 1977 as the single driest year since 1922 and the years 1990 through 1992 as the driest multiple years over that same period. These years represent the years in which the least amount of imported water was available from MWDSC. MWDSC's 2015 UWMP does not identify a particular year that would represent average water year conditions. To determine the average water year, the City's historical gpcd was evaluated. By normalizing water consumption with population and thus expressing consumption in gpcd, the increase in demands due to growth is eliminated. The historical average gpcd in the period 1995-2015 was 207 gpcd, which was closest to the 2009 gpcd of 206 gpcd. Therefore, 2009 was selected to represent average year conditions as shown in Table 7-1.

As described in Section 6.1, since 2012 the continuance of below average rainfall and declining groundwater levels led to the adoption of Emergency Ordinance E in April 2014. Ordinance E is designed to reduce groundwater extractions by 20% from 10-year (2003 to 2012) historical average extractions. The reduced extraction allocation is defined as the Temporary Extraction Allocation (TEA), which is 3,196.6 AFY for the City. For the purposes of the supply projection, it is assumed that the City's TEA in

2015 will remain in effect into the foreseeable future during average, single dry, and multiple dry years as shown in Table 7-1.

Table 7-1 Basis of Water Year Data

Supply Source	Average/ Normal Year	Single Dry Year	Multiple Dry Years		
Groundwater [1]	2015	2015	2015	2015	2015
Imported [2]	2009	1977	1990	1991	1992

[1] Based on FCGMA Emergency Ordinance E TEA.
[2] Average year based on average historical gpcd and dry years based on MWDSC's Draft 2015 UWMP, Section 2.3 (6)

While the source of MWDSC's water might change and fluctuate during drought periods, imported water as a source for the City would remain both constant and unchanged under MWDSC's UWMP conclusion that "the region can provide reliable water supplies under both the single driest year and the multiple dry-year hydrologies" (6). Additionally, the City's groundwater supply is assumed to be 3,196.6 AFY based on the TEA under average, single dry, and multiple dry year conditions. The rest of the City's water supply will be met by imported water. Using the information from Table 7-1, Table 7-2 shows the water supply during the average, single dry, and multiple dry years.

Table 7-2 Historical Water Supply Conditions, AFY

Supply Source	Average/ Normal Year	Single Dry Year	Multiple Dry Years		
Pleasant Valley Basin	3,197	3,197	3,197	3,197	3,197
CMWD	100%	100%	100%	100%	100%
Total Demand	**100%**	**100%**	**100%**	**100%**	**100%**
Percent of Normal		**100%**	**100%**	**100%**	**100%**

7.1.2 Projected Normal Year Supply/Demand

As discussed in Section 5, the normal year water demands through 2035 are estimated by multiplying projected population growth, identified in Section 3.3, and the SB7 target of 180 gpcd, summarized in Section 4.4. The projected normal water year water supply and demand projections are provided in Table 7-3.

Table 7-3 Supply and Demand – Normal Year, AFY

	2020	2025	2030	2035
Supply totals	9,042	9,219	9,401	9,585
Demand totals	9,042	9,219	9,401	9,585
Difference	0	0	0	0
Difference as % of Supply	0%	0%	0%	0%
Difference as % of Demand	0%	0%	0%	0%

7.1.3 Projected Single Dry Year Supply/Demand

Demand responses during single dry years ranged from a 10 percent reduction from the previous year's demands to a 9 percent increase. The average of the single dry year demand percent changes was zero percent. Therefore, the projected single dry year water demands through 2035 are equivalent to normal year demands. As shown in Table 7-4, the City's supplies are 100% of projected demands, even during single-dry year conditions.

Table 7-4 Supply and Demand Comparisons – Single Dry Year, AFY

	2020	2025	2030	2035
Supply totals	9,042	9,219	9,401	9,585
Demand totals	9,042	9,219	9,401	9,585
Difference	0	0	0	0
Difference as % of Supply	0%	0%	0%	0%
Difference as % of Demand	0%	0%	0%	0%

7.1.4 Projected Multiple Dry Year Supply/Demand

The percent change in gpcd from the previous year, and an average year (2009), follow a similar trend for all multiple dry year time periods with the worst conditions occurring from 2013-2015. The projected multiple dry year water demands are based on the percent changes in demand from 2013-2015, which are approximately zero percent reduction in the first year, ten percent reduction in the second year, and a twenty percent reduction in the third year. As shown in Table 7-5, the City's supplies are consistently 100% of projected demands, even during multiple-dry year conditions.

Table 7-5 Supply and Demand Comparison - Multiple Dry Year Events, AFY

		2020	2025	2030	2035
Multiple-dry year first year supply	Supply totals	9,042	9,219	9,401	9,585
	Demand totals	9,042	9,219	9,401	9,585
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%
Multiple-dry year second year supply	Supply totals	8,137	8,297	8,460	8,627
	Demand totals	8,137	8,297	8,460	8,627
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%
Multiple-dry year third year supply	Supply totals	7,233	7,375	7,520	7,668
	Demand totals	7,233	7,375	7,520	7,668
	Difference	0	0	0	0
	Difference as % of Supply	0%	0%	0%	0%
	Difference as % of Demand	0%	0%	0%	0%

7.1.5 Resource Maximization and Import Minimization

As stated in Section 6, the City's sources of existing and planned water supply for the UWMP's planning horizon (2015-2035) are groundwater, recycled water and imported water. The City will maximize its groundwater supply by implementing operational strategies and demand management measures that will keep in balance the safe yield of the groundwater basin. Furthermore, the City will continue to investigate further uses of recycled water and implementation of the North Pleasant Valley Desalter.

7.2 FACTORS AFFECTING SUPPLY RELIABILITY

Calleguas Municipal Water District (CMWD) utilizes imported and local water supplies. Imported water from CMWD, which is purchased from MWDSC, is affected by multiple factors. MWDSC's supply is imported from the Colorado River and Bay-Delta through the Colorado River Aqueduct (CRA) and the State Water Project (SWP), respectively. The local and imported supplies are affected by legal, environmental, water quality and climatic factors.

- **Legal:** Supply allocations from the CRA are dictated through legal agreements and, in some cases, court settlements. Supply from the SWP is affected by legal factors, including the Bay-Delta Accord, which changed operating criteria of the SWP and can significantly reduce supply to MWDSC in dry years. Several of the groundwater basins within the CMWD service area are regulated to ensure that the groundwater resources are utilized in the best interest of the public and for the common benefit of all the water users (7).
- **Environmental:** Several species of fish located in the Bay-Delta have been listed as endangered, which has led to decreased pumping by the SWP and environmental litigation. Numerous environmental regulations limit the discharge of brine waste from desalination facilities. These regulations may impact CMWD and its retail water providers by limiting utilization of local brackish groundwater resources.
- **Water Quality:** Disinfection byproducts pose water quality issues for the SWP. Disinfection byproducts form when organic carbon and bromide in the source water react with disinfectants at the water treatment plant. Groundwater inflows into the SWP also pose arsenic concerns. TDS levels in the Ventura County groundwater are increasing due to discharges from local wastewater treatment facilities. Increased groundwater treatment may be required to utilize local groundwater supplies (7).

  Groundwater quality has historically proved problematic for the City, and has had adverse effects on its water supply. High levels of TDS and chloride have resulted in the City blending groundwater with imported water in order to achieve water quality standards. As mentioned in Section 6.4.1, the City of Camarillo has assessed the feasibility of constructing a groundwater treatment and desalination facility that would be located in the Pleasant Valley Basin. This project would allow the City to stop pumping the groundwater aquifer in areas where the groundwater level is decreasing, and instead take water from areas where the groundwater is of poor quality, but increasing in quantity.

- **Climatic:** Variable hydrology in the basins that feed the Sacramento-San Joaquin Delta affects SWP supply.

The factors resulting in inconsistency of supply for both the District's local and imported sources are summarized in Table 7-6.

Table 7-6 Factors Resulting in Inconsistency of Supply

Water Supply Sources	Legal	Environmental	Water Quality	Climatic
Pleasant Valley Basin	X	X	X	X
CMWD	X	X	X	X

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 provides the City with the tools to maintain reliable supplies and reduce the impacts of supply interruptions due to extended drought or catastrophic supply interruptions.

The UWMP Act requires that the UWMP include an urban water shortage contingency analysis that includes stages of action to be undertaken in the event of water supply shortages; a draft water shortage contingency resolution or ordinance; prohibitions, consumption reduction methods and penalties; an analysis of revenue and expenditure impacts and measures to overcome these impacts; actions to be taken during a catastrophic interruption; and a mechanism for measuring water use reduction.

The City implemented its current Water Shortage Contingency Plan (WSCP) in July 2009. The plan, included in Appendix E, was developed as a tool for the City to manage its water supplies in event of prolonged drought, natural disaster, or water failures. Chapter 14.12 (Water Conservation Ordinance) of the Camarillo Municipal Code, included in Appendix E, details the City's water conservation rules and water shortage contingency plan. The City was in a Stage 2 water supply shortage from 2014 until late July 2016 when the City declared a Stage 1 condition with amendments to the City's Water Conservation Ordinance. The July 2016 amendments include changes to reflect recent permanent water conservation measures required by the State and permanent water offset requirements for new development projects.

8.1 STAGES OF ACTION AND REDUCTION OBJECTIVES

The City's water shortage plan describes four stages of water demand reductions that may be invoked during water supply shortages. Each stage includes a water reduction objective, supply conditions and percent of normal water supply, which may vary based on the nature of water supply emergency. The implementation of the plan is dependent on the cause, severity, and anticipated duration of the water supply shortage. A combination of water conservation measures would be used to reduce water usage in the event of water shortages. Table 8-1 shows the four stages and their representative shortages. As shown in Table 8-1, the water shortage stages include consideration of water shortages up to a Stage 4 Shortage, a Severe Water Supply Shortage, which includes reductions in water consumption by 50 percent.

Table 8-1 Water Shortage Contingency - Rationing Stages

Stage	Supply Condition (% of Normal)	Reduction Objective
Permanent Restrictions		
1 – Water Supply Alert	85 – 95%	15%
2 – Water Supply Shortage	70 – 84%	30%
3 – Critical Water Supply Shortage	60 - 69%	40%
4 – Severe Water Supply Shortage	50 - 59%	50%

Declarations of water supply conditions will occur periodically after evaluation by City staff and the approval by City Council at a public meeting. Such resolution will be based on the current drought situation and the amount of imported water available from CMWD and MWDSC. The respective water supply condition dictates the degree at which water conservation measures are implemented at any particular time in the City. Some of the specific reasons cited in the WSCP as potential reasons to change stages are listed as follows:

- Advancement to subsequent stage
    - Emergency condition, such as failure of pumping equipment, etc., that requires a percentage of water consumption reduction greater than that of the current stage.
    - Regulatory action that requires more than that stage's percentage reduction in water consumption.
    - Failure to maintain target water consumption reduction goal of that particular stage.
- Withdrawal to previous stage
    - Emergency condition has been decreased in severity or resolved, so that the previous target goal may be utilized.
    - Regulatory action has been resolved or modified.
    - Water consumption reductions have been above that necessary to meet target goals of the current stage.

When a resolution of the City Council has been issued to change the water stage, the public will be notified through publication of the resolution in the local newspaper, on the City's website, and in the billing statement.

The City is responsible for supplying water for the health and safety needs of the community. If it appears that the City may be unable to supply the demands and requirements of the water customers, the City Council may declare a water supply shortage condition. Based on the severity of the shortage, the City could take actions as described in the following sections.

8.2 MANDATORY PROHIBITIONS ON WATER WASTING

The City's Water Conservation Ordinance includes the following permanent water use restrictions that are in in effect at all times:

- Irrigating during daytime hours and no more than 15 minutes per station for all customers except commercial nurseries and growers
- Excessive flow or runoff
- Washing outdoor surfaces
- Leaks in distribution, irrigation, or plumbing systems
- Non-recirculating water fountains
- Washing vehicles without a self-closing nozzle
- Restaurants providing water without request
- Not providing guests the option to avoid laundering towels daily
- Single pass cooling systems
- Lack of water conserving nozzles in restaurants
- Restrictions on commercial car wash facilities

In the event of a water supply shortage, the City may implement mandatory compliance measures to increase water conservation. The City's Municipal Code includes prohibition on various wasteful water uses during a declared water supply shortage. Under conservation stages, the City's Ordinance includes the following additional water conservation measures, listed by stage (note that each stage includes the restrictions from prior stages).

Stage 1 Shortage

- Irrigation limited to four days a week
- Water Impact Study for new service connections showing the project will not increase the City's demands

Stage 2 Shortage

- Irrigation limited to three days a week
- Obligation to fix leaks reduced to 48 hours
- Filling ponds or ornamental lakes restricted to sustaining aquatic life
- Agricultural irrigation limited to three days per week
- Construction water must use recycled water if available

Stage 3 Shortage

- Irrigation limited to two days a week
- Agricultural irrigation prohibited unless recycled water is available

Stage 4 Shortage

- Watering is prohibited except with recycled water under restricted conditions
- Obligation to fix leaks reduced to 24 hours
- Washing of vehicles is prohibited
- Limited filling of pools and spas
- No new potable water service connections, except under restricted conditions
- No building permits that increase water demands
- No new annexations

8.3 PENALTIES

The City's WSCP lists the penalties for violating the conservation measures as follows (violations must be within a year of each other to count as a subsequent violation).

- First Violation: written warning
- Second Violation: fine not to exceed $100
- Third Violation: fine not to exceed $500
- Fourth and Subsequent Violations: fine not to exceed $1,000 and installation of a flow restriction device

The City also includes termination of service as a penalty for willful violation of the Ordinance.

The WSCP includes an appeal process by which administrative review can be requested of a penalty. Once an administrative review has been completed, an appeal hearing can be requested. The decision of the appointed hearing officer will be final.

8.4 MECHANISM FOR DETERMINING WATER USE REDUCTIONS

The City's water system currently has water meters on all production sources and customer connections. These meters record the amount of water consumed at each location.

Customer consumption totals are tallied on a monthly basis for billing purposes. The City's WSCP states that the Water Superintendent will inform the Public Works Director of any increase in water consumed or decrease in water supplies. The Public Works Director will then make recommendations to the City Manager on whether to change water shortage stages and will provide supporting reports of consumption or supply as required.

8.5 REVENUE AND EXPENDITURE IMPACTS

The majority of operating costs for most water agencies are fixed rather than a function of the amount of water sold. As a result, when significant conservation programs are undertaken, it is frequently necessary to raise water rates because the revenue generated is based on lower total consumption while the revenue required is basically fixed. In order to counteract the financial impact of conservation, the City may institute an increase in the rate structure so that lower projected water consumption would generate added revenue needed by the City's Water Enterprise fund. Another option would be the use of reserves to minimize the need for additional rate increases. A full analysis of the water rates based on the financial conditions at the time water reduction would occur would be presented to the City Council for their approval.

Some actions the City may choose to consider include temporarily increasing water rates or delaying capital improvements until the shortage has ended.

8.6 ACTIONS DURING A CATASTROPHIC INTERRUPTION

The City has included emergency conditions as a triggering action for advancement to a subsequent stage. A catastrophic interruption could be considered an emergency condition.

8.7 PROJECTED THREE YEAR MINIMUM SUPPLY

The minimum supply for the City is equal to the driest three-year historic sequence in the history of City's water deliveries. The three driest years on record are 2013 through 2015.

Table 8-2 shows the projected three-year minimum water supplies for the City based on the water deliveries from 2013 through 2015.

Table 8-2 City's Projected Three-year Minimum Water Supplies, AFY

Supply Source	2016	2017	2018
Pleasant Valley Basin	3,197	3,197	3,197
CMWD	4,855	5,097	5,343
Total	**8,052**	**8,294**	**8,540**
Note: The amount of demand not met by the City's groundwater allocation is assumed to be available from MWDSC at 100%.			

9 DEMAND MANAGEMENT MEASURES

The Demand Management Measures (DMM) section provides a comprehensive description of the water conservation programs that the City has implemented for the past five years, is currently implementing, and plans to implement in order to meet the 2020 urban water use reduction targets. The section of the California Water Code (CWC) addressing DMMs was significantly modified in 2014, based on recommendations from the Independent Technical Panel (ITP) to the legislature. The ITP was formed by DWR to provide information and recommendations to DWR and the Legislature on new DMMs, technologies and approaches to water use efficiency. The ITP recommended, and the legislature enacted, streamlining the requirements from the 14 specific measures reported in the 2010 UWMP to six more general requirements plus an "other" category for measures agencies implemented in addition to the required elements. The required measures are summarized in Table 9-1.

Table 9-1 Demand Management Measures

	Measure
1	Water waste prevention ordinances
2	Metering
3	Conservation pricing
4	Public education and outreach
5	Programs to assess and manage distribution system real loss
6	Water conservation program coordination and staffing
7	Other demand management measures

Consistent with the requirements of the CWC, this section describes the DMMs that have been implemented in the past five years and will continue to be implemented into the future in order to meet the City's 2020 water use targets pursuant to Section 10608.20 of the CWC.

The UWMP Act allows California Urban Water Conservation Council (CUWCC) members to submit their 2014-2015 approved CUWCC Best Management Practices (BMP) report with their UWMPs in lieu of, or in addition to, a DMM section if the water supplier is in full compliance with the CUWCC Memorandum of Understanding (MOU). The City became a signatory to the MOU in 1991 and submits annual reports outlining progress towards implementing the 14 BMPs in the MOU, which provides a framework for future UWMPs and BMP implementation. As a member of CUWCC and signatory of its MOU, the City realizes the importance of the BMPs to ensure a reliable future water supply. The City is committed to implementing water conservation and water recycling programs to maximize sustainability in meeting future water needs for its customers. Additional DMM implementation information is provided in the following sections.

9.1 DEMAND MANAGEMENT MEASURES

9.1.1 DMM – Water Waste Prevention

According to the DWR 2015 UWMP Guidebook, a water waste ordinance explicitly states the waste of water is to be prohibited. The ordinance may prohibit specific actions that waste water, such as excessive runoff from landscape irrigation, or use of a hose outdoors without a shut off nozzle.

Chapter 14.12 of the City's Municipal Code lists the prohibited uses of water supplied by the City and defines water waste. The prohibited uses include:

1. Watering Hours and Duration. Except for testing an irrigation system for a reasonable period of time, watering is prohibited between the hours of 8:00 a.m. and 6:00 p.m., and irrigation systems are limited to no more than 15 minutes of watering per day per station. These restrictions do not apply to the use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, an irrigation system that uses stream rotor sprinklers that meet a 70% efficiency standard, to very low-flow drip type irrigation systems where no emitter produces more than two gallons of water per hour, or to commercial nurseries and growers. In addition, irrigation for the purpose of installing and germinating new lawns or landscaping is exempt from these restrictions for a period not to exceed three weeks, unless the Water Conservation Administrator gives written permission to a water user for an extension beyond three weeks due to a longer installation and germination period.

2. Excessive Water Flow or Runoff. Watering in a manner that results in overspray or excessive runoff onto paved or hardscaped areas is prohibited.

3. Washing Hard or Paved Surfaces. Washing of hard or paved surfaces, including sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards or as surface preparation for the application of any architectural coating or painting. All such permitted washing must be done by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device, a low-volume, high-pressure cleaning machine, or a low-volume high-pressure water broom.

4. Obligation to Fix Leaks. Leaks in distribution, irrigation, or plumbing systems must be promptly corrected after discovery, and in no event more than 72 hours after receiving notice from the City.

5. Water Fountains and Decorative Water Features. Water fountains and decorative water features must have a water recirculation system.

6. Limits on Washing Vehicles. Washing any automobile, truck, van, bus, motorcycle, boat or any other vehicle is restricted to the use of a hand-held bucket or similar container or a hand-held

hose equipped with a positive self-closing water shut-off nozzle or device. This provision does not apply to a commercial car washing facility.

7. Drinking Water Served Upon Request. Eating or drinking establishments, including restaurants, hotels, cafés, cafeterias, bars, or other public places where food or drinks are sold, are prohibited from providing drinking water to any customer unless expressly requested.

8. Commercial Lodging Establishment Daily Linen Services. Hotels, motels, and other commercial lodging establishments must provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments must prominently display notice of this option in each guest room.

9. Single Pass Cooling Systems. The installation of single pass cooling systems is prohibited in buildings requesting new water service.

10. Restaurants Required to Use Water Conserving Spray Valves. Food service establishments, such as restaurants and cafés, must utilize water conserving nozzles on pre-rinse spray valves.

11. Commercial Car Wash Facilities. Commercial car was facilities may not use or permit the use of any water to wash any car, truck, boat, trailer, bus, recreation vehicle, camper, or any other vehicle, or any portion thereof, except by the following methods:

    - Use of mechanical automatic car wash facilities utilizing water recycling equipment; or
    - Use of a bucket and hand washing; or
    - Use of a hose equipped with an automatic positive self-closing valve that requires the person using the hose to apply and maintain pressure at the outlet end of the hose to activate and maintain the flow of water.

9.1.2 DMM – Metering

According to the DWR 2015 UWMP Guidebook, an agency that is fully metered will state that fact in the UWMP. If an agency is not yet full metered, it will discuss its plans for becoming fully metered in accordance with CWC 527.

All water connections served by City water are currently metered.

9.1.3 DMM – Conservation Pricing

According to the DWR 2015 UWMP Guidebook, retail water agencies need to describe the pricing structure that is used by the water agency. Conservation pricing is designed to discourage wasteful water habits and encourage conservation. The City applies a four tiered rate structure to residential customer classes, which account for almost 90% of the customer base. Rates based on volume of use encourage water conservation by customers. The City applies a uniform rate structure to the remaining

customer classes: commercial, industrial, government, landscape, recycled water, construction, and agricultural.

Table 9-2 shows the tiered consumption rates for a residential meter with a unit defined as 100 cubic feet (748 gallons). Table 9-3 shows the water rates for the other customer classes, while Table 9-4 shows the base fees based on the size of the meter.

Table 9-2 Residential Conservation Pricing Rate Structure

Units	Rate per HCF
1-9 HCF	$1.50
10-18 HCF	$3.58
19-24 HCF	$4.54
25+ HCF	$6.33
*Multi-family rates are based on Hundred Cubic Feet (HCF) per dwelling unit for master-metered connections	

Table 9-3 Multi-family and CII Water Rates

Customer Class	Rate per HCF(uniform)
Commercial/Industrial/Governmental	$2.58
Landscape RW Unavailable (Basic rate)	$4.48
Landscape RW Available (choose not to use)	$4.84
Recycled Water (RW) – Landscape (Limited)	$1.85
Construction (temporary service)	$4.48
Agricultural	$4.48

Table 9-4 Base Fees for Meter Size

Per	Base Fee
¾"	$22.43
1"	$26.78
1.5"	$47.61
2"	$72.56
3"	$139.13
4"	$213.98
6"	$422.01
8"	$671.64
Fire Hydrant	$176.89

9.1.4 DMM – Public Information Programs

This program consists of distributing information to the public through a variety of methods including brochures, radio, television, school presentations and videos, and websites. The City maintains a newsletter which is distributed regularly and often touches on water issues. The City has also distributed water information in its monthly bills, at special events, and on its homepage.

9.1.5 DMM – Water Loss Control

A water audit is a process of accounting for water use throughout a water system in order to quantify unmetered water usage. Non-revenue water is the difference between metered production and metered usage on a system-wide basis.

Public water system statistics records from 2011-2015 show non-revenue water of approximately 4 percent of the City's water production. This is relatively low compared to the typical range of 5 to 10 percent experienced by most agencies in Southern California. For this reason, the City does not provide a comprehensive system leak detection program. The City is conscientious about locating and repairing main and service connection leaks when they occur. The Water Conservation Program provides assistance in locating leaks on private property and City Municipal Code Chapter 14.12 prohibits leak durations of more than 72 hours. Additionally, the City completed the AWWA Water Audit spreadsheet for the calendar year 2015 and will continue to update the spreadsheet on an annual basis.

9.1.6 DMM – Conservation Coordinator and Staffing Support

The City employs one full time Water Conservation Technician and a Water Conservation Coordinator; it budgets for an annual Water Conservation Program.

9.2 OTHER DEMAND MANAGEMENT MEASURES

The City is committed to implementing cost effective programs that will increase water efficiency City-wide. Though not required, the City has implemented the following DMMs during the past five years and will continue implementation into the future in order to increase the overall water efficiency of the City's customers. The following is a brief description of each program.

9.2.1 Water Survey Program

This program consists of offering water audits to single family and multi-family residential customers. Audits include reviewing water usage history with the customer, identifying leaks inside and outside the home, and recommending improvements.

Upon request, City personnel will perform on-site inspection of residences and businesses for potential internal leaks. Leak detection kits are available and are provided to residents free of charge, upon request. As an incentive to complete the audit, the City provides free low-flow showerheads and kitchen/bathroom shut-off nozzles. Also, the City provides exterior audits for residence with landscape irrigation systems.

9.2.2 Water Retrofit Program

This program consists of installing physical devices to reduce the amount of water used or to limit the amount of water that can be served to the customer. In accordance with State law, low-flow fixtures have been required on all new construction since 1978. In addition, State legislation enacted in 1990 requires all new buildings after January 1, 1992 to install Ultra-Low-Flush Toilets (ULFT).

Several studies suggest that water use savings resulting from miscellaneous interior retrofit fixtures can range between 25 and 65 gpd per housing unit. The studies also suggest that installation of retrofit fixtures in older single-family homes tend to produce more savings, while newer multi-family homes tend to produce fewer saving per housing unit.

9.2.3 School Education Program

This DMM includes providing educational materials and instructional assistance to school classes. Brochures are distributed on various water issues, and the City participates in MWDSC programs to promote student Water Awareness. A number of teachers have included water conservation classes as part of their curriculum.

9.2.4 Conservation Programs for Commercial, Industrial, and Institutional Accounts

The City targets commercial, industrial, and institutional water accounts with a monthly consumption of 200 HCF or more for water audits. Such programs typically involve turf fields, smart irrigation timers, and industrial process water use reductions.

10 REFERENCES

1. **California Department of Water Resources.** *Guidebook to Assist Water Suppliers in the Preparation of a 2015 Urban Water Management Plan.* March 2016.

2. —. *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use.* February 2016.

3. **Steven Bachman, PhD.** *Northern Pleasant Valley Desalter Groundwater Analysis and Modeling.* 2016.

4. **AKM Consulting Engineers.** *Recycled Water Plan.* 2014.

5. **Black & Veatch.** *Calleguas Municipal Water District - 2015 Urban Water Management Plan-Final .* 2016.

6. **Metropolitan Water District of Southern California.** DRAFT 2015 Urban Water Management Plan. March 2016.

7. **Black & Veatch.** *2010 Urban Water Management Plan Prepared for Calleguas Municipal Water District.* 2011.

APPENDIX A. DWR CHECKLIST

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1	2.2
10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.5.2	2.1
10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	Plan Preparation	Section 2.5.2	2
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	3.1
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	3.2
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	3.3
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	3.4
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	3.3
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	5
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	5.1.3; Appendix D
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	5.1.1
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	4.4

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5 and App E	4.4
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply is the suppliers base gpcd is at or below 100.	Baselines and Targets	Section 5.7.2	4.3
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	4.4
1608.24(d)(2)	If the retail supplier adjusts its compliance gpcd using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.8.2	N/A
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	N/A
10608.4	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	4.4
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	6
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	6.2
10631(b)(1)	Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2	6.2; Appendix F
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	6-2

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	6.2; Appendix F
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	System Supplies	Section 6.2.3	6.2; Appendix F
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.4	6.2
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	6.2
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	6.3
10631(g)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years.	System Supplies	Section 6.8	6.6
10631(i)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	6.4
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	System Supplies	Section 2.5.1	6.1; Appendix B
10631(j)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.5.1	N/A
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	2.1; 6.5

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	System Supplies (Recycled Water)	Section 6.5.2	6.5
10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5.2.2	6.5
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	6.5
10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4	6.5
10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.4	6.5
10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5.5	6.5
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	6.5
10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.4	7.1.5
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	7.1
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	7.1
10631(c)(2)	For any water source that may not be available at a consistent level of use,	Water Supply Reliability Assessment	Section 7.1	7.1

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
	describe plans to supplement or replace that source.			
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	7.2
10635(a)	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.3	7.1
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	8
10632(a)(2)	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.	Water Shortage Contingency Planning	Section 8.9	8.7
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	8.6
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	8.2
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	8.2
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	8.3
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	8.5
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	8; Appendix E

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	8.4
10631(f)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections and 9.3	9.1
10631(f)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management	Sections and 9.3	N/A
10631(j)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	N/A
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	2.2; Appendix B
10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	2.2; Appendix B
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	2.2; Appendix B

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10635(b)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	2.2; Appendix B
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	2.2; Appendix B
10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Sections 10.2.1	2.2; Appendix B
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	2.2; Appendix B
10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3	2.2; Appendix B
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	2.2; Appendix B
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	2.2; Appendix B
10645	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5	2.2; Appendix B

APPENDIX B. NOTIFICATION AND OUTREACH

City of Camarillo

Department of Public Works – Water Division
601 Carmen Drive • P.O. Box 248 • Camarillo, CA 93011-0248

Phone: (805) 388-5373 • Fax: (805) 389-9524 • e-mail:
waterdiv@ci.camarillo.ca.us

July 12, 2016

Calleguas Municipal Water District
2100 Olsen Rd.
Thousand Oaks, CA 91360-6800

Subject: City of Camarillo 2015 Urban Water Management Plan

The City of Camarillo (City) is in the process of preparing its 2015 Urban Water Management Plan (UWMP) as required by the Urban Water Management Planning Act (UWMP Act). The UWMP Act requires the City to notify cities and counties within its water service area that it is preparing its 2015 UWMP 60 days prior to holding a public hearing thereby encouraging public involvement and agency coordination. The District will notice the specific date, time, and location of this public hearing two weeks prior to its occurrence.

This letter serves as your official notice of preparation and intent to adopt the UWMP. A draft of the UWMP will be available for review in Fall of 2016. Until that time, if you have any questions or comments regarding the District's 2015 UWMP please contact Water Systems Consulting, Inc., the consultant responsible for the preparation of the UWMP at:

Water Systems Consulting, Inc.
Attn. Spencer Waterman, Staff Planner
3765 South Higuera St. Suite 102
San Luis Obispo, California 93401
(805) 457-8833 ext. 102
swaterman@wsc-inc.com

Sincerely,

Rick Dierksen
Water Superintendent
City of Camarillo

COPY

City of Camarillo

Department of Public Works – Water Division
601 Carmen Drive • P.O. Box 248 • Camarillo, CA 93011-0248

Phone: (805) 388-5373 • Fax: (805) 389-9524 • e-mail: waterdiv@ci.camarillo.ca.us

July 12, 2016

Ventura County Public Works Agency
800 S. Victoria Avenue
Ventura, Ca. 93009

Subject: City of Camarillo 2015 Urban Water Management Plan

The City of Camarillo (City) is in the process of preparing its 2015 Urban Water Management Plan (UWMP) as required by the Urban Water Management Planning Act (UWMP Act). The UWMP Act requires the City to notify cities and counties within its water service area that it is preparing its 2015 UWMP 60 days prior to holding a public hearing thereby encouraging public involvement and agency coordination. The District will notice the specific date, time, and location of this public hearing two weeks prior to its occurrence.

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Water Systems Consulting, Inc.
Attn. Spencer Waterman, Staff Planner
3765 South Higuera St. Suite 102
San Luis Obispo, California 93401
(805) 457-8833 ext. 102
swaterman@wsc-inc.com

Sincerely,

Rick Dierksen
Water Superintendent
City of Camarillo

City of Camarillo

Department of Public Works – Water Division
601 Carmen Drive • P.O. Box 248 • Camarillo, CA 93011-0248

Phone: (805) 388-5373 • Fax: (805) 389-9524
• e-mail: waterdiv@ci.camarillo.ca.us

August 29, 2016

ALL INTERESTED PARTIES

2015 Urban Water Management Plan

The City of Camarillo hereby provides public notice that its Final Draft 2015 Urban Water Management Plan is now available for public review.

Urban Water Management Plan
The City of Camarillo has prepared the 2015 Urban Water Management Plan (Plan) for submission to the California Department of Water Resources. The document was developed in response to Water Code Sections 10620, 10621, 10631-10635, and 10642 of the Urban Water Management Planning Act. These plans which describe and evaluate reasonable, practical, and efficient water uses, reclamation and conservation activities are to be filed with the California Department of Water Resource every 5 years ending in five or zero.

Public Review Period
The Act requires that prior to adopting the plan the urban water supplier shall make the plan available for public review in accordance with Government Code 6066. As such City of Camarillo has made the plan available for public review at the City of Camarillo Public Works counter office, as well as the City of Camarillo website at www.cityofcamarillo.org

All written comments on the Plan are to be submitted by Tuesday, September 27, 2016, 5:00PM to:

Mr. Rick Dierksen - Water Superintendent
Ms. Lucie McGovern – Deputy Director Public Works
601 Carmen Dr.
Camarillo, CA 93010
Email: rdierksen@cityofcamarillo.org
lmcgovern@cityofcamarillo.org

Public Hearing
A public hearing to adopt the plan will be held at the City of Camarillo City Council meeting on September 28, 2016. It is anticipated that the City of Camarillo City Council will adopt the Plan at this meeting. This meeting will provide a final opportunity to submit written and/or verbal comments regarding the Plan.

To be published in the Ventura County Star: September 3rd and 11th of 2016.

City of Camarillo

Department of Public Works – Water Division
601 Carmen Drive • P.O. Box 248 • Camarillo, CA 93011-0248

Phone: (805) 388-5373 • Fax: (805) 389-9524 • e-mail:
waterdiv@ci.camarillo.ca.us

August 30, 2016

Cy Johnson
Calleguas Municipal Water District
2100 Olsen Rd.
Thousand Oaks, CA 91360-6800

Subject: City of Camarillo 2015 Urban Water Management Plan

Dear Mr. Johnson:

The City of Camarillo (City) is in the process of preparing its 2015 Urban Water Management Plan (UWMP) as required by the Urban Water Management Planning Act (UWMP Act). An official notice of preparation and intent to adopt the UWMP was sent to you in July 2016. A draft of the UWMP will be available for review prior to the public hearing on September 28, 2016 where it will be considered for adoption. The UWMP Act requires the City to notify wholesale suppliers of its projected demands. This letter serves as an official notice of the City's demand projections as described in its UWMP. The UWMP is available for download here: www.cityofcamarillo.org. The projected demands from the UWMP are summarized in the attached tables, which were provided in a spreadsheet format to Calleguas Municipal Water District (Calleguas) on 01/21/2016. It is important to note that the demand estimates provided previously to Calleguas were revised due to changes in the implementation of the North Pleasant Valley Basin Groundwater Desalter project, new groundwater production assumptions, and revised multiple dry year drought demand assumptions.

Please feel free to forward the link and let me know if there are any questions.

Sincerely,

Rick Dierksen
Water Superintendent
City of Camarillo
rdierksen@cityofcamarillo.org
805-388-5376

Attachments:
1- Projected Supply and Demand Tables

Table 1. Normal Year and Single Dry Year Demand and Supplies

Acre Feet

	2015	2020	2025	2030	2035	2040
Retail Water Demand						
Agricultural	414	1,803	1,808	1,814	1,819	1,825
Municipal and Industrial	7,578	8,770	8,942	9,118	9,297	9,480
Total Retail Demand	**7,992**	**10,573**	**10,750**	**10,932**	**11,116**	**11,305**
Local Supplies						
Potable: Please list by source/project; add lines if necessary						
raw groundwater	3,259	3,197	3,197	3,197	3,197	3,197
Sub-total Local Potable Supply	3,259	3,197	3,197	3,197	3,197	3,197
Non-Potable: Please list by source/project; add lines if necessary						
CSD - recycled (city water customers - added after 2014)	179	1,531	1,531	1,531	1,531	1,531
Subtotal Non-Potable Local Supply	179	1,531	1,531	1,531	1,531	1,531
Total Local Supply	3,438	4,728	4,728	4,728	4,728	4,728
Exports of these sources to other agencies	-	-	-	-	-	-
Net Local Supplies	3,438	4,728	4,728	4,728	4,728	4,728
Net Projected Imported Water Requirement	**4,554**	**5,845**	**6,022**	**6,204**	**6,388**	**6,577**

Table 2. Multiple Dry Years Demand and Supplies
III. Assume all milestone years are the third of multiple dry years

Acre Feet

	2015	2020	2025	2030	2035	2040
Retail Water Demand						
Agricultural	331	1,442	1,446	1,451	1,455	1,460
Municipal and Industrial	6,062	7,016	7,154	7,294	7,437	7,584
Total Retail Demand	**6,394**	**8,458**	**8,600**	**8,745**	**8,893**	**9,044**
Local Supplies						
Potable: Please list by source/project; add lines if necessary						
raw groundwater	3,259	3,197	3,197	3,197	3,197	3,197
Sub-total Local Potable Supply	**3,259**	**3,197**	**3,197**	**3,197**	**3,197**	**3,197**
Non-Potable: Please list by source/project; add lines if necessary						
CSD - recycled (city water customers - added after 2014)	179	1,225	1,225	1,225	1,225	1,225
	-	-	-	-	-	-
	-	-	-	-	-	-
Subtotal Non-Potable Local Supply	179	1,225	1,225	1,225	1,225	1,225
Total Local Supply	**3,438**	**4,421**	**4,421**	**4,421**	**4,421**	**4,421**
Exports of these sources to other agencies	-	-	-	-	-	-
Net Local Supplies	**3,438**	**4,421**	**4,421**	**4,421**	**4,421**	**4,421**
Net Projected Imported Water Requirement	**4,554**	**4,037**	**4,179**	**4,324**	**4,471**	**4,622**

Note: Assumes 80% of the demand volumes in the Normal and Dry Year tabs.

Certificate of Publication

Ad #1230527

In Matter of Publication of:

Public Notice

State of California)
))§
County of Ventura)

I, **Maria Rodriguez**, hereby certify that the **Ventura County Star Newspaper** has been adjudged a newspaper of general circulation by the Superior Court of California, County of Ventura within the provisions of the Government Code of the State of California, printed in the City of Camarillo, for circulation in the County of Ventura, State of California; that I am a clerk of the printer of said paper; that the annexed clipping is a true printed copy and publishing in said newspaper on the following dates to wit:

Sept. 04, 11, 2016

I, Maria Rodriguez certify under penalty of perjury, that the foregoing is true and correct.

Dated this Sept. 12, 2016; in Camarillo, California, County of Ventura.

Maria Rodriguez
(Signature)

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the City Council of the City of Camarillo will conduct a public hearing on Wednesday, September 28, 2016, at 7:30 p.m., in the Council Chambers, 601 Carmen Drive, Camarillo, California, to consider the following:

URBAN WATER MANAGEMENT PLAN 2016 UPDATE

A draft of the Urban Water Management Plan (UWMP) 2015 Update is available for review in the Public Works Department at City Hall, 601 Carmen Drive or at www.cityofcamarillo.org. The City Council may make modifications or other adjustments deemed to be appropriate or attach conditions to the supplies and demands for the next twenty-five years. It considers such items as water sources, reliability planning, supply and demand comparison, demand management measures, water shortage contingency planning, and water recycling. For further information, you may contact Rick Dierksen, Water Superintendent, at the City of Camarillo Water Division, 805-388-5373 or rdierksen@cityofcamarillo.org.

Any person interested in these matters is invited to attend and present testimony either for or against the above item. If you challenge the proposed action in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice or in written correspondence delivered to the City Council at or prior to the public hearing.

Jeffrie Madland, City Clerk
Publish: Sept. 4, 11, 2016 Ad No.1230527

RECEIVED

SEP 14 2016

City of Camarillo
City Clerk

City of Camarillo

AGENDA REPORT

Date: September 28, 2016

To: Honorable Mayor and Councilmembers

From: Dave Norman, City Manager

Submitted by: Dave Klotzle, Director of Public Works

Subject: **Resolution Approving 2015 Urban Water Management Plan Update**

SUMMARY

State law requires water utilities to prepare Urban Water Management Plans (UWMP), and to update them every five years. The 2015 UWMP update for the Camarillo Water Division is presented for City Council approval.

DISCUSSION

The Urban Water Management Planning Act (AB797) was established in 1983, amended in subsequent years and has been regulated by the Department of Water Resources (DWR). The Act requires that all California urban water purveyors who supply water to more than 3,000 customers, develop an urban water management plan and update the document every five years.

The purpose of the UWMP is to provide a comprehensive assessment of the City of Camarillo's water resource needs for a 25-year planning period. The assessment provides supply and demand of water resources during normal and multi-year drought conditions. It considers such items as water sources, reliability planning, supply and demand comparison, demand management measures, water shortage contingency planning and water recycling. The plan also addresses the requirements of SBx7-7 which sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020.

The City of Camarillo has prepared an UWMP since 1985, and updated the plan every 5 years. The previous update to the UWMP was approved by City Council in 2010. The attached 2015 UWMP update has been prepared in accordance with recently revised guidelines which were released by the DWR earlier this year. Prior to the approval of the UWMP, the City Council is required to conduct a public hearing. A public notice was advertised for this public hearing on September 3rd and 11th, 2016, in the Camarillo Star, and copies of the UWMP are available for review at City Hall and the City's website homepage. Upon City Council approval, the UWMP will be filed with the DWR.

AB797 also requires that DWR report to the State Legislature on the agency's compliance with the law. The DWR will send the Legislature a report describing each purveyor's plan, including the water management programs that will be implemented by each retail purveyor. Each purveyor will receive a copy of the report as soon as it is completed.

BUDGET IMPACT

None. This item does not require an expenditure of funds.

SUGGESTED ACTION

a MOTION to adopt a resolution approving the 2015 Urban Water Management Plan update and include said resolution in the plan update.

ATTACHMENTS

Resolution

Finance Review: MVC

RESOLUTION NO. 2016-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CAMARILLO AMENDING THE CAMARILLO URBAN WATER MANAGEMENT PLAN

The City Council of the City of Camarillo resolves as follows:

SECTION 1: The City Council of the City of Camarillo finds and declares as follows:

A. The California Legislature enacted Assembly Bill 797 during the 1983-1984 Regular Session of the California Legislature (Water Code Section 10610 et seq.), known as the Urban Water Management Planning Act, which mandates that every urban supplier of water 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.

B. AB 797 required that said Plan be adopted by December 31, 1985, after public review and hearing, and filed with the California Department of Water Resources within thirty (30) days of adoption.

C. The City of Camarillo (City) did, in conjunction with Ventura County, prepare and file said Plan with the California Department of Water Resources.

D. AB 797 requires that said Plan be periodically reviewed at least once every five years, and that the urban water supplier shall make any amendments or changes to its plan which are indicated by the review.

E. City is an urban supplier of water providing water to over 3,000 customers and has, therefore, prepared and circulated for public review a Draft Urban Water Management Plan Update, in compliance with the requirements of AB 797, and a properly noticed public hearing regarding said Draft Plan Update was held by the City Council on September 28, 2016, the Urban Water Management Plan was adopted by the City Council on September 28, 2016, and subsequently submitted to the California Department of Water Resources.

F. SBx 7-7 requires that all water supplies increase water use efficiency with the overall goal to decrease per capita consumption within the state by 20 percent by year 2020.

SECTION 2: The Urban Water Management Plan is hereby amended and ordered filed with the City Clerk.

SECTION 3: The City Manager is hereby authorized and directed to file an update to the Plan Year 2015 with the California Department of Water Resources within thirty (30) days after this date, in accordance with AB 797.

SECTION 4: The City Manager is hereby authorized and directed to implement the Water Conservation Programs as detailed in the adopted Urban Water Management Plan Update, including recommendations to the City Council regarding necessary procedures, rules and regulations to carry out an effective and equitable water conservation program

consistent with SBx 7-7 requirements. Such steps will include further improvement of water use efficiency in all landscape areas under the City's control.

SECTION 5: The City Clerk shall certify to the adoption of this resolution.

PASSED AND ADOPTED the 28th day of September 2016.

_____
Mayor

Attested to on _____.

_____
City Clerk

I, Jeffrie Madland, City Clerk of the City of Camarillo, certify Resolution No. 2016-__ was adopted by the City Council of the City of Camarillo at a regular meeting held September 28, 2016, by the following vote:

AYES: Councilmembers:
NOES: Councilmembers:
ABSENT: Councilmembers:

_____
City Clerk

c: Public Works
File 920-90
Water division (2)
Certified copy of resolution to: California Department of Water Resources
with three (3) copies of plan (Water Division to mail)

PUBLIC HEARING CONTINUED UNTIL OCTOBER 12, 2016

City of Camarillo

601 Carmen Drive • P.O. Box 248 • Camarillo, CA 93011-0248

Office of the City Clerk
(805) 388-5315
Fax (805) 388-5318

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the City Council of the City of Camarillo will conduct a public hearing on Wednesday, September 28, 2016, at 7:30 p.m., in the Council Chambers, 601 Carmen Drive, Camarillo, California, to consider the following:

URBAN WATER MANAGEMENT PLAN 2016 UPDATE

A draft of the Urban Water Management Plan (UWMP) 2015 Update is available for review in the Public Works Department at City Hall, 601 Carmen Drive or at www.cityofcamarillo.org. The City Council may make modifications or other adjustments deemed to be appropriate or attach conditions to the supplies and demands for the next twenty-five years. It considers such items as water sources, reliability planning, supply and demand comparison, demand management measures, water shortage contingency planning, and water recycling. For further information, you may contact Rick Dierksen, Water Superintendent, at the City of Camarillo Water Division, 805-388-5373 or rdierksen@cityofcamarillo.org.

Any person interested in these matters is invited to attend and present testimony either for or against the above item. If you challenge the proposed action in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice or in written correspondence delivered to the City Council at or prior to the public hearing.

Jeffrie Madland, City Clerk

APPENDIX C. RESOLUTION OF ADOPTION

RESOLUTION NO. 2016-123

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CAMARILLO AMENDING THE CAMARILLO URBAN WATER MANAGEMENT PLAN

The City Council of the City of Camarillo resolves as follows:

SECTION 1: The City Council of the City of Camarillo finds and declares as follows:

A. The California Legislature enacted Assembly Bill 797 during the 1983-1984 Regular Session of the California Legislature (Water Code Section 10610 et seq.), known as the Urban Water Management Planning Act, which mandates that every urban supplier of water 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.

B. AB 797 required that said Plan be adopted by December 31, 1985, after public review and hearing, and filed with the California Department of Water Resources within thirty (30) days of adoption.

C. The City of Camarillo (City) did, in conjunction with Ventura County, prepare and file said Plan with the California Department of Water Resources.

D. AB 797 requires that said Plan be periodically reviewed at least once every five years, and that the urban water supplier shall make any amendments or changes to its plan which are indicated by the review.

E. City is an urban supplier of water providing water to over 3,000 customers and has, therefore, prepared and circulated for public review a Draft Urban Water Management Plan Update, in compliance with the requirements of AB 797. A public hearing notice was published in the paper on September 3 and 11, 2016. The City Council opened the public hearing on September 28, 2016, and continued the hearing to October 12, 2016. The Urban Water Management Plan was adopted by the City Council on October 12, 2016, and subsequently submitted to the California Department of Water Resources.

F. SBx 7-7 requires that all water supplies increase water use efficiency with the overall goal to decrease per capita consumption within the state by 20 percent by year 2020.

SECTION 2: The Urban Water Management Plan is hereby amended and ordered filed with the City Clerk.

SECTION 3: The City Manager is hereby authorized and directed to file an update to the Plan Year 2015 with the California Department of Water Resources within thirty (30) days after this date, in accordance with AB 797.

SECTION 4: The City Manager is hereby authorized and directed to implement the Water Conservation Programs as detailed in the adopted Urban Water Management Plan Update, including recommendations to the City Council regarding necessary procedures, rules and regulations to carry out an effective and equitable water conservation program

consistent with SBx 7-7 requirements. Such steps will include further improvement of water use efficiency in all landscape areas under the City's control.

SECTION 5: The City Clerk shall certify to the adoption of this resolution.

PASSED AND ADOPTED October 12, 2016.

Mike Morgan
Mayor

Attested to on 10/13/16.

jamadland
City Clerk

I, Jeffrie Madland, City Clerk of the City of Camarillo, certify Resolution No. 2016-123 was adopted by the City Council of the City of Camarillo at a regular meeting held October 12, 2016, by the following vote:

AYES: Councilmembers: Craven, Kildee, Little, McDonald, Mayor Morgan
NOES: Councilmembers: None
ABSENT: Councilmembers: None

jamadland
City Clerk

CITY OF CAMARILLO INCORPORATED OCTOBER 22, 1964 CALIFORNIA

c: Public Works
File 920-90
Water division (2)
Certified copy of resolution to: California Department of Water Resources
with three (3) copies of plan (Water Division to mail)

APPENDIX D. AWWA WATER LOSS AUDIT

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.

? Click to access definition

+ Click to add a comment

Water Audit Report for: City of Camarillo (5610019 SD)

Reporting Year: 2013/14 | 6/2013 - 7/2014

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

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the

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

Master Meter and Supply Error Adjustments

WATER SUPPLIED

Volume from own sources:	+ ?	8	4,753.700	acre-ft/yr	+ ?	7	Pcnt:	Value:	acre-ft/yr
Water imported:	+ ?	10	5,125.000	acre-ft/yr	+ ?	7			acre-ft/yr
Water exported:	+ ?	n/a	0.000	acre-ft/yr	+ ?				acre-ft/yr
WATER SUPPLIED:			**9,878.700**	acre-ft/yr					

Enter negative % or value for under-registration

Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:	Value:	
Billed metered:	+ ?	8	9,352.690	acre-ft/yr			
Billed unmetered:	+ ?	10	0.000	acre-ft/yr			
Unbilled metered:	+ ?	9	61.300	acre-ft/yr			
Unbilled unmetered:	+ ?		123.484	acre-ft/yr	1.25%		acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: ? **9,537.474** acre-ft/yr

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

WATER LOSSES (Water Supplied - Authorized Consumption) **341.226** acre-ft/yr

Apparent Losses

					Pcnt:	Value:	
Unauthorized consumption:	+ ?		24.697	acre-ft/yr	0.25%		acre-ft/yr

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

Customer metering inaccuracies:	+ ?	6	0.000	acre-ft/yr			acre-ft/yr
Systematic data handling errors:	+ ?	10	23.382	acre-ft/yr	0.25%		acre-ft/yr

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

Apparent Losses: ? **48.078** acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **293.148** acre-ft/yr

WATER LOSSES: **341.226** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? **526.010** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	5	203.0	miles
Number of active AND inactive service connections:	+ ?	9	13,210	
Service connection density:	?		65	conn./mile main

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

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

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

Average operating pressure: + ? 6 76.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	8	$12,346,465	$/Year	
Customer retail unit cost (applied to Apparent Losses):	+ ?	6	$3.60	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	+ ?	6	$734.50	$/acre-ft	☑ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 76 out of 100 ***

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

PRIORITY AREAS FOR ATTENTION:

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

1: Volume from own sources

2: Customer metering inaccuracies

3: Customer retail unit cost (applied to Apparent Losses)

APPENDIX E. WATER CONSERVATION ORDINANCES

EXHIBIT A

Chapter 14.12 - WATER CONSERVATION MEASURES

Sections:

14.12.010 Definitions.

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

“GSP” means the current Groundwater Sustainability Plan adopted by the Fox Canyon Groundwater Management Agency in accordance with the State’s Sustainable Groundwater Management Act.

"Irrigation system" means an irrigation system with pipes, hoses, spray heads, or sprinkling devices that are operated by hand or through an automated system.

"Potable water" means water that is suitable for drinking.

"Recycled water" means the reclamation and reuse of non-potable water for beneficial use as defined in Title 22 of the California Code of Regulations.

“Significant new development project” means a project that proposes five or more new residential units or 10,000 or more square feet of new commercial or industrial space.

"Single pass cooling systems" means equipment where water is circulated only once to cool equipment before being disposed.

"Water conservation administrator" means the person designated by the city manager to administer the provisions of this chapter or the administrator's designee.

14.12.020 Applicability.

The provisions of this chapter apply to any person in the use of water provided by the city.

14.12.030 Permanent water conservation measures.

The following water conservation measures are in effect at all times:

A. Watering Hours and Duration. Except for testing an irrigation system for a reasonable period of time, watering is prohibited between the hours of 8:00 a.m. and 6:00 p.m., and irrigation systems are limited to no more than 15 minutes of watering per day per station. These restrictions do not apply to the use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, an irrigation system that uses stream rotor sprinklers that meet a 70% efficiency standard, to very low-flow drip type irrigation systems where no emitter produces more than two gallons of water per hour, or to commercial nurseries and growers. In addition, irrigation for the purpose of installing and

germinating new lawns or landscaping is exempt from these restrictions for a period not to exceed three weeks, unless the water conservation administrator gives written permission to a water user for an extension beyond three weeks due to a longer installation and germination period.

B. Excessive Water Flow or Runoff. Watering in a manner that results in overspray or excessive runoff onto paved or hardscaped areas is prohibited.

C. Washing Hard or Paved Surfaces. Washing of hard or paved surfaces, including sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards or as surface preparation for the application of any architectural coating or painting. All such permitted washing must be done by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off device, a low-volume, high-pressure cleaning machine, or a low-volume high-pressure water broom.

D. Obligation to Fix Leaks. Leaks in distribution, irrigation, or plumbing systems must be promptly corrected after discovery, and in no event more than 72 hours after receiving notice from the city.

E. Water Fountains and Decorative Water Features. Water fountains and decorative water features must have a water recirculation system.

F. Limits on Washing Vehicles. Washing any automobile, truck, van, bus, motorcycle, boat or any other vehicle is restricted to the use of a hand-held bucket or similar container or a hand-held hose equipped with a positive self-closing water shut-off nozzle or device. This provision does not apply to a commercial car washing facility.

G. Drinking Water Served Upon Request. Eating or drinking establishments, including restaurants, hotels, cafés, cafeterias, bars, or other public places where food or drinks are sold are prohibited from providing drinking water to any customer unless expressly requested.

H. Commercial Lodging Establishment Daily Linen Services. Hotels, motels, and other commercial lodging establishments must provide customers the option of not having towels and linen laundered daily. Commercial lodging establishments must prominently display notice of this option in each guest room.

I. Single Pass Cooling Systems. The installation of single pass cooling systems is prohibited in buildings requesting new water service.

J. Restaurants Required to Use Water Conserving Spray Valves. Food service establishments, such as restaurants and cafés, must utilize water conserving nozzles on pre-rinse spray valves.

K. Commercial Car Wash Facilities. Commercial car was facilities may not use or permit the use of any water to wash any car, truck, boat, trailer, bus, recreation vehicle, camper, or any other vehicle, or any portion thereof, except by the following methods:

1. Use of mechanical automatic car wash facilities utilizing water recycling equipment; or

2. Use of a bucket and hand washing; or

3. Use of a hose equipped with an automatic positive self-closing valve that requires the person using the hose to apply and maintain pressure at the outlet end of the hose to activate and maintain the flow of water

L. Watering During or Immediately After Measurable Rainfall. The application of potable water to outdoor landscapes is prohibited during and within 48 hours after measurable rainfall. As used in this section, “measurable rainfall” means at least on-quarter inch of rain in the city within a 24-hour period as measured by the California Irrigation Management Information System (CIMIS) Weather Station #152 located in Camarillo (http://ipm.ucanr.edu/calludt.cgi/WXDESCRIPTION?STN=CAMARILLO.A) or such other weather station as may subsequently be identified by the City and the information posted on the city’s website.

M. Watering of Turf on Public Street Medians. The irrigation with potable water of ornamental turf on public and private street medians is prohibited.

N. Compliance with Water Efficient Landscape Ordinance. The irrigation with potable water of landscapes outside of homes and buildings must be done in a manner consistent with the applicable regulations or other requirements established under the city’s water efficient landscape ordinance as set forth in Chapter 14.14 of this code.

O. New Potable Water Service Impact Study. Applicants for new potable water service for a significant new development project must cause to be prepared a water impact study to the satisfaction of the public works director demonstrating the project’s total water demand at build out.

P. Water Demand Offset Requirement. In order for an application for new potable water service to be approved and a will-serve letter issued for a significant new development project, the applicant must demonstrate that the proposed project will not create additional demand on the city's water system. To satisfy this requirement an applicant for a significant new development project must provide, to the satisfaction of the city and in accordance with the city's water demand offset program or water demand credit program, as applicable, substantial evidence of an enforceable commitment that the water demand for the project will be offset prior to the provision of a potable water will-serve letter. The applicant may satisfy this requirement through any one or a combination of the following methods: (i) modifications to the project to provide non-required water savings features, (ii) agreements with existing city water users to retrofit existing improvements and facilities with water savings features in accordance with the city’s water demand offset program, (iii) by transferring groundwater pumping rights or allocations that comply with GSP strategies adopted by the Fox Canyon Groundwater Management Agency and are immediately available for use by the city; or (iv) by credit for historic water use by a municipal or industrial customer served water prior January 1, 2014..

14.12.040 Additional water conservation measures.

The following additional water conservation measures apply upon the effective date of the city council's establishment of the relevant water supply condition stage.

A. Stage 1 (Water Supply Condition - 10% Reduction Goal). The following additional water conservation requirements apply during a declared stage 1 water supply condition:

1. Watering Days. Watering is limited to four days per week and is restricted to Monday, Wednesday, Friday, and Sunday. (The exemptions set forth in Section 14.12.030(A) also apply to this provision.)

B. Stage 2 (Water Supply Condition - 20% Reduction Goal). In addition to the restricted uses of water in subsection (A), the following water conservation requirements apply during a declared stage 2 water supply condition:

1. Watering Days. Watering is limited to three days per week. Watering days will be determined by the last number of the account address. Addresses ending with an even number will be permitted to water on Tuesday, Thursday and Saturday only. Addresses ending with an odd number will be permitted to water on Monday, Wednesday and Friday only. (The exemptions set forth in Section 14.12.030(A) also apply to this provision.)

2. Obligation to Fix Leaks. Leaks in distribution, irrigation, or plumbing systems must be promptly corrected after discovery, and in no event more than 48 hours after receiving notice from the city unless other arrangements are made with the city.

3. Limits on Filling Ornamental Lakes or Ponds. Filling or refilling ornamental lakes or ponds is prohibited, except to the extent needed to sustain aquatic life, provided that such aquatic life is of significant value and have been actively managed within the water feature prior to declaration of the stage 2 water supply condition.

4. Agricultural Irrigation: Agricultural water deliveries will be reduced to three days per week. Irrigation days will be on Monday, Wednesday and Friday only.

5. Construction Water. Recycled water must be used if available.

C. Stage 3 (Water Supply Condition- 30% Reduction Goal). In addition to the restricted uses of water in subsections (A) and (B), the following water conservation requirements apply during a declared stage 3 water supply condition:

1. Watering. Watering is limited to two days per week. Watering days will be determined by the last number of the account address. Addresses ending with an even number will be permitted to water on Tuesday and Friday only. Addresses ending with an odd number will be permitted to water on Monday and Thursday only. (The exemptions set forth in Section 14.12.040(A) also apply to this provision.)

2. Agricultural Irrigation. Irrigation for commercial nurseries and growers is not permitted unless the city determines that recycled water is available and can be applied to the use.

D. Stage 4 (Water Supply Condition - 40% to 50% Reduction Goal). In addition to the restricted uses of water under subsections (A) through (C), the following additional water conservation requirements apply during a declared stage 4 water supply condition:

1. Watering. Watering with potable water is prohibited. If the city determines that recycled water is available, it may be applied for the following uses:

(a) Maintenance of vegetation, including trees and shrubs (but excluding turf), that is watered using a hand-held bucket or similar container, hand-held hose equipped with a positive self-closing water shut-off nozzle or device.

(b) Maintenance of existing landscape necessary for fire protection.

(c) Maintenance of existing landscape for soil erosion control.

(d) Maintenance of plant materials identified to be rare or essential to the well-being of protected species.

(e) Maintenance of landscaped areas within active public parks and playing fields, day care centers, golf course greens, and school grounds, provided that such irrigation does not exceed two days per week according to the schedule and times established in Section 14.12.030(A).

(f) Actively irrigated environmental mitigation projects.

2. Obligation to Fix Leaks. Leaks in distribution, irrigation, or plumbing systems must be promptly corrected after discovery, and in no event more than 24 hours after receiving notice from the city unless other arrangements are made with the city.

3. Limits on Washing Vehicles. Washing any automobile, truck, van, bus, motorcycle, boat, or any other vehicle is prohibited except by use of a commercial car wash facility.

4. Limits on Filling Residential Swimming Pools and Spas. Refilling of more than one foot and initial filling of residential swimming pools or outdoor spas with potable water is prohibited.

5. No New Potable Water Service Connections: No new potable water service connections will be provided, no new temporary meters or permanent meters will be provided, and no statements of immediate ability to serve or provide potable water service (such as will-serve letters or letters of water verification) will be issued, except under any of the following circumstances:

(a) A valid, will-serve letter has been issued;

(b) A valid, unexpired building permit has been issued for the project;

(c) The project is city capital project;

(d) The project is necessary to protect the public health, safety, and welfare; and

(e) The project is a temporary use that will not cumulatively use more than one-quarter acre foot of water.

6. No New Annexations. The city will suspend consideration of annexations to its service area. This provision does not apply to boundary corrections and annexations that will not result in any increased use of water.

14.12.050 Penalties.

A. Penalties. In addition to any other penalties or remedies provided by this code, the following civil fines and penalties may be assessed for any violation of this chapter and made payable as part of the applicable customer's water bill.

1. First Violation. The city will issue a written warning for a first violation and provide a copy of this chapter by mail.

2. Second Violation. A second violation within the 12 calendar months following the first violation is punishable by a fine not to exceed $100.

3. Third Violation. A third violation within the 12 calendar months following the first violation is punishable by a fine not to exceed $500.

4. Fourth and Subsequent Violations. A fourth and any subsequent violation need not be within the 12 calendar months following the first violation is punishable by a fine not to exceed $1,000.

5. Water Flow Restrictor. In addition to the fines for the fourth and subsequent violations, the city will install a flow restriction device of 1 GPM capacity for services, for a period of at least 48 hours, up to one and one-half inch size, and comparatively sized restrictions for larger services, on the service of the customer at the premises at which the violation occurred. A charge for installing and removing such flow restricting device will be assessed based on the actual cost.

6. Termination of Service.

(a) The city may disconnect a customer's water service for willful violations of this chapter.

(b) When water service is disconnected, it will only be reconnected upon:

1. Proof of correction of the condition or activity; and

2. Payment of the estimated reconnection charge, including the cost of any inspection fees or staff time.

B. Notice. The city will provide notice of each violation to both the customer's billing address and the service address by regular mail. For purposes of this section, notice will be deemed served 72 hours after deposit in the United States mail. All notices will contain, in addition to the facts of the violation, a statement of the possible penalties for each violation, a statement of the right to appeal the penalty, a brief summary of the appeal process, and if the penalty is termination of service, the date and time termination will occur.

14.12.060 Administrative review and appeals of penalties.

A. Administrative Review Procedure.

1. Persons may request an administrative review of any penalty imposed under this chapter within 10 days of the issuance of the notice of violation. This request must be made in writing to the city clerk and set forth with particularity the reasons the person believes a violation did not occur or that the person was not responsible for the violation and contain the address to which the conclusions of the city's review should be mailed. A request for an administrative review is a mandatory prerequisite to a request for an administrative hearing. Penalties, including termination of water service, will be stayed until such review is conducted and a written decision is made by the water conservation administrator.

2. Upon receiving a request for an administrative review, the water conservation administrator will review the request and within 10 business days provide the person with a written determination as to whether the penalty was properly assessed.

3. The administrator must mail a copy of the notification to the person at the address on the request for administrative review along with notice establishing the penalty date and the procedure for requesting an appeal hearing.

B. Appeal Hearing Procedure.

1. Any person dissatisfied with the conclusion of the initial administrative review may contest the penalty by requesting an administrative appeal hearing. A person must file a request for an administrative appeal hearing with the city clerk within 10 days after the date the city served the person with notice of the administrative review decision. The request must be accompanied by the appeal hearing fee, if any, established by city council resolution. Pending receipt of a written appeal or pending a hearing pursuant to an appeal, the city may take appropriate steps to prevent any further unauthorized use of water as appropriate to the nature and extent of the alleged violations and the current declared water supply condition.

2. The appeal hearing will be scheduled to occur within a reasonable period of time following the receipt of the request for a hearing not to exceed 15 business days unless consented to by the appellant.

3. The appellant may present any evidence that would tend to show that the alleged violation did not occur. Formal rules of evidence will not apply and all relevant evidence will be admissible, unless a sound objection warrants its exclusion by the city hearing officer designated by the city manager. The decision of the hearing officer will be final and conveyed in writing to the appellant within five business days of the hearing.

APPENDIX F. FCGMA GROUNDWATER MANAGEMENT PLAN & EMERGENCY ORDINANCE E

GROUNDWATER MANAGEMENT PLAN IS AVAILABLE THROUGH THIS LINK: http://www.fcgma.org/public-documents/plans/20-public-documents/plans/95-groundwater-management-plan