



FINAL - MAY 2016

CITY OF ROSEVILLE

2015 Urban Water Management Plan



(THIS PAGE LEFT BLANK INTENTIONALLY)

Final 2015 Urban Water Management Plan

Prepared for

The City of Roseville

May 2016



415-12-15-26



James P. Connell

Project Manager
James P. Connell, PE

May 18, 2016

Date

Elizabeth T. Drayer

QA/QC Review
Elizabeth T. Drayer, PE

May 18, 2016

Date

(THIS PAGE LEFT BLANK INTENTIONALLY)

Executive Summary

ES.1 Introduction	ES-1
ES.2 Water Code Requirements	ES-1
ES.3 Legislative Changes from 2010 UWMP	ES-2
ES.4 Plan Organization	ES-2
ES.5 Plan Review and Adoption.....	ES-3

Chapter 1. Introduction and Overview

1.1 Introduction	1-1
1.2 Importance and Extent of City's Water Management Planning Efforts	1-1
1.3 Changes from 2010 UWMP.....	1-1
1.4 Plan Organization	1-2

Chapter 2. Plan Preparation

2.1 Basis for Preparing a Plan.....	2-1
2.2 Regional Planning	2-1
2.3 Individual or Regional Planning and Compliance.....	2-2
2.4 Fiscal or Calendar Year and Units of Measure	2-2
2.5 Coordination and Outreach	2-3
2.5.1 Wholesale and Retail Coordination.....	2-3
2.5.2 Coordination with Other Agencies and the Community	2-3
2.5.2.1 Coordination with other Agencies.....	2-3
2.5.2.2 Coordination with the Community	2-4
2.5.3 Notice to Cities and Counties.....	2-4

Chapter 3. System Description

3.1 General Description.....	3-1
3.2 Service Area	3-1
3.3 Service Area Climate	3-1
3.4 Service Area Population and Demographics.....	3-2
3.4.1 Population	3-2
3.4.2 Demographic Factors.....	3-3
3.5 Water System Facilities	3-3
3.5.1 Surface Water Supply and Transmission	3-3
3.5.1.1 Folsom Lake	3-3
3.5.1.2 Future Supplies	3-4
3.5.2 Water Treatment Facilities	3-4
3.5.3 Potable Water Storage Facilities.....	3-4
3.5.4 Potable Water Distribution Facilities	3-5
3.5.5 Pump Stations.....	3-5
3.5.6 Groundwater Wells.....	3-6
3.5.7 Interties	3-6
3.5.7.1 Placer County Water Agency (PCWA) Intertie	3-7
3.5.7.2 San Juan Water District (SJWD) Intertie	3-7

3.5.7.3 California American Water Company Intertie 3-7
3.5.7.4 Citrus Heights Water District Intertie 3-8
3.5.7.5 Sacramento Suburban Water District Intertie 3-8

Chapter 4. System Water Use

4.1 Recycled Versus Potable and Raw Water Demand 4-1
4.2 Water Uses by Sector 4-1
4.3 Distribution System Water Losses 4-4
4.4 Estimating Future Water Savings 4-4
 4.4.1 Compliance with Water Efficient Landscape Requirements 4-5
 4.4.2 Increased Utilization of Recycled Water 4-5
 4.4.3 Implementation of Low Water Use Fixtures 4-5
4.5 Water Use for Lower Income Households 4-6
4.6 Climate Change 4-6

Chapter 5. SB X7-7 Baselines and Targets

5.1 Updating Calculations from 2010 UWMP 5-1
5.2 Baseline Periods 5-2
5.3 Service Area Population 5-2
5.4 Gross Water Use 5-3
5.5 Baseline Daily Per Capita Water Use 5-3
5.6 2015 and 2020 Targets 5-4
5.7 2015 Compliance Daily per Capita Water use (GPCD) 5-5
5.8 Regional Alliance 5-5

Chapter 6. System Supplies

6.1 Purchased or Imported Water 6-1
 6.1.1 Other Available Water Purchases 6-1
6.2 Groundwater 6-1
 6.2.1 Groundwater Basin Description 6-1
 6.2.2 Groundwater Management 6-2
 6.2.2.1 Western Placer County Groundwater Management Plan 6-2
 6.2.2.2 Sustainable Groundwater Management Act 6-2
 6.2.3 Historical Groundwater Production 6-4
 6.2.4 Aquifer Storage and Recovery (ASR) 6-4
6.3 Surface Water 6-4
6.4 Stormwater 6-5
6.5 Wastewater and Recycled Water 6-5
 6.5.1 Recycled Water Coordination 6-5
 6.5.2 Wastewater Collection, Treatment, and Disposal 6-5
 6.5.3 Recycled Water System 6-7
 6.5.4 Recycled Water Beneficial Uses 6-7
 6.5.5 Actions to Encourage and Optimize Future Recycled Water Use 6-9

6.6 Desalinated Water Opportunities..... 6-10

6.7 Exchanges or Transfers 6-10

6.8 Future Water Projects..... 6-11

 6.8.1 Purchased or Imported Water..... 6-11

 6.8.2 Groundwater 6-11

 6.8.3 Aquifer Storage and Recovery..... 6-12

6.9 Summary of Existing and Planned Sources of Water 6-12

6.10 Climate Change Impacts to Supply 6-14

Chapter 7. Water Supply Reliability

7.1 Constraints on Water Sources..... 7-1

 7.1.1 Legal Constraints 7-1

 7.1.2 Water Quality Constraints 7-1

 7.1.3 Physical Constraints..... 7-1

 7.1.3.1 Recycled Water 7-1

 7.1.3.2 Surface Water..... 7-2

 7.1.3.3 Groundwater 7-2

 7.1.4 Other Constraints 7-2

 7.1.4.1 Sacramento Water Forum Agreement 7-2

 7.1.4.2 USBR Operations Criteria and Plan (OCAP) 7-3

 7.1.4.3 Central Valley Project Municipal and Industrial Water Shortage Policy
 (CVP M&I WSP) 7-4

7.2 Reliability by Type of Year..... 7-4

 7.2.1 Potable Water Supply and Demand Assessment..... 7-5

 7.2.1.1 Comparison of Supply and Demand 7-8

 7.2.1.2 Deficit Mitigation 7-9

 7.2.2 Recycled Water Supply and Demand Comparison 7-10

 7.2.3 Total Water Supply and Demand Comparison 7-10

7.3 Regional Supply Reliability 7-11

Chapter 8. Water Shortage Contingency Planning

8.1 General Background..... 8-1

8.2 Stages of Action 8-1

8.3 Prohibitions on End Uses 8-3

8.4 Penalties, Charges, Other Enforcement of Prohibitions..... 8-3

8.5 Consumption Reduction Methods 8-4

8.6 Determining Water Shortage Reductions 8-4

8.7 Revenue and Expenditure Impacts 8-4

8.8 Resolution or Ordinance 8-5

8.9 Catastrophic Supply Interruption 8-5

8.10 Minimum Supply Next Three Years..... 8-5

Chapter 9. Demand Management Measures

- 9.1 Demand Management Measures 9-1
 - 9.1.1 Water Waste Prevention Ordinances..... 9-2
 - 9.1.2 Metering 9-2
 - 9.1.3 Conservation Pricing 9-3
 - 9.1.4 Public Education and Outreach 9-3
 - 9.1.4.1 Water Insight Program..... 9-3
 - 9.1.4.2 Utility Exploration Center 9-4
 - 9.1.4.3 Regional Water Authority 9-4
 - 9.1.4.4 Student Outreach 9-4
 - 9.1.5 Programs to Assess and Manage Distribution System Real Loss 9-4
 - 9.1.6 Water Conservation Program Coordination and Staffing Support 9-5
- 9.2 Other Demand Management Measures 9-5
 - 9.2.1 Residential Conservation Programs 9-6
 - 9.2.1.1 Water Wise House Calls..... 9-6
 - 9.2.1.2 Residential High Efficiency Toilet Replacement Program 9-6
 - 9.2.1.3 Residential Irrigation Efficiency Rebate 9-6
 - 9.2.1.4 Residential Cash for Grass 9-7
 - 9.2.2 Commercial, Industrial, Institutional Conservation Programs 9-7
 - 9.2.2.1 Irrigation Water “Budgets” 9-7
 - 9.2.2.2 Irrigation Audit 9-7
 - 9.2.2.3 Night Patrols 9-7
 - 9.2.2.4 Commercial Cash for Grass 9-7
 - 9.2.2.5 Commercial High Efficiency Toilet Replacement Program 9-8
 - 9.2.2.6 Customized Rebate Program 9-8
 - 9.2.2.7 Commercial Landscape Water Use Review 9-8
 - 9.2.2.8 Commercial Interior Water Use Audit..... 9-8
- 9.3 Planned Implementation to Achieve Water Use Targets 9-8
- 9.4 Members of the California Urban Water Conservation Council 9-8

Chapter 10. Plan Adoption, Submittal, and Implementation

- 10.1 Inclusion of All 2015 Data..... 10-1
- 10.2 Notice of Public Hearing 10-1
- 10.3 Public Hearing and Adoption 10-2
- 10.4 Plan Submittal 10-2
- 10.5 Public Availability 10-2
- 10.6 Plan Implementation..... 10-2
- 10.7 Amending an Adopted UWMP..... 10-2

List of Tables

Table 2-1. Retail: Public Water Systems (DWR Table 2-1).....	2-1
Table 2-2. Plan Identification (DWR Table 2-2).....	2-2
Table 2-3. Agency Identification (DWR Table 2-3).....	2-2
Table 2-4. Retail: Water Supplier Information Exchange (DWR Table 2-4).....	2-3
Table 3-1. Monthly Average Climate Data Summary	3-2
Table 3-2. Retail: Population – Current and Projected (DWR Table 3-1).....	3-3
Table 3-3 Potable Water Storage Tanks	3-4
Table 3-4. Groundwater Well Facilities	3-6
Table 3-5. Interties with Neighboring Water Suppliers	3-7
Table 4-1. Historical Water Use by Water Use Type, 2010	4-2
Table 4-2. Retail: Demands for Potable and Raw Water – Actual (DWR Table 4-1).....	4-3
Table 4-3. Retail: Demands for Potable and Raw Water – Projected (DWR Table 4-2).....	4-3
Table 4-4. Retail: Total Water Demands (DWR Table 4-3).....	4-4
Table 4-5. Retail: 12 Month Water Loss Audit Reporting (DWR Table 4-4).....	4-4
Table 4-6. Retail Only: Inclusion in Water Use Projections (DWR Table 4-5).....	4-5
Table 4-7. Projected Water Demand for Future Low-Income Households, AFY	4-6
Table 5-1. Baselines and Targets Summary (DWR Table 5-1).....	5-5
Table 5-2. 2015 Compliance (DWR Table 5-2).....	5-5
Table 6-1. Sustainable Groundwater Management Act Implementation Steps and Deadlines	6-3
Table 6-2. Groundwater Basin Prioritization for Sustainable Groundwater Management Act	6-3
Table 6-3. Retail: Groundwater Volume Pumped (DWR Table 6-1).....	6-4
Table 6-4. Retail: Wastewater Collected Within Service Area in 2015 (DWR Table 6-2).....	6-6
Table 6-5. Retail: Wastewater Treatment and Discharge Within Service Area in 2015 (DWR Table 6-3).....	6-7
Table 6-6. Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area (DWR Table 6-4).....	6-8

Table 6-7. Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual
(DWR Table 6-5)..... 6-9

Table 6-8. Retail: Methods to Expand Future Recycled Water Use
(DWR Table 6-6)..... 6-10

Table 6-9. Retail: Expected Future Water Supply Programs
(DWR Table 6-7)..... 6-12

Table 6-10. Retail: Water Supplies – Actual
(DWR Table 6-8)..... 6-13

Table 6-11. Retail: Water Supplies – Projected
(DWR Table 6-9)..... 6-14

Table 7-1. Surface Water Supply Reliability, Percent of Contracted Amount 7-5

Table 7-2. Retail: Basis of Water Year Data
(DWR Table 7-1)..... 7-6

Table 7-3. Projected Surface Water Contract and Supply Reliability During
Hydrologic Normal, Single Dry, and Multiple Dry Years..... 7-7

Table 7-4. Summary of Potable Water Demand Versus Supply During
Hydrologic Normal, Single Dry, and Multiple Dry Years, AFY 7-8

Table 7-5. Potential Water Conservation (up to 20 percent of Normal Year Demand)..... 7-9

Table 7-6. Potential Groundwater Use to Relieve Remaining Deficit..... 7-9

Table 7-7 Recycled Water Supply and Demand Comparison in All Water Year Types..... 7-10

Table 7-8. Retail: Normal Year Supply and Demand Comparison
(DWR Table 7-2)..... 7-10

Table 7-9. Retail: Single Dry Year Supply and Demand Comparison
(DWR Table 7-3)..... 7-11

Table 7-10. Retail: Multiple Dry Years Supply and Demand Comparison
(DWR Table 7-4)..... 7-11

Table 8-1. Retail: Stages of Water Shortage Contingency Plan
(DWR Table 8-1)..... 8-2

Table 8-2. Retail Only: Restrictions and Prohibitions on End Uses
(DWR Table 8-2)..... 8-3

Table 8-3. Retail Only: Stages of WSCP – Consumption Reduction Methods
(DWR Table 8-3)..... 8-4

Table 8-4. Retail: Minimum Supply Next Three Years
(DWR Table 8-4)..... 8-5

Table 9-1. City of Roseville Potable Water Usage Rates..... 9-3

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

List of Figures

Figure 3-1. City of Roseville Water Service Area 3-9

Figure 6-1. 2005 Regional Service Area 6-15

List of Appendices

- Appendix A: Legislative Requirements
- Appendix B: DWR Urban Water Management Plan Tables
- Appendix C: DWR Urban Water Management Plan Checklist
- Appendix D: Agency and Public Notices
- Appendix E: AWWA Water Audit
- Appendix F: SB X7-7 Compliance and Verification Forms
- Appendix G: Intent to Retain Control of Conserved Water
- Appendix H: SPWA Systems Evaluation
- Appendix I: CVP M&I WSP
- Appendix J: Water Conservation Ordinance
- Appendix K: Supplemental DMM Materials
- Appendix L: CUWCC Reporting Documents
- Appendix M: UWMP Adoption Resolution

List of Acronyms and Abbreviations

AB	Assembly Bill
AB 1881	Water Conservation in Landscaping Act of 2006
Act	Urban Water Management Planning Act
ADWF	Average Dry Weather Flow
AF	Acre-Feet
AF/YR	Acre-Feet Per Year
ASR	Aquifer Storage and Recovery
AWWA	American Water Works Association
Baseline GPCD	Baseline Daily Per Capita Water Use, Measured in Gallons Per Capita Per Day
BMP	Best Management Practice
Cal Am	California American Water Company
CASGEM	California Statewide Groundwater Elevation Monitoring
CDoF	California Department of Finance
CEQA	California Environmental Quality Act
CFS	Cubic Feet Per Second
CHWD	Citrus Heights Water District
CII	Commercial, Industrial and Institutional
CIMIS	California Irrigation Management Information System
City	City of Roseville
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CVP M&I WSP	Central Valley Project Municipal and Industrial Water Shortage Policy

DMMs	Demand Management Measures
DPPS	Dual Purpose Pump Station
Dry Creek WWTP	Dry Creek Wastewater Treatment Plant
DWR	Department of Water Resources
DWR Guidebook	2015 Urban Water Management Plans Guidebook for Urban Water Suppliers
DWR Methodologies	Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use
EIS	Environmental Impact Statement
ET _o	Reference Evapotranspiration
FPS	Feet Per Second
GIS	Geographical Information System
GMP	Groundwater Management Plan
GPCD	Gallons Per Capita Per Day
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HET	High Efficiency Toilet
HP	Hewlett-Packard
HRNPS	Highland Reserve North Pump Station
LEED	Leadership in Energy and Environmental Design
M&I	Municipal and Industrial
MCL	Maximum Contaminant Level
MFP	Middle Fork Project
MGD	Million Gallons Per Day
MOU	Memorandum of Understanding
MWELO	Model Water Efficient Landscape Ordinance
NAICS	North American Industry Classification System
NPDES	National Pollutant Discharge Elimination System
OCAP	Operations Criteria and Plan
PCWA	Placer County Water Agency
Pleasant Grove WWTP	Pleasant Grove Wastewater Treatment Plant
PSI	Pounds Per Square Inch
PWS	Public Water System
PWWF	Peak Daily Wet Weather Flow
RHNA	Regional Housing Needs Allocation
RHNAP	Regional Housing Needs Allocation Plan
RUWMP	Regional Urban Water Management Plan
RWA	Regional Water Authority
SAB	Service Area Boundary
SACOG	Sacramento Area Council of Governments
SB	Senate Bill
SB X7-7	Water Conservation Act of 2009

Table of Contents



SGMA	Sustainable Groundwater Management Plan
SJWD	San Juan Water District
SPMUD	South Placer Municipal Utility District
SPWA	South Placer Wastewater Authority
SSWD	Sacramento Suburban Water District
US EPA	U.S. Environmental Protection Agency
USBR	U.S. Bureau of Reclamation
UWMP	Urban Water Management Plan
West Yost	West Yost Associates
WFA	Water Forum Agreement
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant

(THIS PAGE LEFT BLANK INTENTIONALLY)

ES.1 INTRODUCTION

Over the last several years, Urban Water Management Plans (UWMPs) have assumed a very important role in water supply planning and management for communities in California. UWMPs have become the foundational documents which cities and water agencies use to develop water supply assessments and other key water supply reliability documents.

Development of the 2015 UWMPs comes at a pivotal time for water supply conditions in California. Drought conditions have resulted in unprecedented State mandates for water conservation, and have led to the passage of the Sustainable Groundwater Management Act of 2014. These actions will impact all water suppliers and all water users in the State. As the economy improves, the need for reliable water supplies to serve existing customers, as well as new development, is more critical than ever. The 2015 UWMP is also the primary compliance document for the interim water use targets required by the Water Conservation Act of 2009 (SB X7-7).

As described in this 2015 UWMP, the City of Roseville's (City's) residents and businesses have responded positively to the call for water conservation. The City continues to be committed to the implementation of good water management practices to ensure that adequate, reliable water supplies are available to meet existing and projected demands. The City has met its interim 2015 per capita water use target, and is well positioned to meet the final 2020 water use target per capita water demand.

ES.2 WATER CODE REQUIREMENTS

The Urban Water Management Planning Act (UWMP Act) requires water suppliers that either provide over 3,000 acre-feet per year (AFY) or have over 3,000 connections prepare and submit to the State Department of Water Resources (DWR) an Urban Water Management Plan every 5 years.

The UWMP Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as SB X7-7. This act required agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020.

The primary objective of the UWMP Act is to direct "urban water suppliers" to develop an UWMP that provides a framework for long-term water supply planning. The UWMP also documents how urban water suppliers are carrying out their long-term resource planning responsibilities.

In 2015, the City supplied approximately 22,881 acre-feet (AF) of surface water to approximately 41,469 residential and non-residential connections located within its water service area. The City is therefore considered an urban water supplier and is required to submit an UWMP. This 2015 UWMP describes the City water system, historical and projected water use, water supply sources, and a comparison of projected water supply to water demands during normal, single-dry, and multiple-dry years in five-year increments from 2020 to 2040. As required by SB X7-7, this 2015 UWMP also confirms the City's 2015 and 2020 water use targets, verifies the City's compliance

with the interim 2015 water use target, and describes the City's implementation plan for meeting the City's final 2020 water use target.

The City's 2015 UWMP (or Plan) has been prepared in accordance with the UWMP Act, as defined by the California Water Code, Division 6, Part 2.6, Sections 10610 through 10656 (Urban Water Management Planning), and the Water Conservation Act of 2009 (WC Act, also known as SB X7-7), as defined by California Water Code, Division 6, Part 2.55, Section 10608 (Sustainable Water Use and Demand Reduction). A copy of the relevant sections of the Water Code are included in Appendix A of this document.

A brief summary of this 2015 UWMP's contents and the public review and adoption process is provided below, following a discussion of the legislative changes that have been enacted since the 2010 UWMPs were prepared and adopted.

ES.3 LEGISLATIVE CHANGES FROM 2010 UWMP

The legislative changes to the UWMP Act are described in Chapter 1. Some highlighted changes include:

- Demand Management Measures: Address the nature and extent of each water demand management measure implemented over the past 5 years in narrative form.
- 2015 UWMP Submittal Date to DWR: Changed from December 31, 2015 to July 1, 2016.
- Water Loss: Requires water suppliers to quantify and report on distribution system water loss using the AWWA Water Audit methodology.
- Voluntary Reporting of Passive Savings due to new water codes and requirements.
- Voluntary Reporting of Energy Intensity: Describe the water/energy nexus.
- Defining Water Features: Water Shortage Contingency Plans must distinguish between water features that are artificially supplied with water (including ponds, lakes, waterfalls, and fountains) and swimming pools and spas.

ES.4 PLAN ORGANIZATION

This 2015 UWMP has been prepared per California Water Code Division 6, Part 2.6 (Urban Water Management Planning Act), included in Appendix A. This 2015 UWMP has also been prepared based on guidance provided by the California Department of Water Resources (DWR) in their January 2016 "2015 Urban Water Management Plans, Guidebook for Urban Water Suppliers" (DWR 2015 Guidebook). The required DWR tables are included in Appendix B.

DWR's Urban Water Management Plan Checklist, as provided in the 2015 UWMP Guidebook, has been completed to demonstrate the Plan's compliance with applicable requirements. A copy of the completed checklist is included in Appendix C.

This 2015 UWMP is organized into the following chapters:

- Chapter 1: Introduction and Overview
- Chapter 2: Plan Preparation
- Chapter 3: System Description
- Chapter 4: System Water Use
- Chapter 5: SB X7-7 Baselines and Targets
- Chapter 6: System Supplies
- Chapter 7: Water Supply Reliability
- Chapter 8: Water Shortage Contingency Planning
- Chapter 9: Demand Management Measures
- Chapter 10: Plan Adoption, Submittal and Implementation

Appendices (listed in Chapter 1) provide relevant supporting documents, including the 2015 UWMP tables and SB X7-7 Compliance and Verification Forms.

ES.5 PLAN REVIEW AND ADOPTION

The UWMP Act requires the water supplier to coordinate the preparation of its Plan with other appropriate agencies, including other water suppliers that share a common source, water management agencies, and relevant public agencies. These agencies, as well as the public, participated in the coordination and preparation of this 2015 UWMP. The coordination and outreach are described in Chapter 2.

A public hearing to discuss the Draft 2015 UWMP was held on May 18, 2016.

Public hearings provide an opportunity for all City water users and the general public to become familiar with the Plan, and to ask questions about the City's continuing plans for providing a reliable, safe, high-quality water supply. The adoption, implementation and economic impact of revised per capita water use targets (described in Chapter 5) was also discussed. Copies of the draft Plan were made available for public inspection at the City Clerk's office, and at local public libraries.

Water Code § 10621 (b) requires agencies to notify the cities and counties to which they serve water that the Plan is being updated and reviewed. This notification must be sent out at least 60 days in advance of the public hearing. In early 2016, a notice of preparation was sent to the cities and counties, and other stakeholders, to inform them of the UWMP update process and schedule and to solicit input for the Plan update. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10 and provided in Appendix D.

This Plan was adopted by the City Council on May 18, 2016. A copy of the adoption resolution is provided in Appendix M.

Executive Summary

A copy of this 2015 UWMP will be submitted to DWR within 30 days of adoption and by July 1, 2016. The adopted 2015 UWMP will be submitted electronically to DWR using the WUEdata submittal tool. A CD or hardcopy of the adopted 2015 UWMP will also be submitted to the California State Library.

Within 30 days of submitting the adopted Plan to DWR, copies of this Plan will be provided to the cities and counties to which the City provides water and will be made available during normal business hours at the following locations:

- Local public libraries, and
- City Clerk's Office.

A copy of the adopted Plan will also be available for review and download on the City's website: (<http://www.roseville.ca.us/UWMP>).

Should this Plan be amended or changed, copies of amendments or changes to the Plan shall be submitted to DWR, the California State Library, and any city or county within which the City provides water supplies within 30 days after adoption of the amendment(s).

This chapter provides an introduction and overview of the City of Roseville (City) 2015 Urban Water Management Plan (UWMP) including the importance and extent of the City’s water management planning efforts, changes since the preparation of the City’s 2010 UWMP, and organization of the City’s 2015 UWMP. This 2015 UWMP has been prepared jointly by City staff and West Yost Associates (West Yost).

1.1 INTRODUCTION

The Urban Water Management Planning Act (Act) was originally established by Assembly Bill 797 (AB 797) on September 21, 1983. Passage of the Act was recognition by state legislators that water is a limited resource, and a declaration that efficient water use and conservation would be actively pursued throughout the state. The primary objective of the Act is to direct “urban water suppliers” to develop an UWMP which provides a framework for long-term water supply planning, and documents how urban water suppliers are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future water demands. A copy of the current version of the Act, as incorporated in Sections 10610 through 10656 of the California Water Code (CWC), is provided in Appendix A of this document.

1.2 IMPORTANCE AND EXTENT OF CITY’S WATER MANAGEMENT PLANNING EFFORTS

The purpose of the UWMP is to provide a planning tool for the City for developing and delivering municipal water supplies to the City’s water service area. The City’s UWMP is a comprehensive guide for planning for a safe and adequate water supply.

1.3 CHANGES FROM 2010 UWMP

The Urban Water Management Planning Act has been modified over the years in response to the State’s water shortages, droughts and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor’s call for a statewide 20 percent reduction in urban water use by the year 2020. This Water Conservation Act of 2009, also known as SB X7-7, required agencies to establish interim water use targets for 2015 in order to achieve a statewide water savings of 20 percent by 2020.

There have been several additions and changes to the California Water Code since the City’s 2010 UWMP was prepared. These are summarized below:

- AB 2067 (Weber 2014)
 - CWC Section 10631 (f)(1) and (2): Demand Management Measures
 - 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.
 - See Chapter 9 of this 2015 UWMP for a description of the City’s Demand Management Measures.

- CWC Section 20621 (d): Submittal Date
 - Requires each urban water supplier to submit its 2015 plan to the Department of Water Resources by July 1, 2016.
- SB 1420 (Wolk 2014)
 - CWC Section 10644(a)(2): Submittal Format
 - Requires the plan, or amendments to the plan, to be submitted electronically to the department.
 - CWC Section 10644(a)(2): Standardized Forms
 - Requires the plan, or amendments to the plan, to include any standardized forms, tables, or displays specified by the department.
 - CWC 10631 (e)(1)(J) and (e)(3)(A) and (B): Water Loss
 - Requires a plan to quantify and report on distribution system water loss.
 - See Chapter 4 of this 2015 UWMP for a description of the City’s distribution system water losses.
 - CWC 10631 (e)(4): Voluntary Reporting of Passive Savings
 - 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.
 - See Chapter 4 of this 2015 UWMP for a description of the City’s passive water savings.
- SB 1036 (Pavley 2014)
 - CWC 10631.2 (a) and (b): Voluntary Reporting of Energy Intensity
 - Provides for an urban water supplier to include certain energy-related information, including, but not limited to, an estimate of the amount of the energy used to extract or divert water supplies.
 - The City has opted to not report on energy intensity in this 2015 UWMP.
- CWC 10632: Defining Water Features
 - Commencing with the UWMP update due July 1, 2016, for purposes of developing the water shortage contingency analysis, 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.
 - See Chapter 8 of this 2015 UWMP for a discussion of water features that are artificially supplied with water.

1.4 PLAN ORGANIZATION

This 2015 UWMP was prepared per California Water Code Division 6, Part 2.6 (Urban Water Management Planning Act), included in Appendix A. This 2015 UWMP has also been prepared based on guidance provided by the California Department of Water Resources (DWR) in their “Guidebook for Urban Water Suppliers” (DWR 2015 Guidebook).

This 2015 UWMP is organized into the following chapters:

- Chapter 1: Introduction and Overview
- Chapter 2: Plan Preparation
- Chapter 3: System Description
- Chapter 4: System Water Use
- Chapter 5: SB X7-7 Baselines and Targets
- Chapter 6: System Supplies
- Chapter 7: Water Supply Reliability
- Chapter 8: Water Shortage Contingency Planning
- Chapter 9: Demand Management Measures
- Chapter 10: Plan Adoption, Submittal and Implementation

This 2015 UWMP also contains the following appendices of supplemental information and data related to the City's 2015 UWMP:

- Appendix A: California Water Code - Urban Water Management Planning and Sustainable Water Use and Demand Reduction
- Appendix B: DWR Urban Water Management Plan Tables
- Appendix C: DWR Urban Water Management Plan Checklist
- Appendix D: Agency and Public Notices
- Appendix E: AWWA Water Audit
- Appendix F: SB X7-7 Compliance and Verification Forms
- Appendix G: Intent to Retain Control of Conserved Water
- Appendix H: SPWA Systems Evaluation
- Appendix I: CVP M&I WSP
- Appendix J: Water Conservation Ordinance
- Appendix K: Supplemental DMM Materials
- Appendix L: CUWCC Reporting Documents
- Appendix M: UWMP Adoption Resolution

Chapter 1

Introduction and Overview



Furthermore, this 2015 UWMP contains all of the tables recommended in the DWR Guidebook, both embedded into the UWMP chapters where appropriate and included in Appendix B.

DWR's Urban Water Management Plan Checklist, as provided in the 2015 UWMP Guidebook, has been completed by West Yost to demonstrate the plan's compliance with applicable requirements. A copy of the completed checklist is included in Appendix C.

This chapter describes the preparation of the City’s 2015 UWMP, including the basis for the preparation of the plan, individual or regional planning, fiscal or calendar year reporting, units of measure, and plan coordination and outreach.

2.1 BASIS FOR PREPARING A PLAN

The Urban Water Management Planning Act requires every “urban water supplier” to prepare and adopt an UWMP, to periodically review its UWMP at least once every five years and make any amendments or changes which are indicated by the review. An “urban water supplier” is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually.

A public water system (PWS) is a system that provides drinking water for human consumption through pipes or other constructed conveyances. The City manages PWS # 3110008. As shown in Table 2-1, in 2015, the City provided water supplies to 41,469 customers, and supplied 22,881 AF of water.

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

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
3110008	City of Roseville	41,469	22,881
TOTAL		41,469	22,881
NOTES: All Volumes are in AF. The City was under a state mandate to conserve water due to statewide drought conditions during 2015. The City conserved 32.7% during calendar year 2015.			

2.2 REGIONAL PLANNING

The CWC provides mechanisms for participating in area-wide, regional, watershed, or basin-wide urban water management planning. Per *Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (DWR Methodologies), water suppliers who receive water from a shared wholesale supplier may form a regional alliance. Although the City and its neighboring water suppliers practice regional water supply planning, the City has not formed a regional alliance with other water suppliers for compliance with SB X7-7.

The City has prepared an individual UWMP and will not adopt a Regional Urban Water Management Plan (RUWMP).

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

Water Code § 10620 (d)(1)

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

This 2015 UWMP has been prepared on an Individual Reporting basis, covering only the City’s service area (see Table 2-2). As described below in Section 2.5, the City has notified and coordinated with appropriate regional agencies and constituents.

Table 2-2. Plan Identification (DWR Table 2-2)

Select Only One	Type of Plan	Name of RUWMP or Regional Alliance <i>if applicable</i>
<input checked="" type="checkbox"/>	Individual UWMP	
<input type="checkbox"/>	Regional Urban Water Management Plan (RUWMP)	

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

The City is a water retailer.

The City’s 2015 UWMP has been prepared on a calendar year basis.

The City’s reporting of water volumes in this 2015 UWMP is reported in AF.

Table 2-3 summarizes the City’s reporting methods for this 2015 UWMP.

Table 2-3. Agency Identification (DWR Table 2-3)

Type of Agency (select one or both)	
<input type="checkbox"/>	Agency is a wholesaler
<input checked="" type="checkbox"/>	Agency is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables Are in Calendar Years
<input type="checkbox"/>	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
Unit	AF

2.5 COORDINATION AND OUTREACH

This section includes a discussion of the City’s inter-agency coordination and coordination with the general public. The UWMP Act requires the City to coordinate the preparation of its Plan with other appropriate agencies and all departments within the City, including other water suppliers that share a common source, water management agencies, and relevant public agencies. The City coordinated the preparation of its Plan with Placer County Water Agency (PCWA), United States Bureau of Reclamation (USBR), San Juan Water District, the City of Citrus Heights, and Placer County. These and other agencies, as well as the public, participated in the coordination and preparation of this 2015 UWMP, and are summarized below.

2.5.1 Wholesale and Retail Coordination

Water Code § 10631 (j)

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

The City receives wholesale raw water supplies from several agencies. In accordance with CWC 10631, the City has informed each supplier of projected water use from that source for the period of 2020-2040, as shown in Table 2-4.

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

The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Placer County Water Agency
San Juan Water District
United States Bureau of Reclamation

2.5.2 Coordination with Other Agencies and the Community

The City coordinated its UWMP preparation with other local agencies and the community.

2.5.2.1 Coordination with other Agencies

Water Code § 10620 (d)(2)

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

The City coordinated the preparation of this Plan with several agencies including: PCWA, USBR, San Juan Water District, the City of Citrus Heights, Placer County, and members of the public. These and other agencies, as well as the public, participated in the coordination and preparation of this 2015 UWMP. In addition, the City coordinated the preparation of the water demand projections in this Plan with the Roseville General Plan 2025 (adopted May 5, 2010).

2.5.2.2 Coordination with the Community

Water Code §10642

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

The City has actively encouraged community participation in water management activities and specific water-related projects. The City's public participation program includes both active and passive means of obtaining input from the community, such as mailings, public meetings, and web-based communication. The City's website describes on-going projects and posts announcements of planned rate increases to fund these water projects.

As part of development of this 2015 UWMP update, the City allowed a public review period following noticing and prior to adoption to allow ample time for public comments to be developed and received. Public noticing, pursuant to Section 6066 of the Government Code, was conducted prior to commencement of the public comment period. Public hearing notices are included in Appendix D of this document. During the public comment period, the Draft UWMP update was made available on the City's website (www.roseville.ca.us).

2.5.3 Notice to Cities and Counties

Water Code § 10621 (b) requires agencies to notify the cities and counties to which they serve water at least 60 days in advance of the public hearing that the plan is being updated and reviewed. In early 2016, a notice of preparation was sent to the cities and counties, and other stakeholders, to inform them of the UWMP update process and schedule and to solicit input for the Plan update. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10.

CHAPTER 3

System Description



This chapter provides a description of the City's water system and service area. This includes a description of the water system facilities, climate, population, and housing within the City's service area.

3.1 GENERAL DESCRIPTION

The City is located approximately 16 miles northeast of Sacramento, and has an estimated population of 128,382 residents (as of January 1, 2015, according to California Department of Finance). The City incorporated on April 10, 1909 and is a charter city operating under a City Manager-Council form of government.

The City is bordered in the east by the City of Rocklin and Granite Bay, and in the south by the Sacramento County line and pockets of unincorporated Placer County including the Dry Creek West Placer Community Plan Area. The north and west city boundaries are bordered by mostly undeveloped and unincorporated Placer County land that has the potential for future development and annexation.

3.2 SERVICE AREA

The City's service area boundary is shown in Figure 3-1. The majority of residents within the city limits are served by the City's water system. There are a few small areas within the City that are served by PCWA, San Juan Water District (SJWD), and Citrus Heights Water District (CHWD).

The City's water service area is currently divided into five pressure zones. With the exception of Pressure Zone 4, which utilizes pressure reducing stations, all other pressure zones (Pressure Zones 1, 2, 3, and 5) are either served by gravity, require boosting, or are served by adjacent water agencies that have sufficient pressure to serve these areas.

3.3 SERVICE AREA CLIMATE

The service area experiences cool and humid winters and hot and dry summers. The City's weather is similar to the City of Sacramento which is in close proximity. Based on the historical data obtained from the Western Regional Climate Center, Sacramento's average monthly temperature ranges from 40 to 92 degrees Fahrenheit. The historical annual average precipitation is approximately 18 inches. The rainy season begins in November and ends in March. Average monthly precipitation during the winter months is about 2 to 3 inches. Relative humidity in the region ranges from 29 percent to 90 percent. Low humidity usually occurs in the summer months, from May through September. The combination of hot and dry weather results in high water demands during the summer. A summary of the regional climate data is provided in Table 3-1.

Table 3-1. Monthly Average Climate Data Summary

Month	Average Precipitation, inches ^(a)	Average ETo, inches ^(b)	Average Temperature, °F ^(a)	Average Maximum Temperature, °F ^(a)	Average Minimum Temperature, °F ^(a)
January	3.66	1.1	46.6	53.5	39.6
February	3.20	1.8	51.4	59.7	43.1
March	2.67	3.3	55.3	64.9	45.7
April	1.41	4.5	59.8	71.1	48.4
May	0.62	6.5	65.4	78.3	52.5
June	0.16	7.4	71.4	85.9	56.9
July	0.01	7.9	75.5	91.7	59.2
August	0.03	7.0	74.7	90.6	58.7
September	0.30	5.1	71.7	86.3	57.0
October	0.94	3.3	64.2	76.7	51.6
November	1.98	1.6	54.3	64.1	44.5
December	3.17	1.0	47.0	54.1	39.9
Annual	18.15	50.6	61.5	73.1	49.8

^(a) Western Regional Climate Center (WRCC) website: www.wrcc.dri.edu, Station 047633 Sacramento 5 ESE, California. Period of record: 7/11/1877 to 1/20/2015.

^(b) CIMIS Website: www.cimis.water.ca.gov, Station 131 Fair Oaks, California (April 1997 to December 2015), Monthly Average Eto Report, Printed January 2016.

3.4 SERVICE AREA POPULATION AND DEMOGRAPHICS

The City’s water service area is described below, including population, employment, and other demographics.

3.4.1 Population

Projections for population, employment, and dwelling units within the City’s water service area were completed for build out based on the City’s General Plan 2025.

Historical population estimates, discussed in Chapter 5, are based on data from the Department of Finance, adjusted to account for the known population of neighborhoods within City limits that are not included in the City water service area.

Population is projected through build out of the City’s General Plan based on information from various studies prepared as part of the City’s standard development entitlement processes. Projections are for the current City Water Service Area boundary, including the Sierra Vista and Creekview Specific Plan areas, as well as the proposed Amoruso Ranch Specific Plan area intended for annexation in 2016. The City’s current and projected service area population is shown in Table 3-2.

Table 3-2. Retail: Population – Current and Projected (DWR Table 3-1)

Population Served	2015	2020	2025	2030	2035	2040(opt)
	123,572	133,243	144,113	155,983	165,854	175,724

As indicated earlier, there are areas within the incorporated City limits that are not located within the Water Service Area boundary. These areas are composed primarily of single and multi-family residences, allowing the City to accurately estimate the population within City limits, but outside the Water Service Area.

3.4.2 Demographic Factors

The City of Roseville has a diverse mix of residential, commercial, industrial and institutional land uses. The City is a net importer of jobs, i.e., the City’s daytime population is higher than the residential population. These factors have been considered when preparing the water demand projections. There are no significant non-residential populations (vacation, agriculture) or other demographic characteristics that would affect water use planning.

3.5 WATER SYSTEM FACILITIES

An overview of the City’s water system facilities is provided in Figure 3-1. Major water system facilities are described below.

3.5.1 Surface Water Supply and Transmission

The surface water supply and transmission from Folsom Lake and future supplies are discussed below.

3.5.1.1 Folsom Lake

The City has made improvements to the Folsom Dam pumping station and the raw water delivery system to meet the needs of the City through projected build out. No additional supply capacity from Folsom Lake is anticipated.

In 2010 a major project to increase reliability of the water supply facilities was completed. At the request of the USBR, the City and other water purveyors that receive Folsom Lake water constructed a parallel raw water pipeline on USBR property to allow for maintenance of the existing pipeline, adding additional operational flexibility required for maintenance. This project is seen as a major improvement to this critical facility.

The City’s pumping capacity at Folsom Dam is limited to 150 cubic feet per second (96.9 million gallons per day (MGD)). Once through the pumping station, raw water is conveyed through twin pipelines; an 84-inch diameter pipeline that was installed with original construction of Folsom facilities and a 72-inch diameter pipeline constructed by the City and SJWD to provide required redundancy for facility maintenance, as discussed above. These common facilities convey raw water to the “Hinkel Y” where the flows to SJWD and the City are split. Raw water for the City then flows through parallel 60-inch diameter and 48-inch diameter raw water pipelines to the City’s Barton Road water treatment plant.

3.5.1.2 Future Supplies

Further discussed in Chapter 6, the City is planning to participate in the future PCWA Ophir Water Treatment Plant project to provide a new treated surface water source to the City to serve the proposed Amoruso Ranch Specific Plan area. The City is also evaluating opportunities to participate in a future regional water project that envisions a diversion from the Sacramento River (the RiverArc project). These infrastructure projects would increase the City’s normal year water supply and increase the dry year water supply reliability of its existing water supplies.

3.5.2 Water Treatment Facilities

The City’s water treatment plant (WTP) is located on Barton Road in the Placer County unincorporated community of Granite Bay. The Barton Road WTP capacity was expanded from 60 MGD to 100 MGD in 2008. The purpose of the expansion was to improve system reliability, daily peaking requirements, and regional conjunctive use strategies. Raw water treatment consists of these processes: flocculation/sedimentation, clarification, filtration and disinfection. Treated water is also fluoridated prior to distribution to City water customers.

The City is also part of a group of agencies that are studying the RiverArc project that would consist of constructing new conveyance and treatment facilities using Sacramento River source water. The new facilities will allow access to a portion of the City’s Central Valley Project contract water and would allow greater operational flexibility and could reduce impacts to the Lower American River, a program which is consistent with the Water Forum Agreement.

3.5.3 Potable Water Storage Facilities

Water storage capacity is required to manage flow fluctuations in the system on a daily basis and maintain sufficient storage to address emergency needs such as main breaks or fire flows. The water system currently has 32 MG of storage and is projected to require 49 MG at system build out. Existing water storage projects along with the date of construction are listed in Table 3-3. None of the storage projects are expected to increase total water supplies.

Table 3-3 Potable Water Storage Tanks

Facility	Pressure Zone Served	Capacity, MG	Type	Year Constructed
WTP 2 MG	1, 2, 4, 5	2	Steel	1971
WTP 4 MG	1, 2, 4, 5	4	Pre-stressed Concrete	1990
WTP 6 MG	1, 2, 4, 5	6	Pre-stressed Concrete	2004
Northeast 7.25 MG	1-5	7.25	Pre-stressed Concrete	2009
Northeast 10 MG	1-5	10	Pre-stressed Concrete	1998
Halverson 2.9 MG	2	2.9	Pre-stressed Concrete	2008

3.5.4 Potable Water Distribution Facilities

Distribution piping in the City ranges from as large as 66-inch diameter pipe to as small as 4-inch diameter pipe. The City designs its distribution system to meet various pressure and velocity criteria under average day, maximum day and peak hour delivery scenarios. In general, the City's system meets the maximum day demand criterion of 6 feet per second (FPS) for transmission main velocity (i.e., the rate at which water flows through the pipelines) and the water pressure criterion of 50 pounds per square inch (PSI). There are a few locations where these criteria are not met, but these discrepancies are minimal and do not adversely affect water service to customers.

Potable water distribution networks have been mostly completed within the City with the exception of annexation areas, for which facilities are planned as part of the project development. Annexation area infrastructure has been conceptually designed and sized with timing identified in a phasing plan linked to development. This infrastructure will be constructed by the developer with design approval and construction oversight by the City. Infrastructure improvements will be made through the typical 20- to 30-year build out of the annexation areas and will include looped transmission and distribution mains to meet the needs to the community.

3.5.5 Pump Stations

The City currently operates four potable water pumping stations:

- The Dual Purpose Pump Station (DPPS) fulfills two functions. It provides the City the ability to fill the North East Storage Reservoirs during off-peak demand periods, and boosts water pressures into higher elevation areas in and adjacent to the Stoneridge Specific Plan area of the City (Pressure Zone 2).
- The Highland Reserve North Pump Station (HRNPS) allows the City to boost water pressures into higher elevation portions of the Highland Reserve North Specific Plan area, also designated as Pressure Zone 5.
- The Pleasant Grove Pump Station was constructed in 2015, and allows more efficient movement of water from Pressure Zone 4 to Pressure Zone 1. Several of the City's groundwater wells are located within Pressure Zone 4, located at a lower hydraulic grade than Pressure Zone R1.
- The PFE Pump Station, located near one of the City's interties with Sacramento Suburban Water District (SSWD), allows for the transfer of water to or from SSWD during an emergency.

Future water storage tanks and pump stations are planned for construction within the West Roseville Specific Plan and the Sierra Vista Specific Plan areas to service customers in the western portion of the City.

3.5.6 Groundwater Wells

The City currently operates six groundwater wells, and has plans to construct ten more. The existing wells are capable of delivering a total of approximately 17,500 acre feet per year (AF/YR) of water supply if run full-time, which is the equivalent of approximately 48 acre-feet per day. With construction of the additional wells, the City’s groundwater facilities would allow for delivery of up to 120 acre-feet per day or 43,800 AF/YR if run on a continuous basis. The City’s groundwater wells are currently maintained for backup water supply and to improve water supply reliability during drought and emergency conditions. The City is in process of developing its Aquifer Storage and Recovery (ASR) program that would allow storage of surplus surface water in underground aquifers injected through these production wells. All existing wells have ASR injection capability and all future wells are planned to incorporate the same. Groundwater supplies are further discussed in Chapter 6.

There are six wells currently in place and operational. Information about the existing operational wells is summarized in Table 3-4. Proposed wells are discussed in Chapter 6.

Table 3-4. Groundwater Well Facilities

Facility	Install/Rehab Date	Well Depth, feet	Rated Capacity, GPM	Service Zone
Darling Way (Well No. 4)	1958/1999	303	1,000	1
Oakmont (Well No. 5)	1978/1999	360	1,950	1
Diamond Creek (Well No. 6)	2002	323	2,700	4
Woodcreek North Well (Well No. 7)	2008	440	1,800	1
Hayden Parkway (Well No. 8)	2015	520	1,800	4
Blue Oaks Blvd (Well No. 12)	2015	490	1,800	4
Total Groundwater Capacity			11,050	
GPM = gallons per minute				

It is the City’s policy that groundwater is only used as water supply in times of shortage (see Chapter 7 for an example). Groundwater wells are currently only used for emergency backup and dry year water supplies.

3.5.7 Interties

The City maintains interties with surrounding jurisdictions for water sharing and transfer opportunities. Most times these are utilized for emergency transfers between agencies for a short duration but they can also be used for long term water sharing arrangements between agencies for a variety of reasons. The current interties are listed in Table 3-5, and further described in the paragraphs that follow.

Table 3-5. Interties with Neighboring Water Suppliers

Intertie Agency	Facility Name	Size, inches
Placer County Water Agency	Stoneridge	12
	5 Star	10
	Highland Park	12
	Pleasant Grove	12
	Industrial	16
	Bianchi Estates	12
San Juan Water District	WTP	12
	Eureka ^(a)	12
	Cavitt Stallman	12
California-American Water Company	Crowder	12
	PFE	24
	Vernon Oaks ^(a)	12
Citrus Heights Water District	Orlando ^(a)	6
	Blossom Hill ^(a)	6
Sacramento Suburban Water District	PFE/North Antelope	24

^(a) Local zone feed only due to zone hydraulic grade line matching. Zone isolation is required to move water between agencies.

3.5.7.1 Placer County Water Agency (PCWA) Intertie

The City maintains six interties with PCWA with a total capability of delivering 13 MGD. These facilities are designed to be used for wheeling water through the City’s service area to PCWA customers and for short-term demand shortage assistance. This capability has been used during water transmission interruptions and for supplemental water to particular areas. In addition, an intertie facility has been designed and constructed that will increase reliability to PCWA customers residing within the City. This facility, located at the Northeast tank site, allows PCWA to meet demands within their service area during peak times of the year.

3.5.7.2 San Juan Water District (SJWD) Intertie

Three interties exist between the City and SJWD. Two interties are capable of delivering a maximum of 2.5 MGD directly into the City’s distribution system. The third intertie has the capability of providing up to 10 MGD and is located at the City’s water treatment plant. These interties have been used during water plant interruptions and for localized water supply when required.

3.5.7.3 California American Water Company Intertie

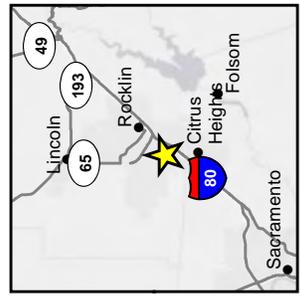
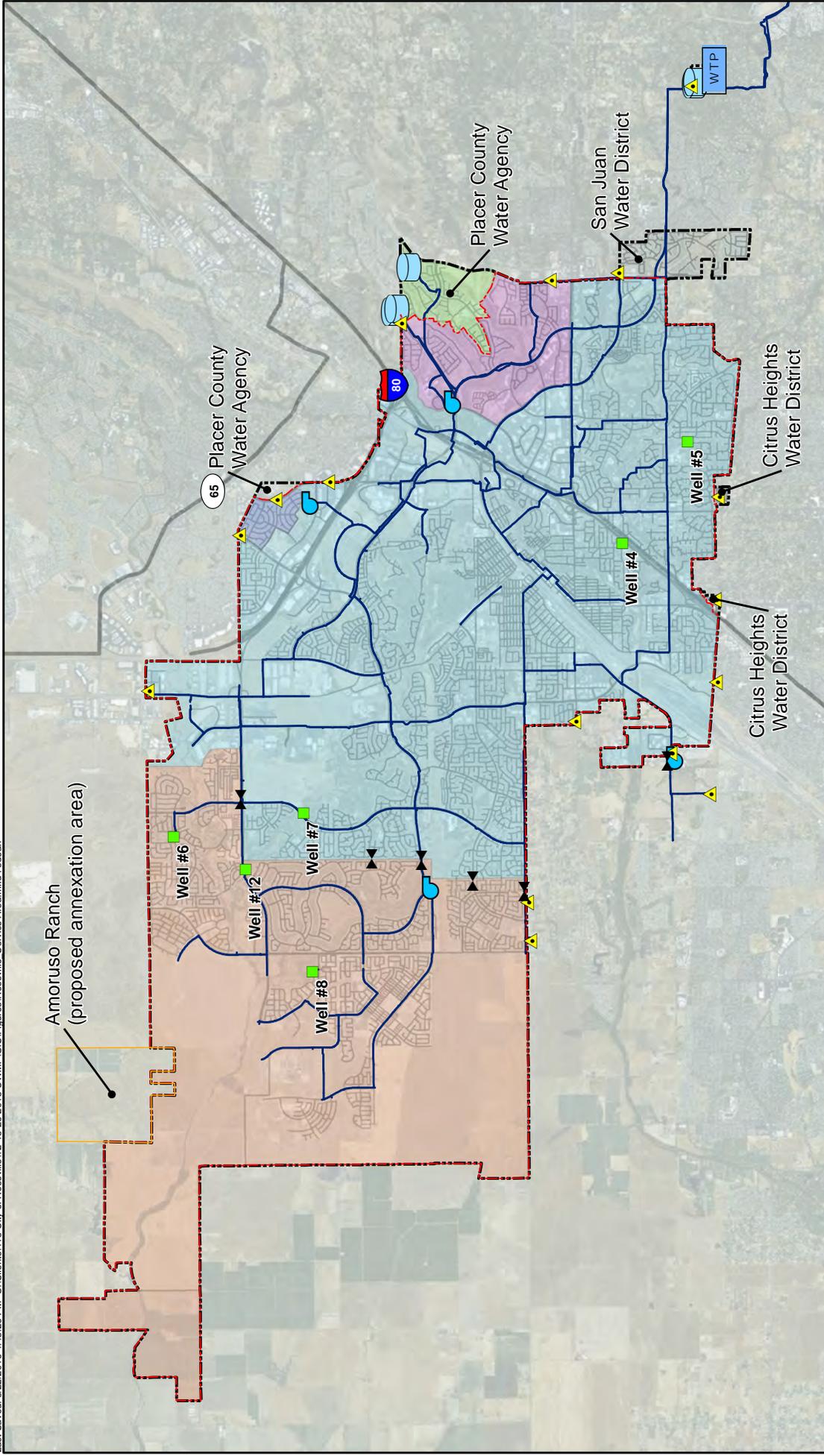
Three interties exist between the City and California American Water Company (Cal-Am). The first intertie is used for emergency use within the City, and cannot be relied upon as a continued source of water. The second and third interties are used to wheel PCWA water to the Cal-Am service area adjacent to the City.

3.5.7.4 Citrus Heights Water District Intertie

Two interties exist between the City and Citrus Heights Water District. Due to low operating pressures in adjoining agency's distribution systems these interties are only good for emergency zonal use within the City, and cannot be relied upon as a continued source of water.

3.5.7.5 Sacramento Suburban Water District Intertie

One intertie exists between the City and the SSWD. As part of regional development of conjunctive use programs, 24-inch diameter and 36-inch diameter water lines connect the City and SSWD water service areas. The newly constructed PFE Pump Station allows for water to be transferred from the SSWD service area into the City's water system. The City and SSWD are currently developing a mutual aid agreement for the use of this intertie.



- LEGEND**
- Water Service Area
 - City Limits
 - Well
 - Booster Pump Station
 - Storage Reservoir
 - Pressure Reducing Station
 - Interline
 - Transmission Main >= 16"
 - Water Treatment Plant
 - PRESSURE ZONE 1
 - PRESSURE ZONE 2
 - PRESSURE ZONE 3
 - PRESSURE ZONE 4
 - PRESSURE ZONE 5

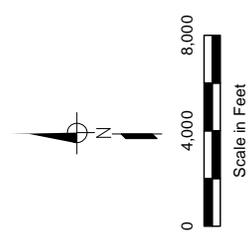


Figure 3-1
City of Roseville
Water Service Area
 City of Roseville
 2015 Urban Water
 Management Plan

(THIS PAGE LEFT BLANK INTENTIONALLY)

This chapter describes and quantifies the City's past, current, and projected water use. Water demand projections are based on the selected SBX 7-7 water use targets combined with the projected population according to the City's General Plan. Accurately tracking and reporting current water demands allows the City to properly analyze the use of their resources and conduct good resource planning.

4.1 RECYCLED VERSUS POTABLE AND RAW WATER DEMAND

The City provides both potable water and recycled water to customers within its water service area. Potable water is water that is safe to drink and which typically has had various levels of treatment and disinfection. The City purchases raw water supplies from PCWA, USBR, and SJWD and treats it to potable water quality. The City does not currently purchase potable water, but plans to do so in the future.

Recycled water is municipal wastewater that has been treated to a specified quality to enable it to be beneficially used. As discussed in Chapter 6, the City owns and operates two WWTPs that treat wastewater to Title 22 disinfected tertiary standards. This highly treated water is then distributed for landscape irrigation within the City service area, environmental releases, cooling water, and construction use.

Raw water is untreated water that is used in its natural state or with minimal treatment. The City does not deliver raw water to any customers in its service area, however it does deliver 182 AF of raw water to Linda Creek outside of the City's service area. Because this raw water delivery is a required minimum discharge and is not considered a potable offset, it has not been included in any of the subsequent tables. Recycled and potable water demands are discussed below.

4.2 WATER USES BY SECTOR

This section describes the City's past, current and projected water use by sector through the year 2040 in five-year increments. Water demand projections are based on the selected SBX 7-7 water use targets combined with the projected population for the service area. Demand projections provide the basis for sizing and staging future water facilities to ensure adequate supply. This section identifies the usage among water use sectors including single-family residential, multi-family residential, commercial, industrial, institutional/governmental, landscape irrigation, agricultural, and others. These classifications were used to analyze current consumption patterns among various types of customers. The City uses the same definitions for each sector as outlined in the DWR 2015 Guidebook:

- **Single-family residential:** A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.
- **Multi-family:** Multiple dwelling units contained within one building or several buildings within one complex.
- **Commercial:** A water user that provides or distributes a product or service (CWC 10608.12 (d)).

- **Industrial:** A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development (CWC 10608.12 (h)).
- **Institutional (and governmental):** A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions (CWC 10608.12 (i)).
- **Landscape:** Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.
- **Agricultural:** Water used for commercial agricultural irrigation.
- **Other:** Any other water demand that is not adequately described by the water sectors defined above. Unlike previous UWMPs, system water losses are not to be reported in the “Other” category.

The historical water demands by water use sector are reported in Table 4-1.

Table 4-1. Historical Water Use by Water Use Type, 2010

Water Use Type	Volume, AF
Commercial	2,042
Industrial	891
Institutional/Governmental	667
Multi-Family	2,196
Single-Family	15,836
Landscape	5,534
Losses	1,195
Other	272
Total	28,633

The City’s actual water demands for the year 2015 are reported in Table 4-2. There are no existing or projected use for saline barriers, conjunctive use, or raw water within the City’s potable water service area.

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

Use Type	2015 Actual		
	Additional Description <i>(as needed)</i>	Level of Treatment When Delivered	Volume
Commercial	Including Non-Metered	Drinking Water	1,930
Industrial	Including Non-Metered	Drinking Water	934
Institutional/Governmental	Including Non-Metered	Drinking Water	561
Multi-Family	Including Non-Metered	Drinking Water	1,464
Single Family	Including Non-Metered	Drinking Water	11,680
Landscape	Including Non-Metered	Drinking Water	4,152
Losses	Unbilled unmetered	Drinking Water	32
Losses		Drinking Water	2,128
TOTAL			22,881

NOTES: All volumes are in AF. The City was under a state mandate to conserve water due to statewide drought conditions during 2015. The City conserved 32.9% during calendar year 2015, compared to calendar year 2013.

The water use projections for 2020 through 2040 are based on land use-based water demand projections documented in the City’s General Plan. The projected water demand through the year 2040 is reported in Table 4-3.

Table 4-3. Retail: Demands for Potable and Raw Water – Projected (DWR Table 4-2)

Use Type	Additional Description <i>(as needed)</i>	Projected Water Use <i>Report To the Extent that Records are Available</i>				
		2020	2025	2030	2035	2040-opt
Commercial		3,402	3,588	3,818	4,041	4,219
Industrial		1,699	1,792	1,907	2,018	2,107
Institutional/Governmental		1,001	1,056	1,123	1,189	1,241
Multi-Family		2,399	2,530	2,692	2,849	2,974
Single Family		21,262	22,425	23,862	25,254	26,365
Landscape		7,559	7,973	8,483	8,978	9,373
Losses		3,732	3,936	4,189	4,433	4,628
TOTAL		41,054	43,300	46,074	48,762	50,907

NOTES: All volumes are in AF.

The actual and projected water demands reported in Tables 4-2 and 4-3, and the recycled water demands reported in Table 6-6 (see Chapter 6), are summarized in Table 4-4.

Table 4-4. Retail: Total Water Demands (DWR Table 4-3)

	2015	2020	2025	2030	2035	2040 <i>(opt)</i>
Potable and Raw Water <i>From Tables 4-1 and 4-2</i>	22,881	41,054	43,300	46,074	48,762	50,907
Recycled Water Demand* <i>From Table 6-4</i>	4,060	4,421	4,791	5,259	5,643	5,958
TOTAL WATER DEMAND	26,941	45,475	48,091	51,333	54,405	56,865

NOTES: All volumes are in AF. Table references refer to DWR table numbers.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

System losses are the difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption. Such apparent losses are always present in a water system due to pipe leaks, unauthorized connections or use; faulty meters; unmetered services such as fire protection and training, and system and street flushing. The water losses in 2015 comprised about 9 percent of the total water produced. Water losses are characterized using the American Water Works Association (AWWA) Water Audit Method (Appendix E).

The system losses as the difference between the annual production (including both treated and untreated water supplies) and annual sales for the most recent 12-month period available are summarized in Table 4-5. The most recent 12 month period began on January 2015.

Table 4-5. Retail: 12 Month Water Loss Audit Reporting (DWR Table 4-4)

Reporting Period Start Date	Volume of Water Loss*
01/2015	2,128
<i>* Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.</i>	

NOTES: All volumes are in AF. Does not include unbilled unmetered water.

4.4 ESTIMATING FUTURE WATER SAVINGS

As indicated in Table 4-6, the City has included estimation of future water savings in its 2015 UWMP. Passive water savings were calculated in the Water Demand Analysis. This section includes a summary of estimated water savings from passive savings such as codes, standards, ordinances and transportation and land use plans, including the City’s Water Efficient Landscape Ordinance and the California Green Building Code. Though future job and population growth would be expected to increase water demand, passive savings are projected to decrease per capita water use for future customers compared to historical customers.

Reduction in water demand across all customer sectors is necessary to achieve the conservation goals established by legislation and laid out in this plan. Although the Demand Management Measures (DMMs) identified in Chapter 9 serve as the primary catalyst for water use reduction, the following reduction strategies have been used when projecting future water demands.

Table 4-6. Retail Only: Inclusion in Water Use Projections (DWR Table 4-5)

Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc... utilized in demand projections are found.	Section 4.4
Are Lower Income Residential Demands Included In Projections?	Yes

4.4.1 Compliance with Water Efficient Landscape Requirements

New development areas are required to reduce landscape area and calculated water demands as part of the process for land use approval. As required by the California Code of Regulations Title 23, Division 2 Chapter 2.7 Model Water Efficient Landscape Ordinance (MWELO), the City has the ability to adopt the State standards or implement even more stringent standards. The City recently updated its standards, which also outline additional requirements for Water Efficient Landscaping. The City’s landscape standards can be found in Chapter 14.18 of the Roseville Municipal Code (available via the City’s website).

4.4.2 Increased Utilization of Recycled Water

The City requires recycled water to be used in most land use development areas currently being planned, and for construction water during a Stage 3 Drought (see Chapter 8). Future required use includes landscaping associated with commercial, industrial, multi-family, parks, and transportation corridors. Guidelines for Recycled Water Service are outlined in Roseville Municipal Code Chapter 14.17 (available via the City’s website).

4.4.3 Implementation of Low Water Use Fixtures

Section 16.04.100 (a) of the Roseville Municipal Code (available via the City’s website) states that: “The 2013 California Building Standards Code is hereby adopted by the City of Roseville Municipal Code.”

In addition to the requirements outlined in the California Building Code, the City also holds developers to even more stringent standards, including installation of High Efficiency Toilets (HET) and re-circulating hot water systems.

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

As shown in Table 4-6, water needs for low-income families are included in the potable water demand projections shown in Table 4-3. Future housing needs for low income families were derived from projections provided by the Regional Housing Needs Allocation Plan (RH NAP) (<http://www.sacog.org/post/key-documents-2013-21-rhna>), adopted by the Sacramento Area Council of Governments (SACOG) in 2012.

Low income water demands were then projected by multiplying the projected number of single-family and multi-family dwelling units by water demand factors (288 gallons per day per dwelling unit (GPD/DU) for multi-family dwelling units and 430 GPD/DU for single-family dwelling units). The resulting projected water demand for projected low-income dwelling units is shown in Table 4-7.

Table 4-7. Projected Water Demand for Future Low-Income Households, AFY^(a)

Water Use Type	2020	2025	2030	2035	2040
Multi-Family Residential	864	1,020	1,102	1,169	1,237
Single-Family Residential	283	334	361	383	405
Total	1,147	1,355	1,463	1,553	1,642

^(a) Based on projected number of new low-income dwelling units multiplied by the water demand factors of 288 GPD/DU for multi-family residential units and 430 GPD/DU for single-family dwelling units.

4.6 CLIMATE CHANGE

DWR 2015 Guidebook suggests that urban water suppliers consider the potential effects related to climate change in their 2015 UWMPs, though it should be noted that there are currently no specific requirements related to addressing the potential impacts of climate change. Because the City has not completed any studies regarding the impacts of climate change on system water demands, the City has decided to not complete this section for this 2015 UWMP.

CHAPTER 5

SB X7-7 Baselines and Targets



In November 2009, Senate Bill X7-7 (SB X7-7), The Water Conservation Act of 2009, was signed into law by Governor Arnold Schwarzenegger as part of a comprehensive water legislation package. The Water Conservation Act addresses both urban and agricultural water conservation. The legislation sets a goal of achieving a 20 percent statewide reduction in urban per capita water use by the year 2020 (i.e., “20 by 2020”), and directs urban retail water suppliers to establish an “interim” per capita water use target to be met by 2015 and a “final” per capita water use target to be met by 2020.

The City’s compliance with SB X7-7 was first addressed in the City’s 2010 UWMP. The City’s baseline per capita water use was determined, and urban water use targets for 2015 and 2020 were established and adopted. SB X7-7 included a provision that an urban water supplier may update its 2020 urban water use target in its 2015 UWMP, and may use a different target method than was used in 2010. Also, the SB X7-7 methodologies developed by DWR in 2011 noted that water suppliers may revise population estimates for baseline years when the 2010 Census information became available (as described below, the 2010 Census data was not finalized until 2012).

The DWR 2015 Guidebook indicates that there were significant discrepancies between the California Department of Finance (CDoF) estimated 2010 population (based on 2000 U.S. Census data) and the actual 2010 population (based on 2010 U.S. Census data). Therefore, if a water supplier did not use 2010 Census data for their baseline population calculations in the 2010 UWMP, DWR has determined that these water suppliers must recalculate their baseline population for the 2015 UWMP using 2000 and 2010 Census data, and baseline and 2015 and 2020 urban water use targets must be modified accordingly.

This chapter provides a review and update of the City’s baseline per capita water use, 2015 interim per capita water use target, and 2020 final per capita water use target in accordance with the requirements described in the DWR 2015 Guidebook and based on the 2010 Census population data. The City calculated baselines and targets on an individual reporting basis in accordance with SB X7-7 legislation requirements and *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (DWR, 2016). The City has achieved compliance with its 2015 interim target, as discussed below, and is well positioned to achieve its 2020 final target. Regional Alliance baselines and targets are discussed in Section 5.8.

The SB X7-7 Compliance and Verification Forms are included in Appendix F.

5.1 UPDATING CALCULATIONS FROM 2010 UWMP

CWC 10608.20 (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

Methodologies DWR 2011, Methodology 2 Service Area Population Page 27 - Water suppliers may revise population estimates for baseline years between 2000 and 2010 when 2010 census information becomes available. DWR will examine discrepancy between the actual population estimate and DOF’s projections for 2010; if significant discrepancies are discovered, DWR may require some or all suppliers to update their baseline population estimates.

DWR 2015 Guidebook, Required Use of 2010 U.S. Census Data page 5-5 – if an agency did not use 2010 Census data for their baseline population calculations in the 2010 UWMP...DWR has determined that these agencies must recalculate their baseline populations for the 2015 UWMPs using 2000 and 2010 Census data. This may affect the baseline and target GPCD values calculated in the 2010 UWMP, which must be modified accordingly in the 2015 UWMP.

Population data from the 2010 United States Census were not made available until 2012, after the City submitted its 2010 UWMP. Therefore, the City updated population, baselines, and targets for this 2015 UWMP to reflect 2010 Census data. The following sections describe these updates.

5.2 BASELINE PERIODS

SB X7-7 requires each urban water retailer to determine their baseline daily per capita water use, measured in gallons per capita per day (Baseline GPCD), over a 10-year or 15-year baseline period. The 10-year baseline period is defined as a continuous 10-year period ending no earlier than December 31, 2004 and no later than December 31, 2010. SB X7-7 also defines that for those urban water retailers that met at least 10 percent of their 2008 water demand using recycled water, the urban water retailer can extend the Baseline GPCD calculation for a maximum of a continuous 15-year baseline period, ending no earlier than December 31, 2004 and no later than December 31, 2010. In 2008, the City met 8.76 percent of demand using recycled water. Therefore, the City must use a 10-year baseline period.

SB X7-7 also requires each urban water retailer to determine a 5-year baseline per capita water demand, which DWR calls the Target Confirmation, calculated over a continuous 5-year period ending no earlier than December 31, 2007 and no later than December 31, 2010.

Based on these requirements, the City has selected the following baseline periods:

- 10-year Baseline Period: 1995 - 2004
- 5-year Baseline Period: 2003 - 2007

These baseline periods are listed in SB X7-7 Table 1 in Appendix F. It should be noted that the 10-year and 5-year periods are the same as reported in the City's 2010 UWMP.

5.3 SERVICE AREA POPULATION

DWR 2015 Guidebook, Required Use of 2010 U.S. Census Data page 5-5 – if an agency did not use 2010 Census data for their baseline population calculations in the 2010 UWMP...DWR has determined that these agencies must recalculate their baseline populations for the 2015 UWMPs using 2000 and 2010 Census data. This may affect the baseline and target GPCD values calculated in the 2010 UWMP, which must be modified accordingly in the 2015 UWMP.

This section includes a discussion of the City's service area population including 2000 and 2010 U.S. Census data. Population reported in the City's 2010 UWMP did not include 2010 U.S. Census data because the full Census data set was not available until 2012.

The CDoF uses U.S. Census data, combined with changes to the housing stock, estimated occupancy of housing units, and the number of persons per household to estimate annual population within jurisdictional boundaries. CDoF population estimates, corrected to account for 1990, 2000, and 2010 Census data, were used to estimate service area population. The service area population is within 5 percent of the City population, and therefore the City population can be used as a surrogate for the service area population. Because the City knows the approximate population of the neighborhoods inside City limits, but outside the City water service area, those

populations were subtracted from the CDoF population estimates. The adjusted population estimate is included in the SB X7-7 Verification Tables in Appendix F.

5.4 GROSS WATER USE

Annual gross water use is the water that enters the City’s distribution system over a 12-month period (calendar year) with certain exclusions. This section discusses the City’s annual gross water use for each year in the baseline periods, as well as 2015, in accordance with Methodology 1: Gross Water of DWR’s *Methodologies* document.

CWC 10608.12 (g) “Gross Water Use” means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

- (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
- (2) The net volume of water that the urban retail water supplier places into long term storage*
- (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier*
- (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24*

California Code of Regulations Title 23 Division 2 Chapter 5.1 Article Section 596 (a) An urban retail water supplier that has a substantial percentage of industrial water use in its service area is eligible to exclude the process water use of existing industrial water customers from the calculation of its gross water use to avoid a disproportionate burden on another customer sector

Annual gross water use for the baseline periods and 2015 are summarized in Appendix F. The values reported in Appendix F are the same as documented in the City’s 2010 UWMP.

5.5 BASELINE DAILY PER CAPITA WATER USE

As indicated above, daily per capita water use is reported in gallons per capita per day (GPCD). Annual gross water use is divided by annual service area population to calculate the annual per capita water use for each year in the baseline periods. As discussed above, the City has used updated population data in this 2015 UWMP. The City’s baseline daily per capita use has been calculated as follows:

- 10-year Base Daily Per Capita Water Use
 - 309 GPCD (for the period from 1995 to 2004)
 - This value is the same as the value calculated in the 2010 UWMP (309 GPCD)
- 5-year Base Daily Per Capita Water Use
 - 295 GPCD (for the period from 2003 to 2007)
 - This value is 3 GPCD less than the value calculated in the 2010 UWMP (298 GPCD), with the change attributed to updated CDoF population estimates following the 2010 Census.

These values are shown in SB X7-7 Table 5 in Appendix F.

5.6 2015 AND 2020 TARGETS

SB X7-7 requires a state-wide average 20 percent reduction of urban per capita water use by the year 2020. Therefore, the City must set an interim (2015) water use target and a final (2020) water use target using one of four methods defined by SB X7-7 and DWR. Three of these methods are defined in Water Code Section 10608.20(a)(1), and the fourth method was later developed by DWR. The 2020 water use target is calculated using one of the following four methods:

- Method 1: 80 percent of the City's base daily per capita water use;
- Method 2: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscaped area water use; and commercial, industrial, and institutional uses;
- Method 3: 95 percent of the applicable State hydrologic region target as stated in the State's Draft 20x2020 Water Conservation Plan (April 30, 2009); or
- Method 4: An approach that considers the water conservation potential from (1) indoor residential savings, (2) metering savings, (3) commercial, industrial and institutional savings, and (4) landscape and water loss savings.

Analysis of Methods 1 and 3 were completed. The calculated 2020 target using Method 1 is 247 GPCD. The 2020 target using Method 3 is 167 GPCD (95 percent of Hydrologic Region 5-Sacramento River 2020 Target of 176 GPCD). Methods 2 and 4 require specific data which were not available, so those two methods were not considered. Target Method 1 results in the highest allowable SB X7-7 final (2020) target (247 GPCD by 2020), and would therefore be most favorable to the City.

The 2015 interim targets for each of the target methods are calculated based on the midpoint of the City's 10-year Base Daily Per Capita Water Use and the 2020 targets calculated for each of the respective target methods. The 2015 interim 2015 target is the midpoint between the City's 10-Year Base Daily Per Capita Water Use (309 GPCD) and the final 2020 target (247 GPCD). Therefore, the City's interim 2015 target is 278 GPCD.

Urban water suppliers must verify that their 2020 final water use target is at least a 5 percent reduction from the 5-year baseline GPCD. As shown in SB X7-7 Table 7F in Appendix F, the City's maximum 2020 target is 280 GPCD (95 percent of the City's 5-year base daily per capita water use of 295 GPCD). The City's Method 1 2020 target of 247 GPCD complies with the minimum reduction.

The City's interim and final targets are summarized in Table 5-1.

Table 5-1. Baselines and Targets Summary (DWR Table 5-1)

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	1995	2004	309	278	247
5 Year	2003	2007	295		

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

For this 2015 UWMP, the City has selected Target Method 1, as was used in the 2010 UWMP. The confirmed final 2020 target of 247 GPCD is the same as the final 2020 target included in the 2010 UWMP. Therefore, the confirmed interim 2015 target of 278 GPCD is also the same as the interim 2015 target reported in the 2010 UWMP. The City understands that the target method and resulting targets may not be changed in any amendments to the 2015 UWMP or in the 2020 UWMP.

5.7 2015 COMPLIANCE DAILY PER CAPITA WATER USE (GPCD)

The City has calculated its actual 2015 water use for the 2015 calendar year in accordance with Methodology 3 of DWR’s *Methodologies* document. As shown in Table 5-2, urban per capita water use in 2015 was 164 GPCD, which is below the 2015 interim water use target of 278 GPCD. Therefore, the City has met its interim 2015 water use target. The complete set of SB X7-7 verification tables used to document this compliance is included in Appendix F.

Table 5-2. 2015 Compliance (DWR Table 5-2)

Actual 2015 GPCD*	2015 Interim Target GPCD*	Optional Adjustments to 2015 GPCD <i>From Methodology 8</i>					2015 GPCD* <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2015 GPCD*		
165	278	0	0	0	0	165	165	Yes

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

As detailed in DWR’s *Methodologies* document, there are allowable adjustments that can be made to an agency’s gross water use in 2015 for unusual weather, land use changes, or extraordinary institutional water use. The City has elected not to make the adjustments allowed by Water Code Section 10608.24 because these exceptions are not needed to demonstrate compliance with SB X7-7.

5.8 REGIONAL ALLIANCE

The City has chosen to comply with the requirements of SB X7-7 on an individual basis. The City has elected not to participate in a regional alliance.

(THIS PAGE LEFT BLANK INTENTIONALLY)

This chapter describes the sources of water available to the City. These sources include supplies from other agencies, groundwater, surface water, storm water, wastewater and recycled water, desalinated water, and exchanges or transfers. The origin of the water supply, water quality, and quantity issues, as well as the anticipated actions to meet future demands for each water source are discussed.

6.1 PURCHASED OR IMPORTED WATER

Folsom Lake has been the primary source of water for the City since 1971. Through the Folsom Lake Municipal and Industrial Intake, the City receives untreated Central Valley Project (CVP) water from the U.S. Bureau of Reclamation (USBR), and untreated water from PCWA. Additionally, through this same delivery point, the City receives a normal/wet year untreated water supply from SJWD. The untreated surface water is delivered to the City's Barton Road Water Treatment Plant. The City is working with PCWA to receive treated water in the future.

The City's three untreated surface water contract entitlements for American River water total 66,000 acre-feet per year (AF/YR), as described below. Additionally, the City, as a member of the Sacramento Water Forum, is a signatory to the Water Forum Agreement (WFA) and has agreed to limit its diversions from the upper American River to 58,900 AF/YR during Normal/Wet Years and to between 54,900 AF/YR and 39,800 AF/YR in Drier and Driest Years. Irrespective of the amount of water used, the City resolves that "By instituting programs to conserve water, it abandons no right, title or interest in or to any city water rights, contractual entitlements or any appurtenant rights necessary to exercise such water rights or entitlements," as described by Resolution No. 09-64, Declaring an Intent to Retain Control of Conserved Water (Appendix G).

6.1.1 Other Available Water Purchases

The City may also purchase Section 215 water from the USBR when available, but has not done so at this time. Section 215 water is water the Bureau releases from Folsom Lake that is in excess of the entitlements and rights of downstream users, and is usually only available during winter months.

6.2 GROUNDWATER

The City currently maintains six groundwater wells for emergency and dry year supply. All wells possess ASR capability. This allows the City to store potable water directly in the aquifer, allowing it to be withdrawn for use at a later time.

6.2.1 Groundwater Basin Description

The City is located over the North American sub-basin of the Sacramento Valley Groundwater Basin. The North American sub-basin (DWR Groundwater Basin Number 5-21.64) is located in the eastern central portion of the Sacramento Groundwater Basin, encompassing portions of Sutter, Placer, and Sacramento Counties. As of 2015, the Basin is listed by DWR as neither adjudicated nor in critical overdraft condition.

Groundwater elevation levels in the basin along the Placer/Sacramento County line declined at a rate of 1 to 1.5 feet per year through the mid 1990's. Some of the largest decreases have occurred in the area of the former McClellan Air Force Base. From 1995, groundwater elevations were maintained and the declining elevation trend was dampened due to groundwater management activities stemming from the Water Forum Agreement restraining further increases in groundwater pumping and implementation of in-lieu banking in the region. Groundwater levels in Sutter and northern Placer counties generally have remained stable, although some wells in southern Sutter County have experienced declines.

In addition, the basin has historically been pumped by agricultural and urban users. Recently, agricultural land has been and is being developed and converted to urban uses. With this conversion, the agricultural groundwater pumping demand will decrease. If the agricultural groundwater pumping demand is not replaced by other pumping demands, it is anticipated that the total groundwater pumping demands throughout the basin will decrease, potentially increasing the volume of groundwater stored in the groundwater basin.

6.2.2 Groundwater Management

The City is participating in local groundwater management through the Western Placer County Groundwater Management Plan and through the provisions of the Sustainable Groundwater Management Act. These are discussed below.

6.2.2.1 Western Placer County Groundwater Management Plan

A Groundwater Management Plan (GMP) was completed in November of 2007 in cooperation with PCWA, City of Lincoln, and California American Water. The GMP is available through the PCWA website: (https://www.pcwa.net/files/docs/enviro/WPCGMP_Groundwater_Management_Plan_07.pdf).

6.2.2.2 Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act of 2014 (SGMA), a three-bill legislative package composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), was passed in September 2014. The legislation provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention when necessary to protect the resource. The legislation lays out a process and a timeline for local authorities to achieve sustainable management of groundwater basins. It also provides tools, authorities and deadlines to take the necessary steps to achieve the goal. For local agencies involved in implementation, the requirements are significant and can be expected to take years to accomplish. The State Water Resources Control Board may intervene if local agencies do not form a Groundwater Sustainability Agency (GSA) and/or fail to adopt and implement a Groundwater Sustainability Plan (GSP).

The SGMA implementation steps and deadlines are shown in Table 6-1.

Table 6-1. Sustainable Groundwater Management Act Implementation Steps and Deadlines

Implementation Step	Implementation Measure	Deadlines
Step One	Local agencies must form local GSAs within two years	<ul style="list-style-type: none"> • June 30, 2017
Step Two	Agencies in basins deemed high- or medium-priority must adopt GSPs within five to seven years, depending on whether a basin is in critical overdraft	<ul style="list-style-type: none"> • January 31, 2020 for critically overdrafted basins • January 31, 2022 for high- and medium-priority basins not currently in overdraft
Step Three	Once plans are in place, local agencies have 20 years to fully implement them and achieve the sustainability goal	<ul style="list-style-type: none"> • January 31, 2040 for critically overdrafted basins • January 31, 2042 for high- and medium-priority basins not currently in overdraft

SGMA applies to basins or subbasins designated by the DWR as high or medium priority basins, based on a statewide ranking that uses criteria including population and extent of irrigated agriculture dependent on groundwater. The final Basin Prioritization findings indicate that 127 of California's 515 groundwater basins and subbasins are high and medium priority basins. These high and medium priority basins account for 96 percent of California's annual groundwater pumping and supply 88 percent of the population which resides over the groundwater basins. The ranking for the North American sub-basin of the Sacramento Valley groundwater basin is shown in Table 6-2. As shown, the Sacramento Valley basin has been ranked as a high priority basin.

Table 6-2. Groundwater Basin Prioritization for Sustainable Groundwater Management Act^(a)

Rank ^(b)	Basin Number	Basin Name	Overall Basin Ranking Score	Overall Basin Priority
24	5-21.64	Sacramento Valley/North American Sub-basin	22.5	High
^(a) CASGEM Groundwater Basin Prioritization Results, run version May 26, 2014. ^(b) Out of a total of 515 basins, of which 127 were high- or medium-priority basins.				

Although not yet finalized, it is believed that Placer County, the City of Roseville, The City of Lincoln, Placer County Water Agency, and the California American Water Company will join and act as the GSA for the development of a GSP for a portion of the North American Sub-basin of the Sacramento Valley groundwater basin. Several of the activities, including adoption of regulations for GSPs, are not expected to be finalized until June 30, 2016. Therefore, new requirements for groundwater management under SGMA do not apply to this 2015 UWMP, but will be addressed in the 2020 UWMP.

6.2.3 Historical Groundwater Production

Groundwater use is not a part of normal condition water supplies for the City. In support of the ASR program development, however, groundwater was extracted and delivered to customers within the service area. This was not a normal supply condition but driven by the ASR demonstration project as opposed to shortages requiring the supplemental water. A summary of the amount of groundwater pumped by the City for the past five years is provided in Table 6-3.

Table 6-3. Retail: Groundwater Volume Pumped (DWR Table 6-1)

Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Sacramento Valley Groundwater Basin - North American Subbasin	0	-1773	-371	296	6
TOTAL		0	(1,773)	(371)	296	6

NOTES: Volumes are in AF. Numbers represent net groundwater pumped out of ASR well and into the distribution system. A negative number represents an injection into an ASR well from the distribution system. Some values, including the 6 AF in 2015, can be attributed to ASR maintenance, or for commission of new pump station facilities.

6.2.4 Aquifer Storage and Recovery (ASR)

With an objective of creating a diverse water system to meet the needs to the community, the City has invested in development of an ASR program that will utilize constructed water infrastructure along with existing water supplies to increase reliability. ASR wells include features that allow injection of surface water from the distribution system into the groundwater aquifer. This allows the City to take surface water sources that are available, treat it and then inject it into the groundwater aquifer for later use.

Water availability for ASR could be from unused allocations consistent with the Water Forum Agreement diversion limitations. In addition, during wet times, Section 215 flood control spill water may also be available. Since flood control spill does not usually correlate with peak demand, banking water through ASR provides an opportunity to capture this water for use when needed. These operations may result in water diversions in excess of customer demands but stored for later use.

In 2013, the City received an operational permit from the Central Valley Regional Water Quality Control Board for the ASR program.

6.3 SURFACE WATER

Although the City’s water supplies are technically surface water, it is not considered self-supplied, and is therefore described above in Section 6.1, Purchased or Imported Water.

6.4 STORMWATER

The City does not currently employ any active storm water recovery measures, and does not have plans to do so.

6.5 WASTEWATER AND RECYCLED WATER

The City currently owns and operates two regional wastewater treatment facilities that treat wastewater flows collected from the City, South Placer Municipal Utilities District, and some areas of Placer County. This section provides information on the wastewater and its current and potential reuse as a recycled water resource.

6.5.1 Recycled Water Coordination

The City regards recycled water as a valuable resource that is integrated into the City's overall water supply portfolio. In preparing this UWMP, the City has coordinated its recycled water planning with its regional wastewater partners, including Placer County and South Placer Municipal Utility District.

6.5.2 Wastewater Collection, Treatment, and Disposal

The City, the South Placer Municipal Utility District (SPMUD), and Placer County are regional partners in the South Placer Wastewater Authority (SPWA). The SPWA was created in 2000 to oversee policy for funding regional wastewater and recycled water infrastructure.

The wastewater collection facilities within the City's service area are maintained by the City. The wastewater collection facilities outside of the City's service area are maintained by the other SPWA agencies (Placer County and South Placer Municipal Utility District). Wastewater outside of the City's service area but within the 2005 SPWA Service Area Boundary (SAB) is conveyed through trunk sewers to the City's wastewater treatment facilities located within the City limits. Metering stations are located at the City's service area boundaries to account for the wastewater entering the City's collection system originating from the Placer County and SPMUD collection areas.

The City owns and operates the Dry Creek Wastewater Treatment Plant (Dry Creek WWTP) and the Pleasant Grove Wastewater Treatment Plant (Pleasant Grove WWTP). Both plants produce a Title 22 quality effluent that meets the requirements for "full unrestricted reuse" that is available for recycled water applications and discharge of disinfected tertiary treated effluent to nearby creeks.

As their names imply, the Dry Creek WWTP discharges to Dry Creek while the Pleasant Grove WWTP discharges to Pleasant Grove Creek. The two wastewater treatment plants serve an area that is larger than the City boundaries. The SPWA 2005 SAB is shown in Figure 6-1.

The Dry Creek WWTP produces disinfected tertiary-level wastewater treatment through the process of screening, grit removal, primary clarification, aeration, nitrification and denitrification, secondary clarification, filtration, and ultraviolet disinfection. Disinfected tertiary treated wastewater from the Dry Creek WWTP meets Title 22 regulations for full, unrestricted use. The

current (2015) average dry weather flow (ADWF) is approximately 7.7 MGD, of which approximately 5 MGD comes from the City of Roseville. The plant is currently authorized to discharge up to 18 MGD ADWF into Dry Creek under National Pollutant Discharge Elimination System (NPDES) permit No. CA0079502 adopted on March 28, 2014. The Dry Creek WWTP currently (2015) produces 1,173 AF/YR of recycled water that is used within the City’s water service area for landscape irrigation, construction uses, and cooling water makeup.

The Pleasant Grove WWTP currently (2015) treats approximately 6.4 MGD ADWF with approximately 5 MGD coming from the City of Roseville. The Pleasant Grove WWTP produces disinfected tertiary-level treatment through the process of screening, grit removal, extended aeration, nitrification and denitrification, secondary clarification, filtration, and either chlorination (for recycled water) or ultraviolet disinfection (for discharge to Pleasant Grove Creek). Chlorine disinfected tertiary treated wastewater from the Pleasant Grove WWTP meets Title 22 regulations for full, unrestricted use. The Pleasant Grove WWTP is currently authorized to discharge disinfected treated effluent into Pleasant Grove Creek under the NPDES Permit No. CA0084573 adopted on March 28, 2014. Under this permit the Pleasant Grove WWTP can discharge an ADWF of 12 MGD increasing to a permitted ADWF discharge of 15 MGD upon completion of additional treatment facilities. The Pleasant Grove WWTP currently (2015) produces 2,094 AF/YR of recycled water that is used within the City’s service area boundary for irrigation and construction uses.

As described above, both treatment plants are regional wastewater facilities and as such, wastewater is generated both inside of and outside of the City from a combination of residential and non-residential sources. A summary of the volume of wastewater processed at and discharged from each of the City’s wastewater treatment plants in 2015 is provided in Table 6-4 and Table 6-5.

Table 6-4. Retail: Wastewater Collected Within Service Area in 2015 (DWR Table 6-2)

<input type="checkbox"/>	There is no wastewater collection system. The supplier will not complete the table below.					
100	Percentage of 2015 service area covered by wastewater collection system <i>(optional)</i>					
100	Percentage of 2015 service area population covered by wastewater collection system <i>(optional)</i>					
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? <i>(optional)</i>
City of Roseville	Estimated	4,728	City of Roseville	Pleasant Grove WWTP	Yes	No
City of Roseville	Estimated	5,940	City of Roseville	Dry Creek WWTP	Yes	No
Total Wastewater Collected from Service Area in 2015:		10,668				
NOTES: Volumes are in AF. City of Roseville manages wastewater collection within the City limits. Other member agencies of the South Placer Wastewater Authority manage wastewater collection in their respective jurisdictions.						

Table 6-5. Retail: Wastewater Treatment and Discharge Within Service Area in 2015 (DWR Table 6-3)

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number (optional)	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Pleasant Grove WWTP	Pleasant Grove Creek	Creek		River or creek outfall	Yes	Tertiary	7,504	5,410	2,094	0
Dry Creek WWTP	Dry Creek	Creek		River or creek outfall	Yes	Tertiary	9,428	7,135	1,966	327
						Total	16,932	12,545	4,060	327

NOTES: All volumes are in AF. Volume delivered outside service area is to the Morgan Creek Golf Course. Of the 5,410 AF discharged from Pleasant Grove WWTP, 4,480 AF is a required discharge, and is therefore not available for other uses.

6.5.3 Recycled Water System

As indicated above, the City treats wastewater at its Dry Creek and Pleasant Grove WWTPs to Title 22 disinfected tertiary standards and distributes it for landscape irrigation, golf course irrigation, construction uses, and to provide cooling water for the Roseville Energy Park within the City water service area. Recycled water is also conveyed outside the City water service area for golf course irrigation.

The City has prepared the 2009 Updated South Placer Regional Wastewater and Recycled Water Systems Evaluation Report (Appendix H), which delineates the 2005 SAB and provides baseline and projected characterizations of its regional wastewater and recycled water systems.

The Systems Evaluation report was updated in part to assist in the ongoing expansion of a regional water recycling system. The goal of utilizing recycled water supplies is to promote responsible water supply management. Beneficial reuse of available disinfected tertiary treated Title 22 recycled water allows surface water and groundwater supplies be applied to potable uses.

All agency elements for a reuse program within the City boundary, including land planning, development, wastewater treatment, and water supply, are all part of the City of Roseville government organization.

6.5.4 Recycled Water Beneficial Uses

The City’s recycled water program predominately serves landscape irrigation customers. The City currently delivers recycled water to four golf courses, several parks, two schools, and several miles of streetscape for landscape irrigation within the City’s potable water service area, plus one golf course (Morgan Creek Golf Course) outside of the City’s potable water service area. The City also delivers recycled water to the Roseville Energy Park for industrial cooling, and discharges flow to Dry Creek, as described below. Landscapes at both regional treatment plants also use recycled water for irrigation purposes.

The current and projected direct beneficial uses of recycled water in the City’s water service area are shown in Table 6-6.

Table 6-6. Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area (DWR Table 6-4)

Name of Agency Producing (Treating) the Recycled Water:		City of Roseville						
Name of Agency Operating the Recycled Water Distribution System:		City of Roseville						
Supplemental Water Added in 2015		No						
Source of 2015 Supplemental Water								
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	2015	2020	2025	2030	2035	2040 (opt)
Agricultural irrigation		Tertiary	0	0	0	0	0	0
Landscape irrigation (excludes golf courses)		Tertiary	1,562	1,923	2,293	2,761	3,145	3,460
Golf course irrigation	Only golf courses within potable water service area	Tertiary	1,378	1,378	1,378	1,378	1,378	1,378
Commercial use		Tertiary	0	0	0	0	0	0
Industrial use	Roseville Energy Park Cooling Water.	Tertiary	1,120	1,120	1,120	1,120	1,120	1,120
Geothermal and other energy production		Tertiary	0	0	0	0	0	0
Seawater intrusion barrier		Tertiary	0	0	0	0	0	0
Recreational impoundment		Tertiary	0	0	0	0	0	0
Wetlands or wildlife habitat		Tertiary	0	0	0	0	0	0
Groundwater recharge (IPR)*		Tertiary	0	0	0	0	0	0
Surface water augmentation (IPR)*		Tertiary		0	0	0	0	0
Direct potable reuse		Tertiary		0	0	0	0	0
Other (Provide General Description)		Tertiary	0	0	0	0	0	0
Total:			4,060	4,421	4,791	5,259	5,643	5,958
<i>*IPR - Indirect Potable Reuse</i>								
NOTES: All volumes in AF. Demands do not include approximately 327 AF delivered to Morgan Creek Golf Course, which is outside the City's potable water service area.								

The uses listed in Table 6-6 include use as recycled water supplies and required discharges. Recycled water uses represent the demands the City has determined are economically feasible to serve within the City’s service area boundary including recently approved specific plans (Sierra Vista, Creekview, and Amoruso Ranch). The City is required to maintain four million gallons per day discharge into Dry Creek as an in-stream flow requirement; however, there are no in-stream flow requirements for Pleasant Grove Creek. These discharge flows, totaling 4,480 AFY, are not shown in Table 6-6.

A comparison of the 2015 actual use of recycled water compared to what was projected for use in 2015 in the 2010 UWMP is provided in Table 6-7.

Table 6-7. Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual (DWR Table 6-5)

Use Type	2010 Projection for 2015	2015 Actual Use
Agricultural irrigation	-	0
Landscape irrigation (excludes golf courses)	2,197	1,562
Golf course irrigation	-	1,378
Commercial use	-	0
Industrial use	-	1,120
Geothermal and other energy production	1,120	0
Seawater intrusion barrier	0	0
Recreational impoundment	-	0
Wetlands or wildlife habitat	4,480	0
Groundwater recharge (IPR)	-	0
Surface water augmentation (IPR)	N/A	0
Direct potable reuse	N/A	0
Other	<i>Type of Use</i>	0
Total	7,797	4,060

NOTES: (1) "2010 Projection for 2015" Landscape Irrigation value of 2,197 included golf courses.
 (2) The 1,120 AF classified in 2010 as "geothermal and other energy production" was reclassified to industrial use.
 (3) The 4,480 AF classified in 2010 as "wetlands or wildlife habitat" represents a required discharge to Dry Creek, and has been reclassified to not be included as a recycled water beneficial use.
 (4) "2010 Projection for 2015" includes approximately 327 AF delivered to the Morgan Creek Golf Course that, although delivered in 2015, is not reported under "2015 Actual Use" due to the Morgan Creek Golf Course location outside of the City's service area.

The 2015 Actual Use column does not include recycled water uses outside of the City's potable water service area, although the 2010 Projection for 2015 does include these uses.

6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

As of 2015, the peak recycled water production in July is approximately equal to the peak recycled water demand in July. For the City to further expand recycled water usage during the irrigation season, additional recycled water must be made available. This will most likely be accomplished through expansion of operational storage, with the necessary storage volume dependent on actual demand requirements. Therefore, the City will continue to evaluate in-City and regional recycled demands and consider its ability to provide recycled water for future projects.

It is the policy of the City that where the use of recycled water is feasible, appropriate, and acceptable to all applicable regulatory agencies, the City will require an owner or customer to use recycled water for approved uses. The City has other methods of encouraging recycled water use including a rate discount and public education. The recycled water rate for customers is currently 50 percent of the potable water rate. The City currently does not charge a connection fee for connecting to the City's recycled water system. Not charging a connection fee also represents substantial cost savings to irrigation customers. The City also implements an extensive public education campaign to educate its customers about the reliability and other benefits of recycled water. Another major benefit to customers of using recycled water is that it can be used in times

of drought. In the event the City imposes drought restrictions on uses, such as irrigation and construction, recycled water is exempt from these restrictions.

One target of future recycled water use is new development (see Table 6-8). A major hindrance to expanding use of recycled water in existing developments is lack of infrastructure. Installing new infrastructure in existing areas is exceedingly expensive. The City requires use of recycled water for all commercial irrigation services in newly developing master planned areas. This is feasible because recycled water infrastructure can be built as a part of the original project. Additionally, the City is considering expanding recycled water distribution to entities both within and outside the potable water service area.

Table 6-8. Retail: Methods to Expand Future Recycled Water Use (DWR Table 6-6)

Section 6.5.5	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Developer Agreements	As part of the entitlement approval process, developers must include recycled water use.	2015-2040	1,898
Total			1,898
NOTES: All volumes in AF.			

6.6 DESALINATED WATER OPPORTUNITIES

There are no opportunities for the development of desalinated water within the City’s service area as a future supply source. The City is not located near any bodies of water that would allow the option.

6.7 EXCHANGES OR TRANSFERS

The City maintains an on-demand treated water system that is used for municipal and industrial purposes. The City maintains direct treated water interties with five surrounding jurisdictions, as described in Section 2.2.3. The City can transfer water between jurisdictions through these interties or access water to supplement its distribution system. These facilities are designed to be used for wheeling water through the service area or for short-term demand shortage assistance. These exchanges or transfers are not considered long term and not included as long term or permanent opportunities.

As a condition of the Water Forum Agreement, the City has entered into a re-operation agreement with PCWA for up to 20,000 AF to be used when Roseville’s surface diversion is cut back. In general, the agreement calls for PCWA to release up to an additional 20,000 AF to the American River on an annual basis during time of reduced water availability in the system. The water is to maintain flows in the Lower American River (Nimbus dam to Sacramento River), and therefore is not available for the City’s use. This re-operation water is considered a transfer, although the ultimate user, if any, of the water has not been identified as part of the agreement, only that the

water would be marketed when it was identified as available. It is possible there could be multiple users, as the water will flow to the Delta and theoretically be available to all Delta water users.

Also as a condition of the Water Forum Agreement, the City has committed to not take the entire amount of contracted water from the Upper American River. As a result of having 66,000 AF of water available through various contracts and a commitment to take no more than 54,900 AF from the American River watershed there is opportunity to find a long term transfer for the 7,100 AF with a user downstream of the confluence of the American and Sacramento Rivers. Several transfer opportunities have been evaluated but none have been completed. The Water Code definition of short and long-term conditions are that short-term is considered for a period of one year or less and long-term is for a period of more than one year.

6.8 FUTURE WATER PROJECTS

Future water supply project opportunities, including purchasing or importing water, further development of groundwater resources, and expansion of the City's ASR program are discussed below.

6.8.1 Purchased or Imported Water

In addition to the current contract with PCWA for 30,000 AFY of surface water, the City is negotiating an agreement with PCWA for additional treated surface water supplies available in all hydrologic year types. The treated PCWA water will be supplied from PCWA's future Ophir Water Treatment Plant (Ophir WTP) which is supplied from PCWA's Middle Fork Project water. The Ophir WTP will be constructed in phases, with the first phase expected to be operational by 2020 and provide 10 MGD total supply to all customers. Additional phases will be evaluated as PCWA wholesale customers need new supply. At a minimum, the City plans to purchase 2.7 MGD of normal year capacity from the Ophir WTP, equivalent to 1,500 AFY of treated surface water supply. The City is also considering purchasing up to 10 MGD of dry-year capacity at this facility to enhance its water supply reliability.

6.8.2 Groundwater

It is the City's current policy that groundwater will be used only for reliability in times of shortage. Therefore, groundwater use is not assumed as part of normal water supply conditions within the planning horizon through 2040. To prepare for shortages in the future, and the eventual development of conjunctive use programs currently being studied, additional wells are being planned for the system. For planning purposes, each well is assumed to produce a nominal 1,500 GPM, with final production identified upon drilling and well development. When wells are used for backup or dry year supply, it is anticipated that they will be run for only short periods of time (in the case of backup), and for only a portion of the year (in the case of dry year supply). All wells will be constructed with capability to recharge the aquifer directly with treated surface water as a key element required for conjunctive use programs (see aquifer storage and recovery discussion below).

The City intends to construct additional groundwater wells over the next fifteen years for a total of ten new wells. Each well is assumed to provide 2,421 AF/YR (1,500 GPM), for a total of 21,789 AF/YR (13,500 GPM) of emergency supply.

6.8.3 Aquifer Storage and Recovery

All existing wells have ASR injection capability, and all future wells are planned to incorporate the same. The ASR program would not only allow the City to change the pattern of water withdrawal from Folsom Reservoir from peak demand times in the summer to better water availability times in the winter, but could also be used as a replacement for surface water in WFA dry/drier years (see Chapter 7).

The expected future water supply programs are listed in Table 6-9.

Table 6-9. Retail: Expected Future Water Supply Programs (DWR Table 6-7)

Section 6.8	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
	Yes	No				
Purchase from PCWA	Yes	PCWA	As described in text	2025-2030	All Year Types	1,500
Well Expansion - Phase I	No		4 New Wells	2015-2020	Single-Dry and Multi-Dry Year	9,684 (2,421 per well)
Well Expansion - Phase II	No		3 New Wells	2020-2025	Single-Dry and Multi-Dry Year	7,263 (2,421 per well)
Well Expansion - Phase III	No		2 New Wells	2025-2030	Single-Dry and Multi-Dry Year	4,842 (2,421 per well)

NOTES: Volumes are in AF. The groundwater projects are intended to act as dry year water supplies and hence increase the City's water supply reliability. It is the City's policy to not use groundwater facilities to increase the available normal year water supply.

6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

The City's current and planned sources of water can be summarized as such:

- The City is currently contracted to purchase 66,000 total AF/YR of American River water diverted from Folsom Lake with certain restrictions (see Chapter 7).
- The City intends to purchase an additional treated water supply from PCWA of no less than 1,500 AF/YR as part of their Ophir Water Treatment Plant project.
- The City maintains groundwater wells for backup, emergency, and dry year supply. All current wells possess ASR capability.
- The City neither currently uses nor plans to use surface water that is not mentioned above.

- The City neither currently uses nor plans to use storm water as a potable water offset.
- The City currently utilizes and has future plans to expand recycled water usage.
- The City neither currently uses nor plans to use desalinated water.
- The City maintains direct treated water interties with four surrounding jurisdictions for use in emergency situations.

The actual (2015) water supplies for the City are summarized in Table 6-10.

Table 6-10. Retail: Water Supplies – Actual (DWR Table 6-8)

Water Supply	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality	Total Right or Safe Yield (optional)
Purchased or Imported Water	United States Bureau of Reclamation (USBR)	7,820	Raw Water	32,000
Purchased or Imported Water	Placer County Water Agency (PCWA)	30,000	Raw Water	30,000
Purchased or Imported Water	San Juan Water District	0	Raw Water	4,000
Recycled Water	South Placer Wastewater Authority	4,060	Recycled Water	4,060
Total		41,880		70,060
NOTES: All volumes in AF. USBR allocation of 7,820 AF is 25% of recent water use. Actual Volume values in table represent supply available in 2015, actual water use was less (20,881 AF). San Juan Water District supply is available only in normal or wetter years and was not available in 2015. Recycled water volume represents volume distributed within the City's potable water service area.				

The future projected water supplies for the City are summarized in Table 6-11.

Table 6-11. Retail: Water Supplies – Projected (DWR Table 6-9)

Water Supply	Additional Detail on Water Supply	Projected Water Supply <i>Report To the Extent Practicable</i>									
		2020		2025		2030		2035		2040 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Purchased or Imported Water	U.S. Bureau of Reclamation (CVP Supply)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000
Purchased or Imported Water	PCWA (Middle Fork Supply)	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Purchased or Imported Water	PCWA Treated Water (Additional Future Purchase)	0	0	0	0	1,500	1,500	1,500	1,500	1,500	1,500
Purchased or Imported Water	San Juan Water District	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Recycled Water	SPWA	4,421	4,421	4,791	4,791	5,259	5,259	5,643	5,643	5,958	5,958
Total		70,421	70,421	70,791	70,791	72,759	72,759	73,143	73,143	73,458	73,458

NOTES: All volumes are in AF. Does not include groundwater or intertie water, as both are intended for emergency situations and/or dry year use.

6.10 CLIMATE CHANGE IMPACTS TO SUPPLY

At this time, a discussion in the UWMP of the potential impacts of climate change on the City’s water supply is not required by the CWC and is therefore not included in this UWMP.

(THIS PAGE LEFT BLANK INTENTIONALLY)

CHAPTER 7

Water System Reliability

This chapter describes the long term reliability of the City's water supplies. The City's existing and planned water management tools for increasing the reliability of water supplies are also addressed. Shorter term reliability planning that may require immediate action, such as drought or a catastrophic supply interruption, is addressed in Chapter 8.

7.1 CONSTRAINTS ON WATER SOURCES

This section addresses potential legal, environmental, water quality, and climatic effects on the reliability of water supply sources through the year 2040.

7.1.1 Legal Constraints

The City does not anticipate legal factors to affect the reliability of recycled water or purchased water supply within the planning horizon of this UMWP.

There are no existing legal constraints that limit groundwater pumping and the groundwater basin is not adjudicated. However, the legal authority to enforce the safe yield of the basin has not been created, and the basin is subject to the users' cooperation in managing the basin until a formal authority is created. These issues and concerns are being discussed as part of the Western Placer County Groundwater Management Plan along with management objectives and activities. The collaborative group of City of Roseville, PCWA, City of Lincoln, and California American Water is responsible for and has been identified as the responsible entity for monitoring groundwater levels meeting requirements of the 2009 SB X7-6 California Statewide Groundwater Elevation Monitoring (CASGEM) program. Information gathered as part of this program was included in the groundwater model that was developed to support the ASR application with the Regional Water Quality Control Board to determine impacts of proposed extractions and injections related to groundwater levels in the region.

7.1.2 Water Quality Constraints

The City does not anticipate water quality factors to affect the reliability of recycled water, purchased water, or groundwater supply within the planning horizon of this UMWP. If applicable in the future, chemical contamination and the lowering of maximum contaminant levels (MCLs) for naturally-occurring constituents can be mitigated by constructing new treatment facilities.

7.1.3 Physical Constraints

The physical constraints of recycled water, surface water, and groundwater are discussed below.

7.1.3.1 Recycled Water

Recycled Water is physically constrained by flows into the City's wastewater treatment plants.

7.1.3.2 Surface Water

The City has identified its Folsom Lake intake pipe as a possible physical constraint on current surface water supply. If the water level of Folsom Lake were to drop below the intake, the City would not be able to divert water without additional infrastructure. As a precaution, the City is actively searching for new diversion points.

The capacities of the Folsom Dam diversion, Roseville Water Treatment Plant, and distribution systems are sufficient to divert, treat, and convey the projected surface water demands. A 150 cubic feet per second (CFS) capacity limitation at the USBR pumping plant, which was agreed to based on recent pumping plant improvements, is sufficient to provide water to meet the City's needs.

7.1.3.3 Groundwater

The physical constraints on the current groundwater supply are the pumping capacities of existing wells. The total pumping capacities from all six wells are about 11,050 GPM, approximately 15.9 MGD (see Chapter 3). The City plans to install ten more wells in the future to provide backup and dry year supply.

7.1.4 Other Constraints

Besides the above constraints, several other conditions could result in a reduction of surface water supply. The City's purchased surface water supply is subject to reductions during dry years (seasonal and climatic shortages) pursuant to the Water Forum Agreement (WFA), the USBR Operations Criteria and Plan (OCAP), and the Central Valley Project Municipal and Industrial Water Shortage Policy (CVP M&I WSP). These programs are discussed below.

7.1.4.1 Sacramento Water Forum Agreement

The Sacramento Water Forum is a diverse group of business and agricultural leaders, citizen groups, environmentalists, water managers, and local governments working together to balance two co-equal objectives:

- To provide a reliable and safe water supply for the Sacramento region's long-term growth and economic health; and
- To preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

The City, along with several other Sacramento-area water suppliers are signatory to the January 2000 Water Forum Agreement which includes Purveyor Specific Agreements. The Water Forum Agreements provide the framework for how water resources, including surface water and groundwater supplies would be used in the region, through the year 2030. The City's Purveyor Specific Agreement includes limitations on City surface water diversions from the American River under various hydrologic conditions. The Water Forum categorized water years into three types, all of which are defined in terms of the projected March through November unimpaired flow into Folsom Reservoir. These hydrologic year types are defined as follows:

- Normal/Wet Years: When the projected unimpaired flow into Folsom Reservoir is greater than or equal to 950,000 AF
- Drier Years: When the projected unimpaired flow into Folsom Reservoir is between 400,000 AF and 950,000 AF
- Driest Years: When the projected unimpaired flow into Folsom Reservoir is less than 400,000 AF

Although Roseville's water contract entitlements total 66,000 AF/YR, the City's diversions from the American River are limited by the WFA in normal/wet years, drier and driest years. In normal/wet years, the City has agreed to limit surface water diversions from the American River to 58,900 AF/YR. In driest years (also called critically dry years), the maximum diversion from the American River is limited to 39,800 AF/YR. In drier years, the City may divert an amount between 39,800 and 54,900 AF/YR from the American River, depending on the unimpaired flow into Folsom Lake.

It is important to note that during the drier and driest years, the City agreed to have PCWA release an additional 20,000 AF/YR of water down the American River on the City's behalf through re-operation of PCWA's American River Middle Fork Project (MFP). This 20,000 AF/YR of water is not part of the City's contracted supply of 66,000 AF/YR. The intent of MFP re-operational releases during drier and driest years is to mitigate environmental impacts resulting from increased diversions above 1995 baseline levels.

7.1.4.2 USBR Operations Criteria and Plan (OCAP)

In addition to WFA, the City's USBR water is also subject to restrictions as detailed in the 2004 Long-Term Central Valley Project Operations and Criteria Plan (Located on USBR's website). Chapter 5 – Operations Forecasting states that CVP allocations can be affected by:

- Forecasted reservoir inflows and Central Valley hydrologic water supply;
- Current amounts of storage in upstream reservoirs and in San Luis Reservoir;
- Projected water demands in the Sacramento Valley;
- Instream and Delta regulatory requirements;
- Annual management of 3406(b)(2) (relating to fish and wildlife) resources; and/or
- Efficient use of CVP-SWP export capacity through Joint Point of Diversion flexibility.

The OCAP includes a requirement that contractors be informed by USBR no later than February 15 of any possible deficiency in supplies that year. Since 1992, increasing constraints placed on operations by legislative and ESA requirements have made water delivery to CVP contractors more difficult, with recent drought conditions further impacting deliveries. Additionally, it is important to note that the City's USBR water deliveries may be curtailed purely based on downstream delta conditions, irrespective of available upstream supply.

7.1.4.3 Central Valley Project Municipal and Industrial Water Shortage Policy (CVP M&I WSP)

Upon a condition of shortage as determined by the OCAP, the CVP M&I WSP details the “incremental steps” for by which the available M&I water supply is allocated to the CVP water service contractors. From the November 2015 USBR news release, elements of the CVP M&I Water Shortage Policy include:

- Define water shortage terms and conditions for applicable CVP water service contractors, as appropriate.
- Determine the quantity of water made available to CVP water service contractors that, together with the M&I water service contractors’ drought water conservation measures and other non-CVP water supplies, would assist the M&I water service contractors in their efforts to protect public health and safety during severe or continuing drought.
- Provide information to CVP water service contractors for their use in water supply planning and development of drought contingency plans.

The Final Environmental Impact Statement (EIS) describes the existing setting, alternatives for future operations under the CVP M&I Water Shortage Policy, and potential environmental impacts of each alternative. USBR selected Alternative 4, the Preferred Alternative, which comprises the Updated CVP M&I Water Shortage Policy developed by USBR with stakeholder input received during preparation of the Final EIS.

The decision will allow USBR the greatest degree of flexibility to address CVP water service contractors’ needs during a Condition of Shortage while recognizing that CVP deliveries are subject to the amount of CVP water available. The Updated CVP M&I Water Shortage Policy also provides clarity to the terms, conditions, and procedures of the CVP M&I Water Shortage Policy. A copy of the November 2015 Final Record of Decision is included in Appendix I.

7.2 RELIABILITY BY TYPE OF YEAR

This section addresses the reliability of the City’s water supply in average, single dry, and multiple dry water years. The City uses the following water year definitions from the DWR 2015 Guidebook:

- **Average year:** a year, or an averaged range of years, that most closely represents the average water supply available to the agency. For the purposes of this UWMP, the terms “normal” and “average” are used interchangeably.
- **Single-dry year:** the year that represents the lowest water supply available to the agency.
- **Multiple-dry year period:** the period that represents the lowest average water supply availability to the agency for a consecutive multiple year period (three years or more).

The reliability of the potable and recycled water supplies are discussed below, and are compared to the projected potable and recycled water demand.

7.2.1 Potable Water Supply and Demand Assessment

This section provides an assessment of the City’s expected water supply and demand for average year, single-dry year, and multiple-dry year periods in five year increments through the year 2040, based on data available at the time of publication of this UWMP, and discusses the City plans to mitigate apparent supply deficits.

The City identified base water years for their historical average year, single driest year, and driest multiple-year period in its 2010 UWMP. Base water years were selected based on aggregated information from all water supply sources. The anticipated reliability of the surface water supplies in Normal, Single Dry, and Multi-Dry hydrologic conditions, as a percentage of contracted volume, is shown in Table 7-1.

Table 7-1. Surface Water Supply Reliability, Percent of Contracted Amount

Contracted Water Supply	Normal Year	Single Dry Year ^(a)	Multiple Dry Years ^(b)		
			Year 1	Year 2	Year 3
USBR (Central Valley Project supply)	100	25 ^(c)	75	75	50
PCWA (Middle Fork supply)	100	100	100	100	100
SJWD (Normal year only – Middle Fork supply) ^(d)	100	—	—	—	—

^(a) Minimum American River diversion as outlined in the City’s Water Forum Agreement is 39,800 AF/YR (see Water Forum Agreement discussion in text). PCWA assumes full delivery of 30,000 AF/YR in all hydrologic conditions. The actual lowest historical allocation of USBR supply was 25% in 2015, which would not provide for the full WFA volume.

^(b) Based on the 1990-1992 historical hydrologic conditions.

^(c) Lowest historical allocation was 25% in 2015.

^(d) SJWD is available only as a normal or wetter year supply.

Supply volumes for base years and the available water supply during each water year type are summarized in Table 7-2. As shown, the City has been able to reliably supply water throughout historic average year, single-dry year, and multiple dry year periods.

Table 7-2. Retail: Basis of Water Year Data (DWR Table 7-1)

Year Type	Base Year <i>If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 1999-2000, use 2000</i>	Available Supplies if Year Type Repeats	
		<input type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		<input checked="" type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year	1902-2010	58,900	100%
Single-Dry Year	2015	38,000	65%
Multiple-Dry Years 1st Year	1990	51,394	87%
Multiple-Dry Years 2nd Year	1991	54,000	92%
Multiple-Dry Years 3rd Year	1992	45,426	77%
NOTES: This table represents actual historical data, and is not a predictor of future availability. Does NOT include recycled water.			

The projected potable water supply by water supply source is shown in Table 7-3.

Table 7-3. Projected Surface Water Contract and Supply Reliability During Hydrologic Normal, Single Dry, and Multiple Dry Years

Wholesale Sources	2020	2025	2030	2035	2040
Existing and Planned Sources of Water - Contracted Volume, AF/YR					
U.S. Bureau of Reclamation (CVP supply)	32,000	32,000	32,000	32,000	32,000
PCWA (Middle Fork supply)	30,000	30,000	30,000	30,000	30,000
PCWA (Ophir WTP Supply)	-	-	1,500	1,500	1,500
San Juan Water District	4,000	4,000	4,000	4,000	4,000
Total	66,000	66,000	67,500	67,500	67,500
Normal Year Water Supplies, AF/YR - 58,900 AF/YR (Base Year Water Forum Limitation)					
U.S. Bureau of Reclamation (CVP supply)	32,000	32,000	32,000	32,000	32,000
PCWA (Middle Fork supply)	30,000	30,000	30,000	30,000	30,000
PCWA (Ophir WTP Supply)	-	-	1,500	1,500	1,500
San Juan Water District	4,000	4,000	4,000	4,000	4,000
Total	66,000	66,000	67,500	67,500	67,500
Single Dry Year Water Supplies, AF/YR - 38,000 AF/YR (Surface Water Allocation)					
U.S. Bureau of Reclamation (CVP supply) ^(a)	8,000	8,000	8,000	8,000	8,000
PCWA (Middle Fork supply)	30,000	30,000	30,000	30,000	30,000
PCWA (Ophir WTP Supply)	-	-	1,500	1,500	1,500
San Juan Water District ^(b)	-	-	-	-	-
Total	38,000	38,000	39,500	39,500	39,500
Multi-Dry Year Water Supplies, First Year, AF/YR - 51,394 AF/YR (Base Year Water Forum Limitation)					
U.S. Bureau of Reclamation (CVP supply) ^(c)	24,000	24,000	24,000	24,000	24,000
PCWA (Middle Fork supply)	30,000	30,000	30,000	30,000	30,000
PCWA (Ophir WTP Supply)	-	-	1,500	1,500	1,500
San Juan Water District	-	-	-	-	-
Total	54,000	54,000	55,500	55,500	55,500
Multi-Dry Year Water Supplies, Second Year, AF/YR - 54,000 AF/YR (Surface Water Allocation)					
U.S. Bureau of Reclamation (CVP supply)	24,000	24,000	24,000	24,000	24,000
PCWA (Middle Fork supply)	30,000	30,000	30,000	30,000	30,000
PCWA (Ophir WTP Supply)	-	-	1,500	1,500	1,500
San Juan Water District	-	-	-	-	-
Total	54,000	54,000	55,500	55,500	55,500
Multi-Dry Year Water Supplies, Third Year, AF/YR - 45,426 AF/YR (Base Year Water Forum Limitation)					
U.S. Bureau of Reclamation (CVP supply)	16,000	16,000	16,000	16,000	16,000
PCWA (Middle Fork supply)	30,000	30,000	30,000	30,000	30,000
PCWA (Ophir WTP Supply)	-	-	1,500	1,500	1,500
San Juan Water District	-	-	-	-	-
Total	46,000	46,000	47,500	47,500	47,500
<p>(a) Actual 2015 allocation of 25%.</p> <p>(b) No supply in Single and Multi-Dry hydrologic conditions.</p> <p>(c) See Table 7-1.</p>					

7.2.1.1 Comparison of Supply and Demand

A comparison of projected water supply and demand during normal, single-dry, and multiple-dry years is included in Table 7-4. It is important to note that in all scenarios shown, normal water demands are shown. No demand reductions have been shown for conservation reductions in dry years.

Table 7-4. Summary of Potable Water Demand Versus Supply During Hydrologic Normal, Single Dry, and Multiple Dry Years, AFY^(a)

	Hydrologic Condition				
	2020	2025	2030	2035	2040
Normal Year					
Available Surface Water Supply	58,900	58,900	60,400	60,400	60,400
Potable Water Demand	41,055	43,300	46,074	48,762	50,907
Potential Surplus (Deficit)	17,845	15,600	14,326	11,638	9,493
Single Dry Year					
Available Surface Water Supply	38,000	38,000	39,500	39,500	39,500
Potable Water Demand	41,054	43,300	46,074	48,762	50,907
Potential Surplus (Deficit)	(3,054)	(5,300)	(6,574)	(9,262)	(11,407)
Multiple Dry Years, First Year Supply					
Available Surface Water Supply	51,394	51,394	52,894	52,894	52,894
Potable Water Demand	41,054	43,300	46,074	48,762	50,907
Potential Surplus (Deficit)	10,340	8,094	6,820	4,132	1,987
Multiple Dry Years, Second Year Supply					
Available Surface Water Supply	54,000	54,000	55,500	55,500	55,500
Potable Water Demand	41,054	43,300	46,074	48,762	50,907
Potential Surplus (Deficit)	12,946	10,700	9,426	6,738	4,593
Multiple Dry Years, Third Year Supply					
Available Surface Water Supply	45,426	45,426	46,926	46,926	46,926
Potable Water Demand	41,054	43,300	46,074	48,762	50,907
Potential Surplus (Deficit)	4,372	2,126	852	(1,836)	(3,981)
^(a) Demands from Table 4-3. Supply from Table 7-3 (using limiting factor).					

As shown, there is adequate water supply in normal years to meet demands through 2040; however, in single dry years, and in certain multiple dry years, a water supply deficit may occur. The apparent potable water supply deficit will be mitigated as described below.

7.2.1.2 Deficit Mitigation

Depending on the raw water supply available from USBR, and in accordance with the WFA, deficits in potable water supply may occur in Single Dry Years and Multi-Dry Years beginning in 2040, as described above. To alleviate the potential deficits, the City will require short term demand reductions (water conservation) and/or pump groundwater.

One potential strategy to alleviate the potential water deficits shown in Table 7-4 is indicated in Tables 7-5 and 7-6. In Table 7-5, the potential volume of water resulting from potable water demand reductions of up to 20 percent of Normal Year demands are shown.

Table 7-5. Potential Water Conservation (up to 20 percent of Normal Year Demand)

Hydrologic Condition	2020	2025	2030	2035	2040
Normal	-	-	-	-	-
Single Dry	3,054	5,300	6,574	9,262	10,181
Multi-Dry (Year 1)	-	-	-	-	-
Multi-Dry (Year 2)	-	-	-	-	-
Multi-Dry (Year 3)	-	-	-	1,836	3,981

The remaining deficit could be alleviated by groundwater pumping, as shown in Table 7-6.

Table 7-6. Potential Groundwater Use to Relieve Remaining Deficit

Hydrologic Condition	2020	2025	2030	2035	2040
Normal	-	-	-	-	-
Single Dry	-	-	-	-	1,226
Multi-Dry (Year 1)	-	-	-	-	-
Multi-Dry (Year 2)	-	-	-	-	-
Multi-Dry (Year 3)	-	-	-	-	-

The City will determine the needed balance between water conservation and groundwater pumping on a case-by-case basis. The City is also considering water supply projects or exchanges that would increase the reliability of the raw water supplies diverted from the American River. When these projects are completed, the necessary demand reduction and groundwater use are expected to decrease.

7.2.2 Recycled Water Supply and Demand Comparison

The recycled water supply is considered to be 100 percent reliable in all water year types, as shown in Table 7-7. The projected recycled water supply has been set equal to the projected recycled water demand in Table 7-7 because showing a surplus recycled water supply would mask potential potable water shortages in Tables 7-8, 7-9 and 7-10 (DWR Tables 7-2, 7-3 and 7-4, respectively).

Table 7-7 Recycled Water Supply and Demand Comparison in All Water Year Types

	2020	2025	2030	2035	2040
Available Recycled Water Supply	4,421	4,791	5,259	5,643	5,958
Recycled Water Demand	4,421	4,791	5,259	5,643	5,958
Difference	0	0	0	0	0

As was indicated in Table 6-5 (DWR Table 6-3), the 2015 volume of wastewater treated to tertiary standards was just less than 17,000 AF.

7.2.3 Total Water Supply and Demand Comparison

A comparison of projected total (potable and recycled) water supply and demand during a normal water year is included in Table 7-8. As shown, there is adequate water supply in normal years to meet demands through 2040.

Table 7-8. Retail: Normal Year Supply and Demand Comparison (DWR Table 7-2)

	2020	2025	2030	2035	2040 (Opt)
Supply totals (autofill from Table 6-9)	70,421	70,791	72,759	73,143	73,458
Demand totals (autofill from Table 4-3)	45,475	48,091	51,333	54,405	56,865
Difference	24,946	22,700	21,426	18,738	16,593
NOTES: Volumes are in AF. Includes Recycled Water. Table references refer to DWR table numbers.					

A comparison of projected water supply and demand during a single dry water year is included in Table 7-9.

Table 7-9. Retail: Single Dry Year Supply and Demand Comparison (DWR Table 7-3)

	2020	2025	2030	2035	2040 (Opt)
Supply totals	42,421	42,791	44,759	45,143	45,458
Demand totals	45,475	48,091	51,333	54,405	56,865
Difference	(3,054)	(5,300)	(6,574)	(9,262)	(11,407)

NOTES: All volumes are in AF. Includes Recycled Water.

A comparison of projected water supply and demand during multiple dry years is included in Table 7-10.

Table 7-10. Retail: Multiple Dry Years Supply and Demand Comparison (DWR Table 7-4)

		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	55,815	56,185	58,153	58,537	58,852
	Demand totals	45,475	48,091	51,333	54,405	56,865
	Difference	10,340	8,094	6,820	4,132	1,987
Second year	Supply totals	58,421	58,791	60,759	61,143	61,458
	Demand totals	45,475	48,091	51,333	54,405	56,865
	Difference	12,946	10,700	9,426	6,738	4,593
Third year	Supply totals	49,847	50,217	52,185	52,569	52,884
	Demand totals	45,475	48,091	51,333	54,405	56,865
	Difference	4,372	2,126	852	(1,836)	(3,981)

NOTES: All volumes are in Af. Includes Recycled Water.

The deficits shown in Tables 7-9 and 7-10 are the same as the deficit in potable water demand (Table 7-4). The deficit will be mitigated by a combination of potable water conservation and groundwater pumping, as described above.

7.3 REGIONAL SUPPLY RELIABILITY

All water consumed by the City comes from local supply sources. No water is imported from other regions, nor does the City anticipate importing water from other regions throughout the UWMP planning period.

(THIS PAGE LEFT BLANK INTENTIONALLY)

CHAPTER 8

Water Shortage Contingency Planning



As part of this UWMP, the City has considered possibilities of shortage and outages that could affect water supply. Water shortage contingency planning includes actions to be implemented during a catastrophic interruption of water supplies including but not limited to regional power outage, earthquake, fire, flooding or other disasters. The City's Water Conservation Ordinance (Appendix J) notes that long-duration shortages are handled through implementation of a drought contingency plan, and short-term disruptions are addressed through use of existing water system storage and water system interties with adjacent jurisdictions. In the event these supplies are not sufficient or available to meet short-term needs, groundwater will be used to supplement water demands.

8.1 GENERAL BACKGROUND

The Water and Energy Conservation component of the City of Roseville General Plan encourages resource conservation and protection, and the City provides a comprehensive program to encourage conservation. The City has implemented various strategies and plans to minimize the use of potable water in order to operate effectively under drought conditions.

In 1991, the City developed and adopted the Roseville Water Conservation Ordinance (Section 14.09 of the Roseville Municipal Code). Under this ordinance, the City has authority to declare water shortage conditions and implement drought related mitigation measures. The City can initiate this process by declaring a drought stage (Stage One through Stage Five) and imposing the appropriate and corresponding drought response measures.

Most recently, in 2015 the City adopted Ordinance 5491, which updated the Roseville Municipal Code regarding water conservation. The purpose of the ordinance is to ensure compliance with all federal, state and local requirements relating to water conservation and drought mitigation by:

- Reducing water consumption throughout the City during years of normal precipitation and during years of drought;
- Protecting and conserving the City's supply of water during times of emergency and/or crisis; and
- Minimizing and/or eliminating the waste through voluntary compliance or punitive action, if necessary.

Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update the State's Model Water Efficient Landscape Ordinance (MWELo) through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015. City Staff revised the City's Ordinance to comply with the State's Model Ordinance. The revised ordinance is found in Section 14.18 of the Roseville Municipal Code (available via the City's website).

8.2 STAGES OF ACTION

The City's Municipal Code allows the City to implement up to 5 stages for conservation as detailed in Table 8-1. These stages and associated actions are planned for use not only for water shortages caused by emergencies but also to address water supply reductions as a result of drought. Each water conservation stage is estimated to yield a ten percent reduction in surface water supply needs.

Shortages will be mitigated with use of groundwater, conservation and expansion of recycled water, as available.

Per the Roseville Municipal Code 14.090.050, however, groundwater cannot be used until surface water shortages would result in greater than 20 percent shortage, which would trigger Stage 3 drought conditions. Groundwater cannot be used to decrease drought conditions to lower than Stage 2 conditions. An example of how the City would balance water conservation and groundwater use was provided in Chapter 7.

Pursuant to the City’s Water Forum Agreement, the City has assumed it is limited to no less than 39,800 AFY of surface water supplies in the driest of year types although conference years, when unimpaired inflow to Folsom Lake is below 400,000 AFA, may result in further reductions. This represents a 32.4 percent reduction in average year water supplies of 58,900 AFY. The City has planned groundwater resources to meet the needs of the community so that supply conditions are not anticipated to require conservation reductions greater than 20 percent. In the event conference years require additional reductions in water supplies then increased conservation measures and additional groundwater use would be considered to make up for the shortage.

In 2015, the USBR OCAP operations provided the City with a 25 percent allocation of its CVP water supply. This resulted in total surface water supply to the City of 37,820 AFY, which is below the WFA lower limit. The City rounded this number up slightly and used a water supply of 38,000 AFY in its single dry year water supply analysis in Chapter 7. The upward rounding in 2015 does not change the overall analysis in this document.

Table 8-1. Retail: Stages of Water Shortage Contingency Plan (DWR Table 8-1)

Stage	Complete Both	
	Percent Supply Reduction ¹ <i>Numerical value as a percent</i>	Water Supply Condition <i>(Narrative description)</i>
I	Up to 10%	Surface water supply availability of 53,010 AF ^(a)
II	Up to 20%	Surface water supply availability of 47,120 AF
III	Up to 30%	Surface water supply availability of 41,230 AF
IV	Up to 40%	Surface water supply availability of 35,340 AF ^(b)
V	Up to 50%	Surface water supply availability of 29,450 AF ^(b)
¹ One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
(a) Surface water availability consistent with Water Forum Agreement for water taken from the American River system. (b) Based on water supply portfolio available it is not projected or anticipated that shortages would ever get to levels of 40 – 50% shortage. Measures are planned, however, to meet regulatory requirements or UWMP.		

8.3 PROHIBITIONS ON END USES

California Water Code Section 10632 (a)(4) requires mandatory prohibitions against specific water use practices that may be considered excessive during water shortages.

The City originally adopted an ordinance that established rules and regulations prohibiting wasteful water use during a normal water supply situation and providing enforcement thereof. This ordinance was updated to conform to the California Urban Water Conservation Council’s (CUWCC) memorandum of understanding (MOU) for best management practices. A copy of the City’s current adopted Water Conservation Ordinance is included in Appendix J of this 2015 UWMP. Table 8-2 lists a selection of the City’s Restrictions and Prohibitions on End Uses.

Table 8-2. Retail Only: Restrictions and Prohibitions on End Uses (DWR Table 8-2)

Stage	Restrictions and Prohibitions on End Uses	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement?
0	Landscape - Limit landscape irrigation to specific times	Appendix - Water Shortage Ordinance: 14.09.070 (A)	Yes
1	Landscape - Limit landscape irrigation to specific days	Appendix - Water Shortage Ordinance: 14.09.070 (C)	Yes
1	Other - Prohibit use of potable water for washing hard surfaces	Appendix - Water Shortage Ordinance: 14.09.070 (H)	Yes
1	CII - Restaurants may only serve water upon request	Appendix - Water Shortage Ordinance: 14.09.070 (I)	Yes
2	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Appendix - Water Shortage Ordinance: 14.09.070 (H)	Yes
3	Landscape - Other landscape restriction or prohibition	Appendix - Water Shortage Ordinance: 14.09.070 (H)	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	Appendix - Water Shortage Ordinance: 14.09.070 (J)	Yes
3	Other - Prohibit use of potable water for construction and dust control	Appendix - Water Shortage Ordinance: 14.09.070 (K)	Yes
3	Pools and Spas - Require covers for pools and spas	Appendix - Water Shortage Ordinance: 14.09.070 (L)	Yes
4	Other water feature or swimming pool restriction	Appendix - Water Shortage Ordinance: 14.09.070 (K)	Yes
4	Other	Appendix - Water Shortage Ordinance: 14.09.070 (L)	Yes
5	Landscape - Prohibit certain types of landscape irrigation	Appendix - Water Shortage Ordinance: 14.09.070 (C)	Yes
5	Other water feature or swimming pool restriction	Appendix - Water Shortage Ordinance: 14.09.070 (D)	Yes

8.4 PENALTIES, CHARGES, OTHER ENFORCEMENT OF PROHIBITIONS

Each Stage of the Contingency Plan establishes certain restrictions on the use of potable water. Violating the restrictions in a particular Stage while it is in effect is declared a non-essential, wasteful use of potable water. The procedures for enforcing the mandatory water use restrictions are further described in Section 9.1.1, with the corresponding Roseville Municipal Code Chapter 14.09 found in Appendix J.

Chapter 8

Water Shortage Contingency Planning



8.5 CONSUMPTION REDUCTION METHODS

Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply. California Water Code Section 10632 (a)(5) requires the water supplier to provide consumption reduction methods in the most restrictive stages of a water shortage. Table 8-3 lists a selection of City's consumption reduction methods for each stage of the City's Water Shortage Contingency Plan (WSCP). Refer to Appendix J for the complete list of consumption reduction methods.

Table 8-3. Retail Only: Stages of WSCP – Consumption Reduction Methods (DWR Table 8-3)

Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference <i>(optional)</i>
All Stages	Expand Public Information Campaign	
All Stages	Increase Water Waste Patrols	
All Stages	Offer Water Use Surveys	
	Implement or Modify Drought Rate Structure or Surcharge	

8.6 DETERMINING WATER SHORTAGE REDUCTIONS

California Water Code Section 10632 (a)(9) requires the water supplier to develop a mechanism for determining actual reductions in water use in the course of carrying out the urban water supply shortage contingency analysis.

The City evaluates the effectiveness of its water conservation program based on metered water use data. Monitoring involves determining the per capita water use for residential users and the water use per account for non-residential customer categories.

The City determines if the water customers are achieving the required demand reductions by comparing historical metered water use without a water shortage emergency to the metered water use under the declared water shortage stage.

8.7 REVENUE AND EXPENDITURE IMPACTS

Section 10632 (7) of the California Water Code requires an analysis of the impacts of each of the actions taken for conservation and water restriction on the revenues and expenditures of the water supplier.

In an effort to stabilize revenues in times of shortage, the City has incorporated measures to deal with revenue shortfall as well as provide additional price signals to users in the highest use brackets. During water shortages, temporary water shortage surcharges and excess water use charges may be instituted, depending on the severity and duration of the shortage. As a first line of defense, the water utility rate stabilization fund serves to ensure reserves exist to maintain the

short-term and long-term financial health of the utility. As such, to the extent reserve funds are available to offset reduced revenue and fund unanticipated cost contingencies associated with a water shortage, they will preclude implementation of the water shortage surcharges and excess water use charges. When reserves are no longer sufficient, water shortage surcharges and/or excess water use charges may be implemented at the direction of the City Manager. Any additional surcharge will be scaled to Water shortage rate structures that are developed to be revenue neutral mitigate the financial impacts caused by reduced water sales. Ensuring revenue sufficiency at reduced water usage levels means that a typical customer will not experience an increase in their bill if they meet the required water usage reduction (i.e., 10 percent, 20 percent, etc.). Customers not achieving the required water usage reduction, would receive higher water utility bills.

8.8 RESOLUTION OR ORDINANCE

The City’s Water Conservation Ordinance (14.09) can be found in Appendix J.

8.9 CATASTROPHIC SUPPLY INTERRUPTION

Section 10632 (3) of the California Water Code requires actions to be undertaken by the water supplier to prepare for and implement during a catastrophic interruption of water supplies.

As discussed in Chapter 6, Roseville maintains direct treated water interties with four surrounding jurisdictions. Roseville can transfer water between jurisdictions through these interties or access water to supplement its distribution system. These facilities can be called upon during a catastrophic supply interruption to provide emergency water from neighboring areas in order to maintain normal distribution.

Additionally, the City maintains groundwater wells for backup supply that can be activated in the event of a catastrophic supply interruption. Details regarding groundwater wells are further discussed in Chapter 6.

8.10 MINIMUM SUPPLY NEXT THREE YEARS

As an UWMP requirement, all water agencies are required to provide an estimate of the minimum water supply available during each of the next three water years, as shown in Table 8-4. This estimate reflects the combined availability of all water sources and assumes the same hydrology that was noted in the historical multiple-dry year period (Chapter 7, Section 7.3).

Table 8-4. Retail: Minimum Supply Next Three Years (DWR Table 8-4)

	2016	2017	2018
Available Water Supply	54,000	54,000	46,000
NOTES: All volumes in AF. Assumes no water from SJWD, minimum recycled water, and minimum groundwater usage.			

(THIS PAGE LEFT BLANK INTENTIONALLY)

CHAPTER 9

Demand Management Measures



This chapter describes the City's historical and existing water conservation program, status of implementation of Demand Management Measures (DMMs), and projected future conservation implementation. The CWC requires that UWMPs include a comprehensive description of historical, current, and projected water conservation programs.

CWC 10631 (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

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

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

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

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

(vi) Water conservation program coordination and staffing support.

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

In previous UWMPs, a substantial amount of data was required to document a water supplier's progress in implementing fourteen specific DMMs. In 2014, Assembly Bill 2067 simplified, clarified, and updated reporting requirements for DMMs. Starting with this 2015 UWMP, focus has turned away from detailed descriptions of each of the fourteen DMMs and has turned to key water conservation measures that are being implemented to achieve compliance with SB X7-7. For retail agencies, the number of DMMs has been reduced from fourteen to six (plus an "other" category). A narrative description of the status of the DMMs and how the DMMs will help the water supplier achieve its SB X7-7 water use targets is required. Detailed data are not required.

Members of the CUWCC may include their reporting in the UWMP, but a narrative is also required.

9.1 DEMAND MANAGEMENT MEASURES

The six DMMs required to be discussed in the 2015 UWMP include the following:

- Water waste prevention ordinances;
- Metering;
- Conservation pricing;
- Public education and outreach;
- Programs to assess and manage distribution system real loss; and
- Water conservation program coordination and staffing support.

For each DMM, the current program is described, followed by a description of how the DMM was implemented over the previous five years and the planned implementation to achieve the water use targets required by SB X7-7 (see Chapter 5 SB X7-7 Baselines and Targets). Supplemental materials can be found in Appendix K.

9.1.1 Water Waste Prevention Ordinances

The City currently restricts water waste within its service area. Roseville Municipal Code Chapter 14.09, Water Conservation Ordinance (presented in Appendix J), defines water waste and associated penalties of continued infractions. Per the ordinance, customers in violation are provided a series of notifications at one week intervals: first a courtesy notice, second an administrative warning, and finally a formal citation. If the situation is not remedied by the time specified in the formal citation, additional measures can be taken to force compliance. These measures include fines, water restrictions, low flow devices, or discontinued service. In addition, the City may waive the courtesy notice and administrative warning in times of drought.

To enforce the Water Waste Ordinance, the City employs three 1,000 hour/year water conservation workers to patrol within the service area limits. The City has also employed contract help at night to conduct water waste patrols. In addition, full-time City staff patrol for water waste as part of their normal job duties. In addition to patrols by City staff, the City has an on-line reporting mechanism that allows customers to report observed water waste anonymously. Customers can visit www.roseville.ca.us/waterwaste and submit an electronic form, which is then further investigated by City staff.

Implementation of this DMM is ongoing and expected to help the City achieve its water use targets by minimizing the nonessential uses of water so that water is available to be used for human consumption, sanitation, and fire protection.

9.1.2 Metering

A meter retrofit program was developed and implemented from 2001 to 2011. Implementation of metered rates began immediately on all residential metered connections established after January 1, 2002, with the remaining retrofitted homes transitioned in large blocks as retrofits were completed. During program development, it was requested that customers be provided water use information for a period of one year before transitioning to a metered rate. This was incorporated into the plan, and the first block of homes to be transitioned began receiving comparative data in March 2003 with transition to metered rates in April 2004.

The metering DMM helps Roseville achieve its water use targets by providing accurate water use information to the customer and the City. Metering also allows the city to improve leak detection efforts, further discussed in Section 9.1.5.

9.1.3 Conservation Pricing

As a component of its meter retrofit program, the City adopted conservation pricing for water on all metered accounts from 2011 through 2015. To comply with Proposition 218 requirements, the City transitioned to a per-use, uniform rate billing structure in February 2016. Water rates for 2011, 2015, 2016 interim, and 2016 final are shown in Table 9-1, with a complete list of service charges, excess water use charges, and water rates are included in Roseville Municipal Code Sections 14.08.090 Service Charges for Metered Service through 14.08.100 Flat Water Rates.

Table 9-1. City of Roseville Potable Water Usage Rates

Water Use Category	2011	2015	Effective Feb 8, 2016	Effective July 1, 2016
Residential Tier 1 (First 12 CCF)	\$0.39	\$0.52	-	-
Residential Tier 2 (Next 30 CCF)	\$0.78	\$1.01	-	-
Residential Tier 3 (Next 33 CCF)	\$1.17	\$1.53	-	-
Residential Tier 4 (Over 75 CCF)	\$1.74	\$2.29	-	-
Residential Rate (Per CCF)	-		\$0.97	\$1.09
Non-Residential Rate (Per CCF)	\$0.78	\$1.01	\$0.97	\$1.09
Recycled Water Rate (Per CCF)	-	\$0.44	\$0.49	\$0.55

Implementation of this DMM is expected to help the City achieve its water use targets by ensuring water customers pay the true cost of water. Sufficient revenue will be available to fund water system operations, maintenance, and water conservation programs.

9.1.4 Public Education and Outreach

The City promotes water conservation and other resource efficiencies in coordination with the Regional Water Authority (RWA), Roseville Electric, and Roseville’s Public Information Department. The City distributes information through paid advertisements, television commercials, featured segments on the local government access channel, the internet (through the City’s website and streaming video), the City’s Utility Exploration Center, several water efficient workshops each year, movie theater ads, newsletters, bill inserts, bill messages, brochures, vehicle decals, community outreach events, community speaker bureaus, and yearly special events.

9.1.4.1 Water Insight Program

In 2005, water bills were redesigned to show historical water usage on individual accounts. This information allows businesses and homeowners to monitor water usage as it varies throughout the year. Additionally, the City has implemented a usage and tracking program known as Water Insight. The Water Insight program allows customers to view their current water usage and compare against previous-year usage. It also allows customers to compare against other households of similar make-up through the City’s website.

9.1.4.2 Utility Exploration Center

In 2008, the City's utilities jointly funded and created the Roseville Utility Exploration Center. In addition to serving as a "storefront" for the utilities, the Center is used by the City for community outreach and environmental education. Designed for an interactive experience, the Center hosts multiple hands-on exhibits with a "learning lab" for demonstrations, presentations and workshops. Topics include water conservation and watershed protection, energy efficiency, waste reduction, and wastewater management.

Since opening, the Utility Exploration Center has hosted over 350,000 program participants, with approximately 7,000 student (preschool through sixth grade) and 34,000 other annual visitors to the exhibit hall; partnered with cultural, recreational, and utility-related organizations to create a lively series of changing events, workshops, and activities; and, connected with residents in a variety of off-site outreach activities.

The Center is housed within the Gold LEED (Leadership in Energy and Environmental Design) certified Martha Riley Library building, which was the first building in Placer County to be so honored. Future plans (currently targeted for an opening Summer 2018) include a one-acre outdoor expansion called the IDEAscape, further expanding exhibits to include topics such as river-friendly landscaping and irrigation, utility systems, solar energy, and watershed protection.

9.1.4.3 Regional Water Authority

The City also is a member of the Regional Water Authority (RWA). RWA has an active public outreach campaign to which the City contributes. The program consists of paid advertising campaigns to market the Blue Thumb (www.bluethumb.org) program, public service announcements, as well as partnerships with big box stores and the local River Cats minor-league baseball team. Additionally, the RWA hosts an interactive website (www.rwah20.org/rwa/) that contains blogs on water use efficiency, garden tours and program information. RWA provides conservation materials to Schools within the City's service area.

9.1.4.4 Student Outreach

In addition to RWA student outreach programs, the City independently provides presentations, conservation materials, and facility tours to local schools.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

The City maintains a comprehensive water audit and leak-detection program to assess, identify, and repair potable distribution system losses.

In 2009 the City began using AWWA Water Loss software to develop an annual water loss audit. Results from the audit have helped the City identify where in the distribution process leaks are occurring. When coupled with detailed pipeline information stored in the City's asset management system, audit information helps identify potentially leak prone areas of the City's distribution system. These areas are then monitored through visual and/or auditory methods to isolate individual areas of leakage. Once isolated, responses include corrosion monitoring programs, service cathodic protection and/or replacement. The City's asset management software is then

updated with identified leaks, which in turn provides more information useful for prioritization of future rehabilitation programs.

9.1.6 Water Conservation Program Coordination and Staffing Support

In addition to the employees mentioned in Section 9.1.1, the City employs other individuals as members of the City's internal water conservation program team. Member qualifications include: Certified Landscape Irrigation Auditor (CLIA) certification, Water Distribution Operator D-2 certification, and extensive irrigation system management experience.

In compliance with DWR's UWMP guidelines, the full contact information for the City's Water Conservation Administrator is listed below:

Bobby Alvarez
Water Conservation Administrator
City of Roseville, Environmental Utilities Department
916-746-1710 (office)
916-774-5755 (fax)
BAlvarez@roseville.ca.us

9.2 OTHER DEMAND MANAGEMENT MEASURES

In addition to the six DMMs described above, the City also implements the following programs:

- Residential Water Wise House Calls
- Residential HET Replacement Program
- Residential Irrigation Rebates
- Residential Cash for Grass Rebates
- Commercial Irrigation Water "Budgets"
- Commercial Irrigation Audit
- Commercial Water Waste "Night Patrols"
- Commercial Cash for Grass Rebates
- Commercial HET Replacement Program
- Commercial Custom Rebate
- Commercial Landscape Water Use Reviews
- Commercial Interior Water Use Audits

These programs are described below.

9.2.1 Residential Conservation Programs

The City implements several programs to reduce the consumption of water to its residents. The activities of these various programs are described below. Implementation of these programs is expected to help the City achieve its water use targets by reducing the amount of water consumed by its residential customers. Supplemental materials can be found in Appendix K.

9.2.1.1 [Water Wise House Calls](#)

The City provides a free home water use inspection service known as the Water Wise House Call Program. Inspections are conducted by trained water conservation technicians, and help identify potential water-savings for the customer.

Single-family inspections are approximately one hour in length, and consist of an indoor and outdoor evaluation. During the interior portion of the inspection, the technician measures flow rates of existing plumbing fixtures (offering high-efficiency alternatives if necessary), checks all fixtures and appliances for leaks, and provides information on the City's currently available rebate programs (further described in Sections 9.2.1.2 - 9.2.1.4 below).

Following the indoor evaluation, the technician then conducts an outdoor inspection. A typical outdoor inspection tests sprinkler system efficiency, distribution uniformity, pool equipment, and for leaks via pressure test. Following the sprinkler test, soil moisture probes are utilized to optimize irrigation scheduling through adjustment of the residence's irrigation controller.

Finally, water use information is reviewed and the customer is provided with suggested corrective actions, information regarding the City's rebate programs, and educational material on how to further water conservation.

In addition to local advertising, Water Wise House Calls are actively marketed to high water use customers by the City's Water Efficiency Division.

9.2.1.2 [Residential High Efficiency Toilet Replacement Program](#)

The City first established a HET rebate program in 2008. Residents can receive up to \$100 for replacing an older (pre-1992), non-conserving toilet with a new 1.28 gallon per flush model. Rebates are offered on a first come/first service basis to customers on an annual basis, and the program is advertised regularly on Roseville's Channel 11, bill inserts, conservation articles, newsletters, and the City's website. Customers can also obtain an application by request through the mail or at special events and City office public counters.

The City plans to maintain the replacement program, and will continue to monitor rebate requests. Program expansion will be assessed annually based on past years' participation.

9.2.1.3 [Residential Irrigation Efficiency Rebate](#)

The City offers residential customers a rebate of up to \$100 for upgrading an existing irrigation system with new, high efficiency equipment. The program covers 100% of eligible parts, and applications can be accessed via the City's website.

9.2.1.4 Residential Cash for Grass

In 2008, Roseville created a turf replacement program titled “Cash for Grass” that provides incentive for customers to replace their turf with water efficient landscaping. Turf is purchased at \$.50 per square foot up to \$1,000 per residential site. To comply, participants must not only remove their turf but also install a low volume irrigation system to irrigate their new water efficient landscape.

9.2.2 Commercial, Industrial, Institutional Conservation Programs

The City implements several programs to reduce the consumption of water to its commercial, industrial, and institutional customers. The activities of these various programs are described below. Implementation of these programs is expected to help the City achieve its water use targets by reducing the amount of water consumed by its non-residential customers.

9.2.2.1 Irrigation Water “Budgets”

The City has developed water “budgets” for the majority of its dedicated irrigation accounts (including those owned by the City). These budgets were created using the City’s geographical information system (GIS) to determine irrigated landscape area, and then field verified for accuracy. The budget reports, produced monthly, show the site’s actual water use compared to the estimated water use based on site demographics. If a site’s water usage is significantly greater than expected, City staff may request the site’s owner complete a site water audit.

9.2.2.2 Irrigation Audit

Similar to Water Wise House Calls, the City provides a free landscape audit services for irrigation customers upon request. Staff evaluates the irrigation system and makes recommendations for improvement. Rebates are available to further incentivize the customer to make improvements to their irrigation systems.

The City will continue to implement this program, and will consider expansion based on the past years’ participation.

9.2.2.3 Night Patrols

Over the past two years, the City has implemented a Night Patrol program during peak water usage months that helps to identify commercial water waste after normal business hours. Patrols are typically conducted several nights per week.

9.2.2.4 Commercial Cash for Grass

Similar to the Residential Cash for Grass Program, the City offers rebates to commercial customers for replacing turf with water efficient landscaping. Commercial customers can receive \$1.50 per square foot up to \$2,500.

9.2.2.5 Commercial High Efficiency Toilet Replacement Program

Similar to the Residential High Efficiency Toilet Replacement Program, commercial customers can receive up to \$175 for replacing an older (pre-1992), non-conserving toilet with a new 1.28 gallon per flush model.

9.2.2.6 Customized Rebate Program

In addition to the above rebates, the Customized Rebate Program helps commercial, industrial, and institutional customers save money with financial incentives on capital expenditures for retrofit of existing equipment with more water-efficient technologies. This program applies to hardware upgrades including equipment and technology for space cooling, refrigeration, laundry, cleaning, and flushing. The customized rebate amount is derived by measuring current usage of the process compared to the water usage of the new retrofitted process. Water savings are estimated using the number of days operated per year and the expected life of the equipment (capped at 10 years). Total amount of saved water is rebated at \$0.50 per 100 Cubic Feet. Rebates will be paid on a first-come, first served basis until program funds are depleted.

9.2.2.7 Commercial Landscape Water Use Review

The Commercial Landscape Water Use Review offers an assessment of irrigation areas to identify inefficiencies and make recommendations for improvement. Water use history is reviewed with landscape managers and watering schedules are prepared to suit the landscape. Comprehensive reports are provided summarizing all finding and recommendations.

9.2.2.8 Commercial Interior Water Use Audit

The Commercial Interior Water Use Audit assists commercial properties in lowering water, wastewater, and energy costs. A facility review identifies equipment inefficiencies and provides a detailed report of all inefficiencies and corresponding recommendations.

9.3 PLANNED IMPLEMENTATION TO ACHIEVE WATER USE TARGETS

In most instances, helping customers understand the savings that can be achieved and methods available to achieve these savings is enough to motivate change. Through the above DMMs, the City can help customers identify these savings, which in turn helps the City to achieve its water use targets. Additionally, the City will continue to work with the Parks Department, area school districts, landscape contractors, and property managers to improve water use efficiency.

9.4 MEMBERS OF THE CALIFORNIA URBAN WATER CONSERVATION COUNCIL

In 1991 (amended September 16, 1999), an MOU regarding urban water conservation in California was made that formalizes an agreement between DWR, water utilities, environmental organizations, and other interested groups to implement Best Management Practices (BMPs) and make a cooperative effort to reduce the consumption of California's water resources. This MOU is administered by the CUWCC.

Chapter 9

Demand Management Measures



In 1991, Roseville became a voluntary signatory of the CUWCC's MOU. Since becoming a signatory to the MOU, the City has implemented and promoted its water use efficiency programs to help customers reduce water demand. The City reports to the CUWCC on its coverage of the recommended BMPs on a fiscal year basis.

The Urban Water Management Planning Act (Water Code Section 10631 (j)) allows for an urban retail water agency that is a signatory (member) of the CUWCC to meet the DMM requirements by documenting that the CUWCC has determined the urban water agency is complying (coverage) with all of the provisions of the MOU. Documentation of the City's compliance is provided in Appendix L.

(THIS PAGE LEFT BLANK INTENTIONALLY)

CHAPTER 10

Plan Adoption, Submittal, and Implementation



This chapter provides information regarding the notification, public hearing and adoption of the Plan.

10.1 INCLUSION OF ALL 2015 DATA

Because 2015 is the first compliance year for SB X7-7, the 2015 UWMPs must contain data through the end of 2015. If a water supplier bases its accounting on a fiscal year (July through June) the data must be through the end of the 2015 fiscal year (June 2015). If the water supplier bases its accounting on a calendar year, the data must be through the end of the 2015 calendar year (December 2015).

As indicated in Chapter 1, the City uses a calendar year for water supply and demand accounting, and therefore this 2015 UWMP includes data through December 2015.

10.2 NOTICE OF PUBLIC HEARING

The City provided 60-day notice of the preparation of its 2015 UWMP, and notice of the 2015 UWMP Public Hearing to the cities and counties listed in Table 10-1.

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

City Name	60 Day Notice	Notice of Public Hearing
Roseville	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
County Name	60 Day Notice	Notice of Public Hearing
Placer County	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Other agencies notified included the following:

- PCWA
- SJWD
- USBR
- City of Citrus Heights

Public hearing notifications for adopting the Plan were published in the local newspaper (Roseville Press Tribune) and on the City’s website. Copies of the published Notice of Public Hearing are included in Appendix D.

Chapter 10

Plan Adoption, Submittal, and Implementation



10.3 PUBLIC HEARING AND ADOPTION

The City has encouraged community and public interest involvement in the Plan update through the use of mailings, public meetings, and web-based communication. Copies of the City's outreach efforts are included in Appendix D.

The public hearings provided an opportunity for all City water users and the general public to become familiar with the Plan and ask questions about its water supply, in addition to the City's continuing plans for providing a reliable, safe, high-quality water supply. Copies of the draft Plan were made available for public inspection on the City's website. The public hearing was held on May 18, 2016.

This Plan was adopted by the City Council on May 18, 2016. A copy of the adoption resolution is provided in Appendix M.

10.4 PLAN SUBMITTAL

A copy of this 2015 UWMP will be submitted to DWR within 30 days of adoption and by July 1, 2016. The adopted 2015 UWMP will be submitted electronically to DWR using the WUEdata submittal tool. A CD or hardcopy of the adopted 2015 UWMP will also be submitted to the California State Library.

No later than 30 days after adoption, a copy of the adopted 2015 UWMP, including the Water Shortage Contingency Plan, will be provided to the cities and counties to which the City provides water.

10.5 PUBLIC AVAILABILITY

No later than 30 days after submittal to DWR, copies of this Plan will be available for public review at the City's public offices. An electronic copy of this Plan will also be available for review and download on the City's website: www.roseville.ca.us/UWMP.

10.6 PLAN IMPLEMENTATION

This Plan will be the source document for any Senate Bill 610 Water Supply Assessments or Senate Bill 221 Water Supply Verifications required for any proposed projects between 2016 and 2020 that are subject to the California Environmental Quality Act (CEQA) and would demand an amount of water equivalent or greater than the amount of water required by a 500 dwelling unit project. This Plan will also be the source document for water demand projections and water supply availability. Lastly, this Plan will provide guidance and direction on development of new local supplies and implementation of water conservation programs and recycled water expansion to meet the requirements of the WC Act.

10.7 AMENDING AN ADOPTED UWMP

If the City amends its 2015 UWMP, copies of amendments or changes to the plans will be submitted to DWR, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

APPENDIX A

California Water Code – Urban Water Management Planning and Sustainable Water Use and Demand Reduction

- California Water Code – Urban Water Management Planning
- California Water Code – Sustainable Water Use and Demand Reduction

(THIS PAGE LEFT BLANK INTENTIONALLY)

California Water Code Urban Water Management Planning

California Water Code Division 6, Part 2.6.

Chapter 1. General Declaration and Policy §10610-10610.4

Chapter 2. Definitions §10611-10617

Chapter 3. Urban Water Management Plans

Article 1. General Provisions §10620-10621

Article 2. Contents of Plans §10630-10634

Article 2.5. Water Service Reliability §10635

Article 3. Adoption And Implementation of Plans §10640-10645

Chapter 4. Miscellaneous Provisions §10650-10656

Chapter 1. General Declaration and Policy

SECTION 10610-10610.4

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

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

- (1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.
- (2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- (3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- (4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.
- (5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- (6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- (7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

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

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

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

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

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

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

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

Chapter 2. Definitions

SECTION 10611-10617

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

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

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

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

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

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses,

reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

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

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

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

Chapter 3. Urban Water Management Plans

Article 1. General Provisions

SECTION 10620-10621

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).
- (b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.
- (c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
- (d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.
- (2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that

share a common source, water management agencies, and relevant public agencies, to the extent practicable.

- (e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
 - (f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.
10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero, except as provided in subdivision (d).
- (b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.
 - (c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).
 - (d) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

Article 2. Contents of Plan

SECTION 10630-10634

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.
10631. A plan shall be adopted in accordance with this chapter that shall do all of the following:
- (a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.
 - (b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of

water available to the supplier, all of the following information shall be included in the plan:

- (1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.
 - (2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.
 - (3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
 - (4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.
- (c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:
- (A) An average water year.
 - (B) A single-dry water year.
 - (C) Multiple-dry water years.
- (2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

- (d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.
- (e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:
 - (A) Single-family residential.
 - (B) Multifamily.
 - (C) Commercial.
 - (D) Industrial.
 - (E) Institutional and governmental.
 - (F) Landscape.
 - (G) Sales to other agencies.
 - (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
 - (I) Agricultural.
 - (J) Distribution system water loss.
- (2) The water use projections shall be in the same five-year increments described in subdivision (a).
- (3) (A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.
 - (B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.
- (4) (A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

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

use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

- (h) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.
- (i) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.
- (j) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

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

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

10631.2. (a) In addition to the requirements of Section 10631, an urban water management plan may, but is not required to, include any of the following information:

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

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

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has

submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

- (i) Compliance on an individual basis.
 - (ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.
- (B) The department may require additional information for any determination pursuant to this section.
- (3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.
- (c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).
 - (d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.
 - (e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

- (f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:
- (1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.
 - (2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
 - (3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
 - (4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
 - (5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are

appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

- (6) Penalties or charges for excessive use, where applicable.
 - (7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
 - (8) A draft water shortage contingency resolution or ordinance.
 - (9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.
- (b) Commencing with the urban water management plan update due July 1, 2016, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

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

- (a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.
- (b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.
- (c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.
- (d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

- (e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.
- (f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.
- (g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

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

Article 2.5. Water Service Reliability

SECTION 10635

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.
- (b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.
- (c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

- (d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Article 3. Adoption and Implementation of Plans

SECTION 10640-10645

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

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

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area.

After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

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

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

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

- (b) (1) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part.

The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

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

- (c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section 10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

- (2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

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

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

Chapter 4. Miscellaneous Provisions

SECTION 10650-10656

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

- (a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

- (b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.
10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.
10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.
10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.
10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.
10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.
10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26

(commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

(THIS PAGE LEFT BLANK INTENTIONALLY)

California Water Code

Sustainable Water Use and Demand Reduction

California Water Code Division 6, Part 2.55.

- Chapter 1. General Declarations and Policy §10608-10608.8**
- Chapter 2. Definitions §10608.12**
- Chapter 3. Urban Retail Water Suppliers §10608.16-10608.44**
- Chapter 4. Agricultural Water Suppliers §10608.48**
- Chapter 5. Sustainable Water Management §10608.50**
- Chapter 6 Standardized Data Collection §10608.52**
- Chapter 7 Funding Provisions §10608.56-10608.60**
- Chapter 8 Quantifying Agricultural Water Use Efficiency §10608.64**

Chapter 1. General Declarations and Policy

SECTION 10608-10608.8

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

- (a) Water is a public resource that the California Constitution protects against waste and unreasonable use.
- (b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.
- (c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.
- (d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.
- (e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.
- (f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.
- (g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.
- (h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

- (i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

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

- (a) Require all water suppliers to increase the efficiency of use of this essential resource.
- (b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.
- (c) Measure increased efficiency of urban water use on a per capita basis.
- (d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.
- (e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.
- (f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.
- (g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.
- (h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.
- (i) Require implementation of specified efficient water management practices for agricultural water suppliers.
- (j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.
- (k) Advance regional water resources management.

- 10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.
- (2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to

January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

- (3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.
- (b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.
- (c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.
- (d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

Chapter 2 Definitions

SECTION 10608.12

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

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

- (2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.
 - (3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.
- (c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.
 - (d) "Commercial water user" means a water user that provides or distributes a product or service.
 - (e) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.
 - (f) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.
 - (g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:
 - (1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.
 - (2) The net volume of water that the urban retail water supplier places into long-term storage.
 - (3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.
 - (4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.
 - (h) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.
 - (i) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.

- (j) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.
- (k) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.
- (l) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.
- (m) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050, that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:
 - (1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:
 - (A) Metered.
 - (B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.
 - (C) Treated to a minimum tertiary level.
 - (D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.
 - (2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.
- (n) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:
 - (1) The capture and reuse of stormwater or rainwater.
 - (2) The use of recycled water.
 - (3) The desalination of brackish groundwater.

- (4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.
- (o) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.
- (p) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.
- (q) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.
- (r) "Urban wholesale water supplier," means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

Chapter 3 Urban Retail Water Suppliers

SECTION 10608.16-10608.44

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

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

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

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

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

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

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

- (A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.
 - (B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.
 - (C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.
- (3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.
- (4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:
- (A) Consider climatic differences within the state.
 - (B) Consider population density differences within the state.
 - (C) Provide flexibility to communities and regions in meeting the targets.
 - (D) Consider different levels of per capita water use according to plant water needs in different regions.
 - (E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.
 - (F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.
- (c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method

described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

- (d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.
- (e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.
- (f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.
- (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).
- (h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:
 - (A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.
 - (B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.
- (2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its Internet Web site, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.
- (i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with subdivision (l) of Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.
- (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the

Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

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

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

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

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

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

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

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

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

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

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in

paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

- (e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.
- (f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

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

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

- (1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.
 - (2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.
 - (3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.
- (b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.
- (c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under federal Executive Order 13514.
- (d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit

an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

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

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

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

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

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

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

10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans

submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

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

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

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

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

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

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

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

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

10608.44. Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

Chapter 4 Agricultural Water Suppliers

SECTION 10608.48

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

(b) Agricultural water suppliers shall implement all of the following critical efficient management practices:

(1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).

(2) Adopt a pricing structure for water customers based at least in part on quantity delivered.

(c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:

(1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

(2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

(3) Facilitate the financing of capital improvements for on-farm irrigation systems.

(4) Implement an incentive pricing structure that promotes one or more of the following goals:

(A) More efficient water use at the farm level.

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

(F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

(5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

- (6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.
 - (7) Construct and operate supplier spill and tailwater recovery systems.
 - (8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.
 - (9) Automate canal control structures.
 - (10) Facilitate or promote customer pump testing and evaluation.
 - (11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.
 - (12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:
 - (A) On-farm irrigation and drainage system evaluations.
 - (B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.
 - (C) Surface water, groundwater, and drainage water quantity and quality data.
 - (D) Agricultural water management educational programs and materials for farmers, staff, and the public.
 - (13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.
 - (14) Evaluate and improve the efficiencies of the supplier's pumps.
- (d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.
 - (e) The data shall be reported using a standardized form developed pursuant to Section 10608.52.
 - (f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.

- (g) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.
- (h) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.
- (i)
 - (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).
 - (2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

Chapter 5 Sustainable Water Management

Section 10608.50

- 10608.50.(a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:
- (1) Revisions to the requirements for urban and agricultural water management plans.
 - (2) Revisions to the requirements for integrated regional water management plans.
 - (3) Revisions to the eligibility for state water management grants and loans.

- (4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.
 - (5) Increased funding for research, feasibility studies, and project construction.
 - (6) Expanding technical and educational support for local land use and water management agencies.
- (b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

Chapter 6 Standardized Data Collection

SECTION 10608.52

- 10608.52.(a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.
- (b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

Chapter 7 Funding Provisions

Section 10608.56-10608.60

- 10608.56.(a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.
- (b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

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

10608.60.(a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

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

Chapter 8 Quantifying Agricultural Water Use Efficiency

SECTION 10608.64

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

(THIS PAGE LEFT BLANK INTENTIONALLY)

APPENDIX B

DWR UWMP Tables

(THIS PAGE LEFT BLANK INTENTIONALLY)

Table 2-1 Retail Only: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
3110008	City of Roseville	41,469	22,881
TOTAL		41,469	22,881

NOTES: All Volumes are in AF.
The City was under a state mandate to conserve water due to statewide drought conditions during 2015. The City conserved 32.7% during calendar year 2015.

Table 2-2: Plan Identification

Select Only One	Type of Plan	Name of RUWMP or Regional Alliance <i>if applicable</i>
<input checked="" type="checkbox"/>	Individual UWMP	
<input type="checkbox"/>	Regional Urban Water Management Plan (RUWMP)	
NOTES:		

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
<input type="checkbox"/>	Agency is a wholesaler
<input checked="" type="checkbox"/>	Agency is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables Are in Calendar Years
<input type="checkbox"/>	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
Unit	AF
NOTES:	

Table 2-4 Retail: Water Supplier Information Exchange
--

The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.

Wholesale Water Supplier Name

Placer County Water Agency

San Juan Water District

United States Bureau of Reclamation

NOTES:

Table 3-1 Retail: Population - Current and Projected

Population Served	2015	2020	2025	2030	2035	2040(opt)
	123,572	133,243	144,113	155,983	165,854	175,724

NOTES:

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

Use Type	2015 Actual		
	Additional Description <i>(as needed)</i>	Level of Treatment When Delivered	Volume
Commercial	Including Non-Metered	Drinking Water	1,930
Industrial	Including Non-Metered	Drinking Water	934
Institutional/Governmental	Including Non-Metered	Drinking Water	561
Multi-Family	Including Non-Metered	Drinking Water	1,464
Single Family	Including Non-Metered	Drinking Water	11,680
Landscape	Including Non-Metered	Drinking Water	4,152
Losses	Unbilled unmetered	Drinking Water	32
Losses		Drinking Water	2,128
TOTAL			22,881
<p>NOTES: All volumes are in AF. The City was under a state mandate to conserve water due to statewide drought conditions during 2015. The City conserved 32.9% during calendar year 2015, compared to calendar year 2013.</p>			

Table 4-2 Retail: Demands for Potable and Raw Water - Projected

Use Type	Additional Description <i>(as needed)</i>	Projected Water Use <i>Report To the Extent that Records are Available</i>				
		2020	2025	2030	2035	2040-opt
Commercial		3,402	3,588	3,818	4,041	4,219
Industrial		1,699	1,792	1,907	2,018	2,107
Institutional/Governmental		1,001	1,056	1,123	1,189	1,241
Multi-Family		2,399	2,530	2,692	2,849	2,974
Single Family		21,262	22,425	23,862	25,254	26,365
Landscape		7,559	7,973	8,483	8,978	9,373
Losses		3,732	3,936	4,189	4,433	4,628
TOTAL		41,054	43,300	46,074	48,762	50,907

NOTES: All volumes are in AF.

Table 4-3 Retail: Total Water Demands						
	2015	2020	2025	2030	2035	2040 <i>(opt)</i>
Potable and Raw Water <i>From</i> <i>Tables 4-1 and 4-2</i>	22,881	41,054	43,300	46,074	48,762	50,907
Recycled Water Demand* <i>From</i> <i>Table 6-4</i>	4,060	4,421	4,791	5,259	5,643	5,958
TOTAL WATER DEMAND	26,941	45,475	48,091	51,333	54,405	56,865
NOTES: All volumes are in AF. Table references refer to DWR table numbers.						

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date	Volume of Water Loss*
01/2015	2,128
* Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.	
NOTES: All volumes are in AF. Does not include unbilled unmetered water.	

Table 4-5 Retail Only: Inclusion in Water Use Projections

Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc... utilized in demand projections are found.	Section 4.4
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

Table 5-1 Baselines and Targets Summary

Retail Agency or Regional Alliance Only

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	1995	2004	309	278	247
5 Year	2003	2007	295		

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

NOTES:

Table 5-2: 2015 Compliance
Retail Agency or Regional Alliance Only

Actual 2015 GPCD*	2015 Interim Target GPCD*	Optional Adjustments to 2015 GPCD <i>From Methodology 8</i>					2015 GPCD* <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2015 GPCD*		
165	278	0	0	0	0	165	165	Yes
<i>*All values are in Gallons per Capita per Day (GPCD)</i>								
NOTES:								

Table 6-1 Retail: Groundwater Volume Pumped

Table 6-1 Retail: Groundwater Volume Pumped						
<input type="checkbox"/>	Supplier does not pump groundwater. The supplier will not complete the table below.					
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Sacramento Valley Groundwater Basin - North American Subbasin	0	-1773	-371	296	6
TOTAL		0	(1,773)	(371)	296	6
<p>NOTES: Volumes are in AF. Numbers represent net groundwater pumped out of ASR well and into the distribution system. A negative number represents an injection into an ASR well from the distribution system. Some values, including the 6 AF in 2015, can be attributed to ASR maintenance, or for commission of new pump station facilities.</p>						

Table 6-2 Retail: Wastewater Collected Within Service Area in 2015						
<input type="checkbox"/>	There is no wastewater collection system. The supplier will not complete the table below.					
100	Percentage of 2015 service area covered by wastewater collection system <i>(optional)</i>					
100	Percentage of 2015 service area population covered by wastewater collection system <i>(optional)</i>					
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? <i>(optional)</i>
City of Roseville	Estimated	4,728	City of Roseville	Pleasant Grove WWTP	Yes	No
City of Roseville	Estimated	5,940	City of Roseville	Dry Creek WWTP	Yes	No
Total Wastewater Collected from Service Area in 2015:		10,668				
NOTES: Volumes are in AF. City of Roseville manages wastewater collection within the City limits. Other member agencies of the South Placer Wastewater Authority manage wastewater collection in their respective jurisdictions.						

Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2015

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number <i>(optional)</i>	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Pleasant Grove WWTP	Pleasant Grove Creek	Creek		River or creek outfall	Yes	Tertiary	7,504	5,410	2,094	0
Dry Creek WWTP	Dry Creek	Creek		River or creek outfall	Yes	Tertiary	9,428	7,135	1,966	327
						Total	16,932	12,545	4,060	327

NOTES: All volumes are in AF. Volume delivered outside service area is to the Morgan Creek Golf Course. Of the 5,410 AF discharged from Pleasant Grove WWTP, 4,480 AF is a required discharge, and is therefore not available for other uses.

Table 6-4 Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area

<input type="checkbox"/> Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.										
Name of Agency Producing (Treating) the Recycled Water:		City of Roseville								
Name of Agency Operating the Recycled Water Distribution System:		City of Roseville								
Supplemental Water Added in 2015		No								
Source of 2015 Supplemental Water										
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	2015	2020	2025	2030	2035	2040 (opt)		
Agricultural irrigation		Tertiary	0	0	0	0	0	0		
Landscape irrigation (excludes golf courses)		Tertiary	1,562	1,923	2,293	2,761	3,145	3,460		
Golf course irrigation	Only golf courses within potable water service area	Tertiary	1,378	1,378	1,378	1,378	1,378	1,378		
Commercial use		Tertiary	0	0	0	0	0	0		
Industrial use	Roseville Energy Park Cooling Water.	Tertiary	1,120	1,120	1,120	1,120	1,120	1,120		
Geothermal and other energy production		Tertiary	0	0	0	0	0	0		
Seawater intrusion barrier		Tertiary	0	0	0	0	0	0		
Recreational impoundment		Tertiary	0	0	0	0	0	0		
Wetlands or wildlife habitat		Tertiary	0	0	0	0	0	0		
Groundwater recharge (IPR) *		Tertiary	0	0	0	0	0	0		
Surface water augmentation (IPR) *		Tertiary	0	0	0	0	0	0		
Direct potable reuse		Tertiary	0	0	0	0	0	0		
Other (Provide General Description)		Tertiary	0	0	0	0	0	0		
Total:			4,060	4,421	4,791	5,259	5,643	5,958		

* IPR - Indirect Potable Reuse

NOTES: All volumes in AF. Demands do not include approximately 327 AF delivered to Morgan Creek Golf Course, which is outside the City's potable water service area.

Table 6-5 Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual

□	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.	
Use Type	2010 Projection for 2015	2015 Actual Use
Agricultural irrigation	-	0
Landscape irrigation (excludes golf courses)	2,197	1,562
Golf course irrigation	-	1,378
Commercial use	-	0
Industrial use	-	1,120
Geothermal and other energy production	1,120	0
Seawater intrusion barrier	0	0
Recreational impoundment	-	0
Wetlands or wildlife habitat	4,480	0
Groundwater recharge (IPR)	-	0
Surface water augmentation (IPR)	N/A	0
Direct potable reuse	N/A	0
Other	<i>Type of Use</i>	N/A
Total	7,797	4,060
<p>NOTES: (1) "2010 Projection for 2015" Landscape Irrigation value of 2,197 included golf courses. (2) The 1,120 AF classified in 2010 as "geothermal and other energy production" was reclassified to industrial use. (3) The 4,480 AF classified in 2010 as "wetlands or wildlife habitat" represents a required discharge to Dry Creek, and has been reclassified to not be included as a recycled water beneficial use. (4) "2010 Projection for 2015" includes approximately 327 AF delivered to the Morgan Creek Golf Course that, although delivered in 2015, is not reported under "2015 Actual Use" due to the Morgan Creek Golf Course location outside of the City's service area.</p>		

Table 6-6 Retail: Methods to Expand Future Recycled Water Use

☐	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
Section 6.5.5	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Developer Agreements	As part of the entitlement approval process, developers must include recycled water use.	2015-2040	1,898
Total			1,898
NOTES: All volumes in AF.			

Table 6-7 Retail: Expected Future Water Supply Projects or Programs

<input type="checkbox"/>	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
<input type="checkbox"/>	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
Section 6.8	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
Purchase from PCWA	Yes	PCWA	As described in text	2025-2030	All Year Types	1,500
Well Expansion - Phase I	No		4 New Wells	2015-2020	Single-Dry and Multi-Dry Year	9,684 (2,421 per well)
Well Expansion - Phase II	No		3 New Wells	2020-2025	Single-Dry and Multi-Dry Year	7,263 (2,421 per well)
Well Expansion - Phase III	No		2 New Wells	2025-2030	Single-Dry and Multi-Dry Year	4,842 (2,421 per well)
NOTES: Volumes are in AF. The groundwater projects are intended to act as dry year water supplies and hence increase the City's water supply reliability. It is the City's policy to not use groundwater facilities to increase the available normal year water supply.						

Table 6-8 Retail: Water Supplies — Actual

Water Supply	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality	Total Right or Safe Yield (optional)
Purchased or Imported Water	United States Bureau of Reclamation (USBR)	7,820	Raw Water	32,000
Purchased or Imported Water	Placer County Water Agency (PCWA)	30,000	Raw Water	30,000
Purchased or Imported Water	San Juan Water District	0	Raw Water	4,000
Recycled Water	South Placer Wastewater Authority	4,060	Recycled Water	4,060
Total		41,880		70,060

NOTES: All volumes in AF. USBR allocation of 7,820 AF is 25% of recent water use. Actual Volume values in table represent supply available in 2015, actual water use was less (20,881 AF). San Juan Water District supply is available only in normal or wetter years and was not available in 2015. Recycled water volume represents volume distributed within the City's potable water service area.

Table 6-9 Retail: Water Supplies — Projected												
Water Supply	Additional Detail on Water Supply	Projected Water Supply Report To the Extent Practicable										
		2020		2025		2030		2035		2040 (opt)		
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	
Purchased or Imported Water	U.S. Bureau of Reclamation (CVP Supply)	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	32,000	
Purchased or Imported Water	PCWA (Middle Fork Supply)	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	
Purchased or Imported Water	PCWA Treated Water (Additional Future Purchase)	0	0	0	0	1,500	1,500	1,500	1,500	1,500	1,500	
Purchased or Imported Water	San Juan Water District	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	
Recycled Water	SPWA	4,421	4,421	4,791	4,791	5,259	5,259	5,643	5,643	5,958	5,958	
	Total	70,421	70,421	70,791	70,791	72,759	72,759	73,143	73,143	73,458	73,458	

NOTES: All volumes are in AF. Does not include groundwater or intertie water, as both are intended for emergency situations and/or dry year use.

Table 7-1 Retail: Basis of Water Year Data

Year Type	Base Year <i>If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 1999-2000, use 2000</i>	Available Supplies if Year Type Repeats	
		<input type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		<input checked="" type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year	1902-2010	58,900	100%
Single-Dry Year	2015	38,000	65%
Multiple-Dry Years 1st Year	1990	51,394	87%
Multiple-Dry Years 2nd Year	1991	54,000	92%
Multiple-Dry Years 3rd Year	1992	45,426	77%

NOTES: This table represents actual historical data, and is not a predictor of future availability. Does NOT include recycled water.

Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals <i>(autofill from Table 6-9)</i>	70,421	70,791	72,759	73,143	73,458
Demand totals <i>(autofill from Table 4-3)</i>	45,475	48,091	51,333	54,405	56,865
Difference	24,946	22,700	21,426	18,738	16,593
NOTES: Volumes are in AF. Includes Recycled Water. Table references refer to DWR table numbers.					

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	42,421	42,791	44,759	45,143	45,458
Demand totals	45,475	48,091	51,333	54,405	56,865
Difference	(3,054)	(5,300)	(6,574)	(9,262)	(11,407)
NOTES: All volumes are in AF. Includes Recycled Water.					

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	55,815	56,185	58,153	58,537	58,852
	Demand totals	45,475	48,091	51,333	54,405	56,865
	Difference	10,340	8,094	6,820	4,132	1,987
Second year	Supply totals	58,421	58,791	60,759	61,143	61,458
	Demand totals	45,475	48,091	51,333	54,405	56,865
	Difference	12,946	10,700	9,426	6,738	4,593
Third year	Supply totals	49,847	50,217	52,185	52,569	52,884
	Demand totals	45,475	48,091	51,333	54,405	56,865
	Difference	4,372	2,126	852	(1,836)	(3,981)
NOTES: All volumes are in Af. Includes Recycled Water.						

Table 8-1 Retail Stages of Water Shortage Contingency Plan		
Stage	Complete Both	
	Percent Supply Reduction ¹ <i>Numerical value as a percent</i>	Water Supply Condition <i>(Narrative description)</i>
I	Up to 10%	Surface water supply availability of 53,010 AF ^(a)
II	Up to 20%	Surface water supply availability of 47,120 AF
III	Up to 30%	Surface water supply availability of 41,230 AF
IV	Up to 40%	Surface water supply availability of 35,340 AF ^(b)
V	Up to 50%	Surface water supply availability of 29,450 AF ^(b)
¹ One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
<p>(a) Surface water availability consistent with Water Forum Agreement for water taken from the American River system.</p> <p>(b) Based on water supply portfolio available it is not projected or anticipated that shortages would ever get to levels of 40 – 50% shortage. Measures are planned, however, to meet regulatory requirements or UWMP.</p>		

Table 8-2 Retail Only: Restrictions and Prohibitions on End Uses

Stage	Restrictions and Prohibitions on End Uses	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement?
0	Landscape - Limit landscape irrigation to specific times	Appendix - Water Shortage Ordinance: 14.09.070 (A)	Yes
1	Landscape - Limit landscape irrigation to specific days	Appendix - Water Shortage Ordinance: 14.09.070 (C)	Yes
1	Other - Prohibit use of potable water for washing hard surfaces	Appendix - Water Shortage Ordinance: 14.09.070 (H)	Yes
1	CII - Restaurants may only serve water upon request	Appendix - Water Shortage Ordinance: 14.09.070 (I)	Yes
2	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Appendix - Water Shortage Ordinance: 14.09.070 (H)	Yes
3	Landscape - Other landscape restriction or prohibition	Appendix - Water Shortage Ordinance: 14.09.070 (H)	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	Appendix - Water Shortage Ordinance: 14.09.070 (J)	Yes
3	Other - Prohibit use of potable water for construction and dust control	Appendix - Water Shortage Ordinance: 14.09.070 (K)	Yes
3	Pools and Spas - Require covers for pools and spas	Appendix - Water Shortage Ordinance: 14.09.070 (L)	Yes
4	Other water feature or swimming pool restriction	Appendix - Water Shortage Ordinance: 14.09.070 (K)	Yes
4	Other	Appendix - Water Shortage Ordinance: 14.09.070 (L)	Yes
5	Landscape - Prohibit certain types of landscape irrigation	Appendix - Water Shortage Ordinance: 14.09.070 (C)	Yes
5	Other water feature or swimming pool restriction	Appendix - Water Shortage Ordinance: 14.09.070 (D)	Yes

NOTES:

**Table 8-3 Retail Only:
Stages of Water Shortage Contingency Plan - Consumption Reduction Methods**

Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference <i>(optional)</i>
All Stages	Expand Public Information Campaign	
All Stages	Increase Water Waste Patrols	
All Stages	Offer Water Use Surveys	
	Implement or Modify Drought Rate Structure or Surcharge	

NOTES:

Table 8-4 Retail: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	54,000	54,000	46,000
NOTES: All volumes in AF. Assumes no water from SJWD, minimum recycled water, and minimum groundwater usage.			

Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Roseville	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
County Name	60 Day Notice	Notice of Public Hearing
Placer County	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

APPENDIX C

DWR UWMP Checklist

(THIS PAGE LEFT BLANK INTENTIONALLY)

**Appendix C. Urban Water Management Plan Checklist
Checklist Arranged by Subject**

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	Section 2.1 (Page 2-1)
10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.5.2	Section 2.5.1 (Page 2-3)
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	Section 2.5.2.2 (Page 2-4)
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	Section 3.2 (Page 3-1)
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	Section 3.3 (Page 3-1, 3-2)
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	Section 3.4.1 (Page 3-3)
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	Section 3.4.2 (Page 3-3)
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	Section 3.4.1 (Page 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	Section 4.2 (Page 4-1 to 4-4)
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	Section 4.3 (Page 4-4)
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	Section 4.5 (Page 4-6)
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	Section 5.7 (Page 5-5)
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	Section 5.5 to 5.7 (Page 5-3 to 5-5)
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply is the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	Section 5.6 (Page 5-4) Appendix F
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	Section 5.7 (Page 5-5)
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: No Adjustment – See Section 5.7 (Page 5-5)
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: Not Wholesaler – See Section 2.4 (Page 2-2)
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	Section 5.7 (Page 5-5)
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	Section 6.9 (Page 6-12, 6-13)
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	Section 6.2 (Page 6-1)
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	Section 6.2.2 (Page 6-2)
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	Section 6.2.1 (Page 6-1, 6-2)
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	Section 6.2.1 (Page 6-1)
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	Section 6.2.1 (Page 6-1)
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	Section 6.2.3 (Page 6-4)

**Appendix C. Urban Water Management Plan Checklist
Checklist Arranged by Subject**

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
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	Section 6.2 (Page 6-1 to 6-4)
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	Section 6.7 (Page 6-10)
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	Section 6.8 (Page 6-11, 6-12)
10631(i)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	Section 6.6 (Page 6-10)
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	Section 2.5.1 (Page 2-3)
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: Not Wholesaler – See Section 2.4 (Page 2-2)
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	Section 6.5.1 (Page 6-5)
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	Section 6.5.2 (Page 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	Section 6.5.2 (Page 6-7)
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	Section 6.5.3 (Page 6-7)
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	Section 6.5.4 (Page 6-7, 6-8)
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	Section 6.5.4 (Page 6-8)
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	Section 6.5 (Page 6-10)
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	Section 6.5.5 (Page 6-9)
10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.4	Section 7.3 (Page 7-11)
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	Section 7.1.4 (Page 7-2 to 7-4)
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	Section 7.2 (Page 7-4 to 7-11)
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	Section 7.2.1.2 (Page 7-9)
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	Section 7.1.2 (Page 7-1)
10635(a)	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.3	Section 7.2 (Page 7-4 to 7-11)
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	Section 8.2 (Page 8-1, 8-2)
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	Section 8.10 (Page 8-5)
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	Section 8.9 (Page 8-5)
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	Section 8.3 (Page 8-3)
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	Section 8.5 (Page 8-4)

**Appendix C. Urban Water Management Plan Checklist
Checklist Arranged by Subject**

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	Section 8.4 (Page 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	Section 8.7 (Page 8-4, 8-5)
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	Section 8.8, (Page 8-5) Appendix J
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	Section 8.6 (Page 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 9.2 and 9.3	Section 9.1, 9.2 (Page 9-1 to 9-8)
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 Measures	Sections 9.1 and 9.3	N/A: Not Wholesaler – See Section 2.4 (Page 2-2)
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	Section 9.4 (Page 9-8, 9-9)
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	Section 10.2 (Page 10-1)
10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	Section 10.2 (Page 10-1)
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	Section 10.4 (Page 10-2)
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	Section 10.4 (Page 10-2)
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	Section 10.2, 10.3, 10.5 (Page 10-1,10-2)
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	Section 10.2 (Page 10-1)
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	Section 10.3 (Page 10-2)
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	Section 10.4 (Page 10-2)
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	Section 10.4 (Page 10-2)
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	Section 10.4 (Page 10-2)
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	Section 10.5 (Page 10-2)

(THIS PAGE LEFT BLANK INTENTIONALLY)

APPENDIX D

Agency and Public Notices

(THIS PAGE LEFT BLANK INTENTIONALLY)



Environmental Utilities
Water Division
2005 Hilltop Circle
Roseville, California 95747

January 22, 2016

Mr. Rob Jensen
City Manager
City of Roseville
311 Vernon Street
Roseville, CA 95678

SUBJECT: 2015 Urban Water Management Plan

Dear Mr. Jensen:

The City of Roseville (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). The Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP every five years. The UWMP is a planning document and a source document which reports, describes and evaluates water deliveries and uses, water supply sources and conservation efforts.

As an urban water supplier, the City coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP update. The City will be reviewing the UWMP and will make amendments and updates, as appropriate. If you wish to contact the City about its review process, you may do so by writing to the undersigned or by email to jmulligan@roseville.ca.us. Thank you.

Sincerely,

Jim Mulligan
Water Utility Manager
City of Roseville
Environmental Utilities Department



**Environmental Utilities
Water Division**
2005 Hilltop Circle
Roseville, California 95747

January 22, 2016

Mr. Einar Maisch
General Manager
Placer County Water Agency
P.O. Box 6570
Auburn, CA 95604-6570

SUBJECT: 2015 Urban Water Management Plan

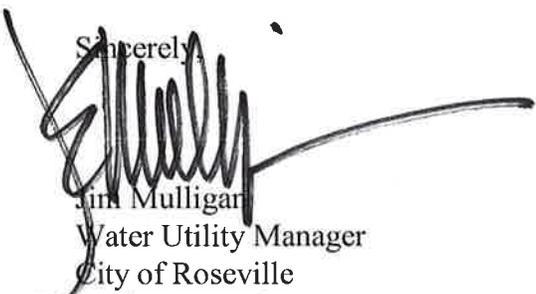
Dear Mr. Maisch:

The City of Roseville (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). The Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP every five years. The UWMP is a planning document and a source document which reports, describes and evaluates water deliveries and uses, water supply sources and conservation efforts.

As an urban water supplier, the City coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP update. The City will be reviewing the UWMP and will make amendments and updates, as appropriate.

If you wish to contact the City about its review process, you may do so by writing to the undersigned or by email to jmulligan@roseville.ca.us. Thank you.

Sincerely,



Jim Mulligan

Water Utility Manager
City of Roseville

Environmental Utilities Department



Environmental Utilities
Water Division
2005 Hilltop Circle
Roseville, California 95747

January 22, 2016

Ms. Shirlee I. Herrington
Environmental Coordination Services
Placer County Community Development Resource Agency
3091 County Center Drive, Suite #190
Auburn, CA 95603

SUBJECT: 2015 Urban Water Management Plan

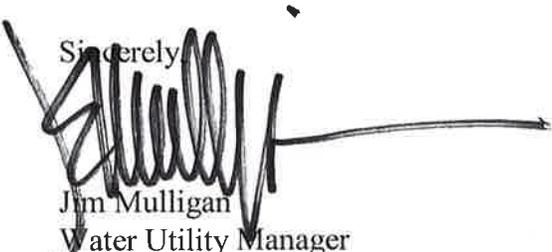
Dear Ms. Herrington:

The City of Roseville (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). The Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP every five years. The UWMP is a planning document and a source document which reports, describes and evaluates water deliveries and uses, water supply sources and conservation efforts.

As an urban water supplier, the City coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP update. The City will be reviewing the UWMP and will make amendments and updates, as appropriate.

If you wish to contact the City about its review process, you may do so by writing to the undersigned or by email to jmulligan@roseville.ca.us. Thank you.

Sincerely,



Jim Mulligan
Water Utility Manager

City of Roseville
Environmental Utilities Department



**Environmental Utilities
Water Division**
2005 Hilltop Circle
Roseville, California 95747

January 22, 2016

Mr. Ken Grehm
Department Head, Placer County Public Works
Placer County
3091 County Center Drive, Suite 220
Auburn, CA 95603

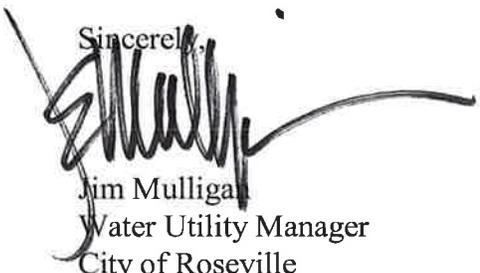
SUBJECT: 2015 Urban Water Management Plan

Dear Mr. Grehm:

The City of Roseville (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). The Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP every five years. The UWMP is a planning document and a source document which reports, describes and evaluates water deliveries and uses, water supply sources and conservation efforts.

As an urban water supplier, the City coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP update. The City will be reviewing the UWMP and will make amendments and updates, as appropriate. If you wish to contact the City about its review process, you may do so by writing to the undersigned or by email to jmulligan@roseville.ca.us. Thank you.

Sincerely,



Jim Mulligan
Water Utility Manager
City of Roseville
Environmental Utilities Department



**Environmental Utilities
Water Division**
2005 Hilltop Circle
Roseville, California 95747

January 22, 2016

Ms. Shauna Lorance
General Manager
San Juan Water District
9935 Auburn-Folsom Road
Granite Bay, CA 95746

SUBJECT: 2015 Urban Water Management Plan

Dear Ms. Lorance:

The City of Roseville (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). The Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP every five years. The UWMP is a planning document and a source document which reports, describes and evaluates water deliveries and uses, water supply sources and conservation efforts.

As an urban water supplier, the City coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP update. The City will be reviewing the UWMP and will make amendments and updates, as appropriate.

If you wish to contact the City about its review process, you may do so by writing to the undersigned or by email to jmulligan@roseville.ca.us. Thank you.

Sincerely,

Jim Mulligan
Water Utility Manager
City of Roseville
Environmental Utilities Department



Environmental Utilities
Water Division
2005 Hilltop Circle
Roseville, California 95747

March 15, 2016

Drew Lessard, Area Manager
Central California Area Office
7794 Folsom Dam Road
Folsom CA 95630-1799

SUBJECT: 2015 Urban Water Management Plan

Dear Mr. Drew Lessard:

The City of Roseville (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). The Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP every five years. The UWMP is a planning document and a source document which reports, describes and evaluates water deliveries and uses, water supply sources and conservation efforts.

As an urban water supplier, the City coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP update. The City will be reviewing the UWMP and will make amendments and updates, as appropriate. If you wish to contact the City about its review process, you may do so by writing to the undersigned or by email to jmulligan@roseville.ca.us. Thank you.

Sincerely,

Jim Mulligan
Water Utility Manager
City of Roseville
Environmental Utilities Department



Environmental Utilities
Water Division
2005 Hilltop Circle
Roseville, California 95747

January 22, 2016

Mr. Robert Churchill
General Manager
Citrus Heights Water District
P.O Box 286
Citrus Heights, CA 95611-0286

SUBJECT: 2015 Urban Water Management Plan

Dear Mr. Churchill:

The City of Roseville (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). The Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP every five years. The UWMP is a planning document and a source document which reports, describes and evaluates water deliveries and uses, water supply sources and conservation efforts.

As an urban water supplier, the City coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP update. The City will be reviewing the UWMP and will make amendments and updates, as appropriate. If you wish to contact the City about its review process, you may do so by writing to the undersigned or by email to jmulligan@roseville.ca.us. Thank you.

Sincerely,

Jim Mulligan
Water Utility Manager
City of Roseville
Environmental Utilities Department

(THIS PAGE LEFT BLANK INTENTIONALLY)

NOTICE OF PUBLIC HEARING

16619008

**NOTICE OF PUBLIC HEARING ON THE CITY OF ROSEVILLE
2015 URBAN WATER MANAGEMENT PLAN UPDATE
CITY OF ROSEVILLE, PLACER COUNTY, CALIFORNIA**

NOTICE IS HEREBY GIVEN That the City of Roseville will hold a public hearing on Wednesday, May 18, 2016 at 7:00 p.m. in the City Council Chambers at 311 Vernon Street, Roseville, California, to consider adoption of the City of Roseville 2015 Urban Water Management Plan. In accordance with SBX7-7, the public hearing will include consideration for adoption of a method (Method 1) for determining City of Roseville's targets for 20% reduction of water use by 2020, as well as any economic impacts associated with achieving these targets.

The Public Review Draft of the document is available on the City's website at <http://roseville.ca.us/UWMP>.

PUBLISHED IN ROSEVILLE PRESS TRIBUNE: MAY 6, 2016

The above space is reserved for Court/County Filed Date Stamp

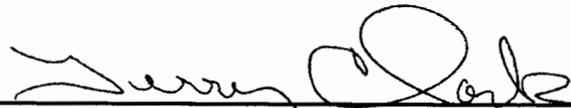
**PROOF OF PUBLICATION
(2015.5 C.C.P.)**

**STATE OF CALIFORNIA
County of Placer**

I am a citizen of the United States and employed by a publication in the County aforesaid. I am over the age of eighteen years, and not a party to the mentioned matter. I am the principal clerk of the **Roseville Press Tribune**, a newspaper of general circulation, in the **City of Roseville**, which is printed and published in the **County of Placer**. This newspaper has been judged a newspaper of general circulation by the Superior Court of the State of California, in and for the **County of Placer**, on the date of May 5, 1952 (Case Number 17357). The notice, of which the attached is a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

MAY 6

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



Terry Clark

Dated in Loomis, California

MAY 6, 2016

**PROOF OF PUBLICATION
THE ROSEVILLE PRESS TRIBUNE
188 CIRBY WAY
ROSEVILLE, CA 95678**

(THIS PAGE LEFT BLANK INTENTIONALLY)

APPENDIX E

AWWA Water Audit

(THIS PAGE LEFT BLANK INTENTIONALLY)

AWWA Free Water Audit Software v5.0

American Water Works Association Copyright © 2014, All Rights Reserved.

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format, and is not meant to take the place of a full-scale, comprehensive water audit format.

Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targetting loss reduction levels

The spreadsheet contains several separate worksheets. Sheets can be accessed using the tabs towards the bottom of the screen, or by clicking the buttons below.

Please begin by providing the following information

Name of Contact Person:

Email Address:

Telephone (incl Ext.):

Name of City / Utility:

City/Town/Municipality:

State / Province:

Country:

Year:

Start Date: Enter MM/YYYY numeric format

End Date: Enter MM/YYYY numeric format

Audit Preparation Date:

Volume Reporting Units:

PWSID / Other ID:

The following guidance will help you complete the Audit

All audit data are entered on the [Reporting Worksheet](#)

- Value can be entered by user
- Value calculated based on input data
- These cells contain recommended default values

Use of Option (Radio) Buttons: Pcnt: Value:

Select the default percentage by choosing the option button on the left

To enter a value, choose this button and enter a value in the cell to the right

The following worksheets are available by clicking the buttons below or selecting the tabs along the bottom of the page

<p><u>Instructions</u></p> <p>The current sheet. Enter contact information and basic audit details (year, units etc)</p>	<p><u>Reporting Worksheet</u></p> <p>Enter the required data on this worksheet to calculate the water balance and data grading</p>	<p><u>Comments</u></p> <p>Enter comments to explain how values were calculated or to document data sources</p>	<p><u>Performance Indicators</u></p> <p>Review the performance indicators to evaluate the results of the audit</p>	<p><u>Water Balance</u></p> <p>The values entered in the Reporting Worksheet are used to populate the Water Balance</p>	<p><u>Dashboard</u></p> <p>A graphical summary of the water balance and Non-Revenue Water components</p>
<p><u>Grading Matrix</u></p> <p>Presents the possible grading options for each input component of the audit</p>	<p><u>Service Connection Diagram</u></p> <p>Diagrams depicting possible customer service connection line configurations</p>	<p><u>Definitions</u></p> <p>Use this sheet to understand the terms used in the audit process</p>	<p><u>Loss Control Planning</u></p> <p>Use this sheet to interpret the results of the audit validity score and performance indicators</p>	<p><u>Example Audits</u></p> <p>Reporting Worksheet and Performance Indicators examples are shown for two validated audits</p>	<p><u>Acknowledgements</u></p> <p>Acknowledgements for the AWWA Free Water Audit Software v5.0</p>

If you have questions or comments regarding the software please contact us via email at: wlc@awwa.org



AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0
American Water Works Association,
Copyright © 2014, All Rights Reserved.

?
+

Water Audit Report for:
Reporting Year:

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

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

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

WATER SUPPLIED

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

Volume from own sources:	+ ?	7	22,991.000	acre-ft/yr
Water imported:	+ ?	9	853.500	acre-ft/yr
Water exported:	+ ?	9	781.900	acre-ft/yr

Master Meter and Supply Error Adjustments

Pcnt:	Value:	acre-ft/yr
+ ?	<input type="text" value=""/>	<input type="text" value=""/>
+ ?	<input type="text" value=""/>	<input type="text" value=""/>
+ ?	<input type="text" value=""/>	<input type="text" value=""/>

WATER SUPPLIED: acre-ft/yr

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

AUTHORIZED CONSUMPTION

Billed metered:	+ ?	7	20,499.000	acre-ft/yr
Billed unmetered:	+ ?	9	222.000	acre-ft/yr
Unbilled metered:	+ ?	8	182.000	acre-ft/yr
Unbilled unmetered:	+ ?	7	32.080	acre-ft/yr

AUTHORIZED CONSUMPTION: acre-ft/yr

Click here: ?
for help using option buttons below

Pcnt:	Value:	acre-ft/yr
<input type="text" value=""/>	<input type="text" value="32.080"/>	<input type="text" value=""/>

Use buttons to select percentage of water supplied OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

acre-ft/yr

Apparent Losses

Unauthorized consumption: + ? acre-ft/yr

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

Customer metering inaccuracies:	+ ?	5	208.899	acre-ft/yr
Systematic data handling errors:	+ ?	5	51.248	acre-ft/yr

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

Apparent Losses: acre-ft/yr

Pcnt:	Value:	acre-ft/yr
0.25%	<input type="text" value=""/>	<input type="text" value=""/>
1.00%	<input type="text" value=""/>	<input type="text" value=""/>
0.25%	<input type="text" value=""/>	<input type="text" value=""/>

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: acre-ft/yr

WATER LOSSES: acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	10	583.0	miles
Number of <u>active AND inactive</u> service connections:	+ ?	8	41,832	
Service connection density:	?		72	conn./mile main

Are customer meters typically located at the curbside or property line?
Average length of customer service line: + ? ft (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average operating pressure: + ? psi

COST DATA

Total annual cost of operating water system:	+ ?	8	\$5,579,612	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	8	\$0.72	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+ ?	8	\$242.69	\$/acre-ft <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 72 out of 100 ***

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

PRIORITY AREAS FOR ATTENTION:

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

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

APPENDIX F

SB X7-7 Compliance and Verification Forms

(THIS PAGE LEFT BLANK INTENTIONALLY)

SB X7-7 Table 0: Units of Measure Used in UWMP*

(select one from the drop down list)

Acre Feet

**The unit of measure must be consistent with Table 2-3*

NOTES:

SB X7-7 Table-1: Baseline Period Ranges

Baseline	Parameter	Value	Units
10- to 15-year baseline period	2008 total water deliveries	34,052	Acre Feet
	2008 total volume of delivered recycled water	2,985	Acre Feet
	2008 recycled water as a percent of total deliveries	8.77%	Percent
	Number of years in baseline period ^{1, 2}	10	Years
	Year beginning baseline period range	1995	
	Year ending baseline period range ³	2004	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range ⁴	2007	

¹ If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period. ² The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

³ The ending year must be between December 31, 2004 and December 31, 2010.

⁴ The ending year must be between December 31, 2007 and December 31, 2010.

NOTES:

SB X7-7 Table 2: Method for Population Estimates

Method Used to Determine Population (may check more than one)	
<input checked="" type="checkbox"/>	1. Department of Finance (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input type="checkbox"/>	2. Persons-per-Connection Method
<input type="checkbox"/>	3. DWR Population Tool
<input type="checkbox"/>	4. Other DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	1995	54,602
Year 2	1996	58,424
Year 3	1997	62,619
Year 4	1998	66,761
Year 5	1999	71,824
Year 6	2000	74,562
Year 7	2001	78,420
Year 8	2002	83,167
Year 9	2003	89,289
Year 10	2004	94,561
5 Year Baseline Population		
Year 1	2003	89,289
Year 2	2004	94,561
Year 3	2005	99,295
Year 4	2006	101,641
Year 5	2007	103,693
2015 Compliance Year Population		
2015		123,572
<p>NOTES: Does not include approximately 4,810 person living within City limits, but outside the water service area.</p>		

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source		All Sources		
This water source is:				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment* <i>Optional (+/-)</i>	Corrected Volume Entering Distribution System	
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1995	18,841		18,841
Year 2	1996	21,254		21,254
Year 3	1997	23,001		23,001
Year 4	1998	20,462		20,462
Year 5	1999	24,179		24,179
Year 6	2000	25,646		25,646
Year 7	2001	28,100		28,100
Year 8	2002	29,853		29,853
Year 9	2003	29,714		29,714
Year 10	2004	32,468		32,468
5 Year Baseline - Water into Distribution System				
Year 1	2003	29,714		29,714
Year 2	2004	32,468		32,468
Year 3	2005	31,481		31,481
Year 4	2006	33,637		33,637
Year 5	2007	33,864		33,864
2015 Compliance Year - Water into Distribution System				
	2015	22,881		22,881
* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document				
NOTES:				

SB X7-7 Table 4: Annual Gross Water Use *

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>	
10 to 15 Year Baseline - Gross Water Use							
Year 1	1995	18,841			-		18,841
Year 2	1996	21,254			-		21,254
Year 3	1997	23,001			-		23,001
Year 4	1998	20,462			-		20,462
Year 5	1999	24,179			-		24,179
Year 6	2000	25,646			-		25,646
Year 7	2001	28,100			-		28,100
Year 8	2002	29,853			-		29,853
Year 9	2003	29,714			-		29,714
Year 10	2004	32,468			-		32,468
10 - 15 year baseline average gross water use							25,352
5 Year Baseline - Gross Water Use							
Year 1	2003	29,714			-		29,714
Year 2	2004	32,468			-		32,468
Year 3	2005	31,481			-		31,481
Year 4	2006	33,637			-		33,637
Year 5	2007	33,864			-		33,864
5 year baseline average gross water use							32,233
2015 Compliance Year - Gross Water Use							
2015		22,881	-		-		22,881
* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3							
NOTES:							

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)

Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Annual Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1995	54,602	18,841	308
Year 2	1996	58,424	21,254	325
Year 3	1997	62,619	23,001	328
Year 4	1998	66,761	20,462	274
Year 5	1999	71,824	24,179	301
Year 6	2000	74,562	25,646	307
Year 7	2001	78,420	28,100	320
Year 8	2002	83,167	29,853	320
Year 9	2003	89,289	29,714	297
Year 10	2004	94,561	32,468	307
10-15 Year Average Baseline GPCD				309
5 Year Baseline GPCD				
Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use
Year 1	2003	89,289	29,714	297
Year 2	2004	94,561	32,468	307
Year 3	2005	99,295	31,481	283
Year 4	2006	101,641	33,637	295
Year 5	2007	103,693	33,864	292
5 Year Average Baseline GPCD				295
2015 Compliance Year GPCD				
2015		123,572	22,881	165
NOTES:				

SB X7-7 Table 6: Gallons per Capita per Day
Summary From Table SB X7-7 Table 5

10-15 Year Baseline GPCD	309
5 Year Baseline GPCD	295
2015 Compliance Year GPCD	165
NOTES:	

SB X7-7 Table 7: 2020 Target Method*Select Only One*

Target Method		Supporting Documentation
<input checked="" type="checkbox"/>	Method 1	SB X7-7 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D <i>Contact DWR for these tables</i>
<input type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	Method 4	Method 4 Calculator

NOTES:

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	2020 Target GPCD
309	247
NOTES:	

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD <i>From SB X7-7 Table 5</i>	Maximum 2020 Target ¹	Calculated 2020 Target ²	Confirmed 2020 Target
295	280	247	247

¹ Maximum 2020 Target is 95% of the 5 Year Baseline GPCD
² 2020
Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and
corresponding tables for agency's calculated target.

NOTES:

SB X7-7 Table 8: 2015 Interim Target GPCD

Confirmed 2020 Target <i>Fm SB X7-7 Table 7-F</i>	10-15 year Baseline GPCD <i>Fm SB X7-7 Table 5</i>	2015 Interim Target GPCD
247	309	278

NOTES:

SB X7-7 Table 9: 2015 Compliance

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments <i>(in GPCD)</i>					2015 GPCD <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2015?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD		
		Extraordinary Events	Weather Normalization	Economic Adjustment				
165	278	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	<i>From Methodology 8 (Optional)</i>	-	165	165	YES

NOTES:

(THIS PAGE LEFT BLANK INTENTIONALLY)

APPENDIX G

Intent to Retain Control of Conserved Water

(THIS PAGE LEFT BLANK INTENTIONALLY)

RESOLUTION NO. 09-64

DECLARING AN INTENT TO RETAIN CONTROL OF CONSERVED WATER

WHEREAS, the City has contractual entitlements to divert water from Folsom Reservoir, under which the City diverts and treats water for distribution to its residents and water users; and

WHEREAS, the City plans to implement a series of water conservation projects and programs for the purpose of eliminating losses of water within its water transmission and distribution system and for reducing consumption of water by its customers through on-site efficiency improvements and curtailment of water waste; and

WHEREAS, Water Code section 1011 provides that water is deemed conserved when less water is used to accomplish the same purposes of use allowed under a water right and that such cessation or reduction in use is deemed a beneficial use of a water right to the extent of such cessation or reduction in use; and

WHEREAS, Water Code section 1011 and the City's CVP water service contract authorizes the City to make water conserved as a result of such water conservation projects and programs available for use, sale, lease, exchange or short- or long-term transfers inside and outside of the City; and

NOW, THEREFORE, BE IT RESOLVED by the Council of the City of Roseville as follows:

1. The foregoing recitals are true and are incorporated into this Resolution by this reference.
2. The City Council finds and determines that: (a) making significant investments in infrastructure and administrative resources protects the City's water supplies for the benefit of all residents and water users in the City; (b) protecting all of the City's water supplies is of paramount importance to the health and welfare of the City's residents and water users; (c) conserving water through reductions in use is intended to promote statewide policies mandating and encouraging beneficial use of water; and (d) preserving conserved water supplies and making those supplies available for use, sale or transfer is in the best interests of the City and its residents and water users.
3. The City Council declares that, by instituting programs to conserve water, it abandons no right, title or interest in or to any City water rights, contractual entitlements or any appurtenant rights necessary to exercise such water rights or entitlements.
4. In accordance with Water Code section 1011 and any contractual rights, the City reserves the right to sell, lease, exchange, or otherwise transfer for use within or outside of the City's boundaries all water that has been conserved as a result of its water conservation projects and programs.

5. The Environmental Utilities Director and staff are directed to take all actions necessary to implement this Resolution, including the filing of annual reports of reductions in water use resulting from any water conservation projects and programs carried out under this Resolution with the State Water Resources Control Board.

PASSED AND ADOPTED by the City Council of the City of Roseville on the 18th day of February 2009, by the following vote:

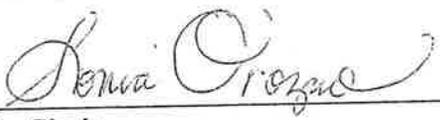
AYES COUNCILMEMBERS: Allard, Gray, Garcia, Roccucci, Garbolino

NOES COUNCILMEMBERS: None

ABSENT COUNCILMEMBERS: None


MAYOR

Attest:


City Clerk

[Handwritten notes]

APPENDIX H

SPWA Systems Evaluation

(THIS PAGE LEFT BLANK INTENTIONALLY)

Report can be downloaded/viewed from the City of Roseville's website:

http://www.roseville.ca.us/eu/wastewater_utility/south_placer_wastewater_systems_evaluation.asp

South Placer Regional Wastewater and Recycled Water Systems Evaluation

Updated Final Report

Prepared by:
RMC
Water and Environment

In Association With:
Brown & Caldwell
Environmental Science Associates (ESA)

December 2009

(THIS PAGE LEFT BLANK INTENTIONALLY)

APPENDIX I

CVP M&I WSP

(THIS PAGE LEFT BLANK INTENTIONALLY)

RECLAMATION

Managing Water in the West

Record of Decision

Central Valley Project Municipal and Industrial Water Shortage Policy

Prepared by
**United States Department of the Interior
Bureau of Reclamation
Mid Pacific Region**



**U.S. Department of the Interior
Bureau of Reclamation
Sacramento, California**

November 2015

Mission Statements

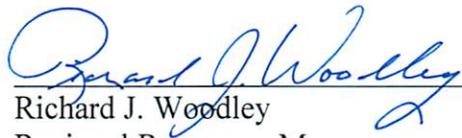
The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Record of Decision

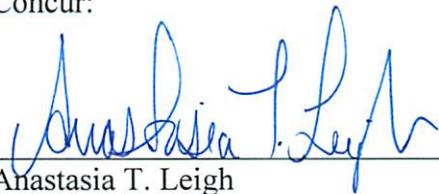
Central Valley Project Municipal and Industrial Water Shortage Policy

Recommended:


Richard J. Woodley
Regional Resources Manager
Mid-Pacific Region

Date Nov. 4, 2015

Concur:


Anastasia T. Leigh
Regional Environmental Officer
Mid-Pacific Region

Date 11/9/2015

Approved:


David Murillo
Regional Director
Mid-Pacific Region

Date 11/13/15

Summary of Action

The Bureau of Reclamation (Reclamation) prepared the Central Valley Project (CVP) Municipal and Industrial (M&I) Water Shortage Policy (WSP) Environmental Impact Statement (EIS) to evaluate the potential impacts of CVP M&I WSP alternatives. The M&I WSP would be used by Reclamation to: 1) define water shortage terms and conditions for applicable CVP water service contractors, as appropriate; 2) determine the quantity of water made available to CVP water service contractors from the CVP that, together with the M&I water service contractors' drought water conservation measures and other non-CVP water supplies, would assist the M&I water service contractors in their efforts to protect public health and safety (PHS) during severe or continuing droughts; and 3) provide information to CVP water service contractors for their use in water supply planning and development of drought contingency plans. The alternatives evaluated in this EIS utilize different methodologies for allocating available CVP water supplies to CVP water service contractors during a Condition of Shortage¹. This EIS evaluates potential impacts of the M&I WSP over a 20-year period, 2010 through 2030. Reclamation's decision is the adoption of an updated M&I WSP.

Background

In January 1993, following the adoption of the Central Valley Project Improvement Act (CVPIA), many CVP M&I water service contractors expressed concerns regarding future allocations of water supplies provided by the CVP. Reclamation subsequently initiated an effort to develop an M&I WSP that would be incorporated into long-term water service contracts during the contract renewal process implemented under the CVPIA. Involved stakeholders submitted language for the M&I WSP as part of several proposed policies. In September 2001, Reclamation released a Draft M&I WSP. Reclamation initiated the preparation of an Environmental Assessment (EA) which included stakeholder input and consideration and evaluation of alternative policies developed in 1993, 1996-1997, and 2000-2001. The M&I WSP EA was released in October 2005 and a Finding of No Significant Impact was signed in December 2005. The M&I WSP currently being implemented by Reclamation is the 2001 Draft M&I WSP, as amended by Alternative 1B from the 2005 EA. Because the assumptions supporting the 2005 EA became outdated and due to significant changes in the Sacramento-San Joaquin River Delta (Delta) and CVP/State Water Project (SWP) operations, Reclamation decided in 2009 to

¹ "Condition of Shortage" is defined in Reclamation water service contracts as "...a condition respecting the Project during any Year (*March 1 through February of the following year*) such that the Contracting Officer is unable to deliver sufficient water to meet the Contract Total".

undertake the M&I WSP EIS to provide an updated M&I WSP that best recognizes the needs of various segments of the water user community and how those needs could be addressed under Conditions of Shortage.

Decision

Reclamation’s decision is to implement Alternative 4, Updated M&I WSP (Preferred Alternative). This alternative comprises the updated M&I WSP developed by Reclamation with stakeholder input received during the M&I WSP stakeholder workshops held between May 2010 and January 2011, with clarifying revisions made to address comments from stakeholders received after Stakeholder Workshop 4 (November 2010) and to address public comments received on the Draft EIS (March 2015). The Updated M&I WSP will apply to the CVP water service contractors noted in Table 1. These water service contractors generally comprise those whose contracts currently reference the M&I WSP and those with a water service contract that is expected to reference the updated policy. These water users are located throughout the Sacramento River Valley, San Joaquin River Valley, Tulare Lake Region, and San Francisco Bay/Central Coast area.

Table 1. Water Service Contractors Subject to the Updated M&I WSP

General Geographical Region	CVP Division	Water Service Contractors	M&I	Ag ¹
North of Delta	Shasta and Trinity River	Bella Vista Water District	X	X
		Centerville Community Services District	X	-
		City of Redding	X	-
		City of Shasta Lake	X	-
		Clear Creek Community Services District	X	X
		Mountain Gate Community Services District	X	-
		Shasta Community Services District	X	-
		Shasta County Water Agency	X	-
		United States (U.S.) Forest Service (Shasta)	X	-
	Sacramento River	4-M Water District	X	X
		Colusa County Water District	X	X
		Corning Water District	X	X
		Cortina Water District	X	X
		County of Colusa	X	X
		County of Colusa (Stonyford)	X	-
		Davis Water District	X	X
		Dunnigan Water District	X	X
		Elk Creek Community Services District	X	-
		Glenn Valley Water District	X	X
		Glide Water District	X	X
Holthouse Water District	X	X		

Central Valley Project Municipal and Industrial Water Shortage Policy
Record of Decision

General Geographical Region	CVP Division	Water Service Contractors	M&I	Ag ¹
North of Delta	Sacramento River	Kanawha Water District	X	X
		Kirkwood Water District	X	X
		La Grande Water District	X	X
		Myers-Marsh Mutual Water Company	X	X
		Orland-Artois Water District	X	X
		Proberta Water District	X	X
		Stony Creek Water District	X	X
		Thomes Creek Water District	X	X
		U.S. Forest Service (Salt Creek)	X	-
		Westside Water District	X	X
		Whitney Construction, Incorporated	X	-
	American River	City of Roseville	X	-
		East Bay Municipal Utility District	X	-
		El Dorado Irrigation District	X	-
		Placer County Water Agency	X	-
		Sacramento County Water Agency	X	-
		Sacramento Municipal Utility District	X	-
		San Juan Water District	X	-
	Delta	Banta-Carbona Irrigation District	X	X
		Byron-Bethany Irrigation District	X	X
		City of Tracy	X	X
		Coelho Family Trust	X	X
		Contra Costa Water District	X	-
		Del Puerto Water District	X	X
		Eagle Field Water District	X	X
		Fresno Slough Water District	X	X
		James Irrigation District	X	X
		Laguna Water District	X	X
		Mercy Springs Water District	X	X
		Oro Loma Water District	X	X
		Pajaro Valley Water Management Agency, Westlands Water District	X	X
		Patterson Irrigation District	X	X
		Reclamation District No. 1606	X	X
		Tranquillity Irrigation District	X	X
		Tranquillity Public Utility District	X	X
		U.S. Department of Veteran Affairs	X	-
		West Side Irrigation District	X	X
		West Stanislaus Irrigation District	X	X
	Westlands Water District Distribution Districts	X	X	
	South of Delta	West San Joaquin	City of Avenal	X
City of Coalinga			X	-
City of Huron			X	-
Pacheco Water District			X	X
Panoche Water District			X	X
San Luis Water District			X	X
State of California			X	-

General Geographical Region	CVP Division	Water Service Contractors	M&I	Ag ¹
South of Delta	West San Joaquin	Westlands Water District	X	X
	San Felipe	San Benito County Water District	X	X
		Santa Clara Valley Water District	X	X
		County of Fresno	X	X
	Cross Valley Canal	County of Tulare	X	X
		Hills Valley Irrigation District (includes Rag Gulch Water District)	X	X
		Kern-Tulare Water District	X	X
		Lower Tule River Irrigation District	-	X
		Pixley Irrigation District	X	X
		Tri-Valley Water District	X	X

Note:

¹ Ag = Agricultural water service contractor

Alternatives Considered

No Action Alternative

The No Action Alternative represents continued implementation of the current Draft M&I WSP. This existing draft policy is currently guiding Reclamation's allocation of CVP water to agricultural and M&I water service contractors during Conditions of Shortage and would continue if none of the action alternatives were selected.

During Conditions of Shortage when the CVP is unable to deliver sufficient water to meet the CVP water service contractors' Contract Total, M&I water service contractors allocations are maintained at 100 percent of their Contract Total as the agricultural water service contractor allocations are reduced to 75 percent of their Contract Total in incremental steps. Then, M&I water service contractor allocations are reduced to 75 percent of their historical use in incremental steps as agricultural water service contractor allocations are reduced to 50 percent of their Contract Total. The M&I water service contractor allocations are maintained at 75 percent of historical use until agricultural water service contractor allocations are reduced in incremental steps to 25 percent of Contract Total. M&I water service contractor allocations are then reduced in incremental steps to 50 percent of historical use until agricultural water service contract allocations are reduced in incremental steps from 25 percent to zero.

In years when the M&I water service contractor allocations are less than 75 percent of historical use, Reclamation would attempt to provide the amount of PHS need unmet by contractors' CVP allocation and other available non-CVP

supplies, up to 75 percent of the historical use, subject to the availability of CVP water supplies. There are some years in which allocations to agricultural water service contractors are at or near zero. In those years, CVP water deliveries for unmet PHS need to M&I water service contractors may not be fully realized. Water made available to M&I water service contractors may be reduced below 75 percent of historical use and below the unmet PHS needs when CVP water is not available.

Action Alternatives

The alternatives that moved forward for more detailed analysis in the EIS were those that responded to the National Environmental Policy Act (NEPA) purpose and need, minimized negative effects, were potentially feasible, and represented a range of reasonable alternatives. As a result of initial alternatives screening, four action alternatives were selected to move forward for analysis in the EIS (in addition to the No Action Alternative). Table 2 presents the alternatives analyzed in the EIS. Analysis of these alternatives will provide the information needed for Reclamation to make a decision.

Table 2. Alternatives Analyzed in the EIS

Alternative Number	Alternative Name	Description
Alternative 1	No Action Alternative	Represents a projection of current conditions to the most reasonable future conditions that could occur during the life of the proposed action without any action alternative being implemented. The No Action Alternative represents continued allocation of water in the same way that Reclamation currently allocates CVP water to agricultural and M&I water service contractors during Conditions of Shortage, consistent with the 2001 Draft M&I WSP, as modified by Alternative 1B of the 2005 EA.
Alternative 2	Equal Agricultural and M&I Allocation	Provides no preference for either agricultural or M&I contractors. M&I and agricultural water service contractors receive equal allocation percentages during a Condition of Shortage.
Alternative 3	Full M&I Allocation Preference	M&I water service contractors receive 100% of their Contract Total until CVP supplies are not available to meet those demands. Agricultural allocations are reduced as needed to maintain 100% allocations to M&I contractors.
Alternative 4	Updated M&I WSP (Preferred Alternative)	Similar to Alternative 1 but modified to update the definition of unconstrained years used in calculating historical use. Attempts to provide unmet PHS need, but without a guarantee. Provides implementation guidelines and procedures.
Alternative 5	M&I Contractor Suggested WSP	Similar to Alternative 4 except attempts to provide a greater quantity of unmet PHS need.

Under Alternative 2, Equal Agricultural and M&I Allocation, M&I water service contractors would receive the same allocation, as a percentage of Contract Total, as the agricultural water service contractors. This means that in years when the CVP water supplies are not adequate to provide water to all water service contractors, agricultural and M&I water service contractor allocations would be reduced by the same percentage. This allocation methodology would provide a larger volume of CVP water to agricultural water service contractors than the No Action Alternative, as there would be no reductions to agricultural contractors to provide a larger volume of CVP water to M&I water service contractors. Deliveries to both north of the Delta and south of Delta M&I contractors would be lower than under the No Action Alternative in order to provide an equal allocation to agricultural water service contractors.

Under Alternative 3, Full M&I Allocation Preference, M&I water service contractors would receive a higher allocation as compared to the No Action Alternative and other action alternatives. Under this alternative, Reclamation would attempt to provide a 100 percent allocation to M&I water service contractors during a Condition of Shortage, to the extent that adequate CVP water supplies are available. This would be achieved by reducing allocations to agricultural water service contractors as needed to maximize the frequency of 100 percent allocations to the M&I water service contractors. This allocation methodology would provide the lowest volume of CVP water to agricultural water service contractors compared to the No Action and other action alternatives. Alternative 3 would have no provisions for unmet PHS needs that would be made available by Reclamation from CVP water supplies.

Alternative 4, Updated M&I WSP, is similar to the No Action Alternative. This alternative comprises the M&I WSP developed by Reclamation with stakeholder input received during the M&I WSP stakeholder workshops held between May 2010 and January 2011, with clarifying revisions made to address comments from stakeholders received after Stakeholder Workshop 4 and to address public comments received on the Draft EIS. Reclamation used this feedback to identify elements of the 2001 Draft M&I WSP (represented in the No Action Alternative) that could be improved. The major modifications made to the 2001 Draft M&I WSP that are reflected in the Updated M&I WSP include the following:

- Reclamation deleted the reference to 1996 M&I Water Rate book.
- At the M&I water service contractors' request, Reclamation modified the method that would be used to adjust an M&I water service contractor's historical use.
- Reclamation expanded the definitions of the key terms and also defined terms not previously defined, to provide greater clarity on the intent and requirements of the M&I WSP's key terms and conditions.

- Term and Condition 1 was revised to remove the sentence stating that Reclamation intended contractors to use their non-CVP supplies first and rely on CVP water as a supplemental supply. Instead, Reclamation expects water service contractors, at their discretion, to use CVP water in conjunction with their other non-CVP supplies to meet demand during all years, including years where a Condition of Shortage exists.
- Clarified M&I allocation for contracts with both irrigation and M&I use which do not set forth individual Contract Totals for each use.

Alternative 5, M&I Contractor Suggested WSP, is similar to Alternative 4, Updated M&I WSP. This alternative was developed and recommended by several M&I water service contractors who participated in the M&I WSP workshops held between May 2010 and January 2011. Alternative 5 attempts to provide an increased quantity of CVP water allocated to M&I water service contractors to supply the unmet portion of the PHS needs during a Condition of Shortage. This would be achieved by increasing the upper limit for consideration of additional allocations to assist in meeting unmet PHS need from an initial allocation of 75 percent of historical use (under Alternative 4) to an initial allocation of 95 percent of historical use (under Alternative 5).

Environmentally Preferable Alternative

Section 1505.2(b) of NEPA requires that, in cases where an EIS has been prepared, the Record of Decision must identify all alternatives that were considered, specifying the alternative or alternatives which were considered to be environmentally preferable. The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources (Council on Environmental Quality 40 Most Asked Questions number 6(a)). It is implicit in NEPA that the environmentally preferable alternative must be reasonable and feasible to implement.

In choosing the environmentally preferable alternative, Reclamation considered impacts to all resources. On balance, Alternative 1, No Action Alternative, and Alternative 4, Updated M&I WSP, would have the least environmental effects associated with implementing a CVP M&I WSP during a Condition of Shortage. Alternative 4 would have no environmental impacts compared to the No Action Alternative. Alternatives 2 and 3 have greater environmental effects to water quality, groundwater resources, air quality, geology and soils, and agricultural resources than Alternative 4. Alternative 5 would have small but greater effects to groundwater resources and air quality compared to Alternative 4.

Basis of Decision

Reclamation's decision to move forward is based on how the alternatives meet the project's purpose and need and the magnitude of environmental effects. While the alternatives would affect different resources in different ways, Alternative 4 provides Reclamation with the greatest degree of flexibility to address CVP water service contractors' needs during Conditions of Shortage while recognizing that CVP deliveries are subject to the amount of CVP water available and cannot be guaranteed, and provides clarity to the terms, conditions, and procedures of the CVP M&I WSP. Additionally, Alternative 4 has no environmental effects compared to the No Action Alternative; therefore, no mitigation measures are necessary.

Purpose and Need

The purpose of updating the 2001 Draft M&I WSP, as amended, is to provide detailed, clear, and objective guidelines for the allocation of available CVP water supplies to CVP water service contractors during a Condition of Shortage. The update to the M&I WSP is needed by water managers and CVP water service contractors to help them better plan for and manage available CVP water supplies, and to better integrate the use of CVP water with the use of other available non-CVP water supplies. The update to the M&I WSP is also needed to clarify certain terms and conditions with regard to the applicability and implementation process of the M&I WSP.

The updated M&I WSP would be used by Reclamation to:

- Define water shortage terms and conditions for applicable CVP water service contracts, as appropriate;
- Determine the quantity of water made available to CVP water service contractors from the CVP, that together with the M&I water service contractors' drought water conservation measures and other non-CVP water supplies, would assist the M&I water service contractors in their efforts to protect PHS during severe or continuing droughts; and
- Provide information to CVP water service contractors for their use in water supply planning and development of drought contingency plans.

All action alternatives meet the purpose and need, but the No Action Alternative does not meet the purpose and need.

Environmental Issues Evaluated

During March 2011, public scoping sessions on the development of the CVP M&I WSP EIS were held in Sacramento, Willows, Fresno, and Oakland, California. Key issues raised during the public scoping process that are applicable for inclusion in the EIS are listed below.

- The final M&I WSP should be a single document that clearly states how Reclamation interprets and implements the M&I WSP.
- Any additional water provided to M&I water service contractors is viewed as water “taken” from agricultural contractors.
- M&I water service contractors would like a guaranteed quantity of CVP water to meet PHS needs and do not want their use of non-CVP supplies to count against their deliveries of CVP water in Conditions of Shortage.
- The analysis should use an appropriate baseline given ongoing regulatory issues regarding CVP/SWP operations.
- The effects analysis should include a cumulative impact discussion in the context of other reasonably foreseeable past, present, and future actions potentially affecting the allocation of CVP water, including the Bay Delta Conservation Plan.
- The EIS should analyze the impacts to water service contractors who have limited access to alternative water supplies and to “mixed use” contractors.
- The M&I WSP EIS should specifically state the agencies that are and are not affected by the policy, and state that the M&I WSP will apply equally to all M&I contractors, including the American River Division contractors.
- Certain American River Division contractors (City of Roseville, Placer County Water Agency, Sacramento Municipal Utility District, and San Juan Water District) disagree with Reclamation’s interpretation of Term 14 of State Water Resources Control Board Decision 893 and believe it should provide them with additional supply reliability beyond what the M&I WSP provides in their water service contracts.

The alternatives were evaluated to address issues raised and potential impacts to the range of environmental and socioeconomic resources relevant to NEPA. The action alternatives have the potential to result in impacts to several resources, including surface water, water quality, groundwater, geology and soils, air quality, greenhouse gases (GHGs) and climate change, agricultural

resources, socioeconomics, and power². The differences between the action alternatives for these impacts include:

- *Surface Water:* Alternative 2 would increase CVP deliveries to agricultural water service contractors and decrease CVP deliveries to M&I water service contractors, compared to the No Action Alternative. Alternative 3 would decrease CVP deliveries to agricultural water service contractors and increase CVP deliveries to M&I water service contractors, compared to the No Action Alternative. Alternatives 4 and 5 would have no change in CVP deliveries compared to the No Action Alternative. PHS needs would be met for the Sacramento River Division under all alternatives. The American River, Delta, and San Felipe Divisions would have unmet PHS needs under Alternative 2. There would be unmet PHS needs for the Shasta/Trinity River and West San Joaquin Divisions under Alternatives 2, 3, and 4. The Cross Valley Canal Unit would have unmet PHS needs under all alternatives.

There are only relatively small to no changes to Shasta and Trinity lakes storages, upper Sacramento River flows, and Lake Oroville storage as a result of action alternatives, which do not result in substantial impacts. The effects of changes to other reservoirs' storage and rivers' flows are addressed under other appropriate resource areas (e.g., water quality, recreation, flood hydrology, water quality, etc.).

- *Water Quality:* Changes in CVP deliveries could affect the salinity and bromide concentrations in the Delta Division. Alternative 5 would have only very minimal changes in reservoir or river flows compared to the No Action Alternative that would not affect salinity and bromide concentrations. Alternatives 2 and 3 would cause an increase in electrical conductivity which could affect water quality in the Delta Division.
- *Groundwater:* A reduction in CVP deliveries to agricultural water service contractors could cause these contractors to supplement their surface water supplies through increased groundwater pumping. Alternative 2 would reduce agricultural groundwater pumping in all regions due to increases in CVP deliveries to agricultural water service contractors, while Alternative 3 would increase agricultural groundwater pumping in all regions due to decreases in CVP deliveries to agricultural contractors. M&I water service contractors may need to make use of all their available groundwater supplies under Alternative 2 in order to meet PHS needs in certain years. Alternatives 4 and 5 would have little to no change in groundwater pumping by CVP water service contractors compared to the No Action Alternative.

² It was determined that no impacts or only minor impacts would occur to aquatic resources, terrestrial resources, environmental justice, cultural resources, Indian sacred sites, recreation, flood hydrology, and visual resources.

Increased pumping caused by change in deliveries to supplement supply shortages may cause groundwater level declines that could lead to land subsidence. Alternative 2 would cause a net increase in pumping that could potentially increase land subsidence in the San Francisco Bay/Central Coast region. Alternative 3 would cause a net increase in pumping that could potentially increase land subsidence in the Sacramento Valley, San Joaquin Valley, and Tulare Lake regions.

- *Geology and Soils*: Under Alternative 3, reduced CVP deliveries to agricultural water service contractors could indirectly lead to wind erosion if agricultural water service contractors implement crop idling to manage their water supplies.
- *Air Quality*: Increases in CVP deliveries to agricultural water service contractors under Alternative 2 would result in decreased pollutant emissions from reduced groundwater pumping. Decreases in CVP deliveries to agricultural water service contractors under Alternative 3 would result in increased pollutant emissions due to increased groundwater pumping. Under Alternative 3, the general conformity *de minimis* threshold would be exceeded in the San Joaquin Valley Air Basin. Alternatives 4 and 5 would have little to no changes compared to the No Action Alternative.
- *GHGs and Climate Change*: Changes in CVP deliveries to agricultural water service contractors would decrease GHG emissions under Alternative 2 and increase GHG emissions under Alternatives 3 and 5. Alternative 4 would have no change compared to the No Action Alternative.
- *Agricultural Resources*: Alternative 3 would reduce agricultural acreage primarily in the Tulare Lake Region, but minimally to other regions in the study area.
- *Socioeconomics*: Changes in CVP deliveries for CVP water service contractors would have differing effects for agricultural and M&I water service contractors in Alternatives 2 and 3. Generally, effects would be positive for agricultural water service contractors under Alternative 2 and negative under Alternative 3, while the opposite would be true for M&I water service contractors. Alternatives 4 and 5 would have no change compared to the No Action Alternative.
- *Power*: Changes in CVP deliveries may cause changes in power generation from hydroelectric power generation facilities by changing reservoir releases or by changing reservoir storage, as represented by changes in reservoir elevations. Alternative 2 and 3 would experience minimal reductions to the amount of power generated at the Folsom and Nimbus power plants and slight fluctuations in the amount of

power generated at San Luis Reservoir. Alternatives 4 and 5 would have no change compared to the No Action Alternative.

- *Indian Trust Assets:* Under Alternatives 2 and 3, the magnitudes of groundwater level fluctuations are very small compared to overall groundwater supplies and would not be substantial enough to create a noticeable change to water supply at existing wells near Indian Trust Asset sites. Therefore, Alternatives 2 and 3 would not interfere with the exercise of federally-reserved water rights and/or reduce the health of tribal members by decreasing water supplies. Alternatives 4 and 5 would have no change compared to the No Action Alternative, and would not result in impacts to Indian Trust Assets.

Section 7 of the Federal Endangered Species Act (ESA)

Reclamation coordinated with the U.S. Fish & Wildlife Service during development of the Draft EIS regarding the impact analysis on special status species and environmental commitments. Reclamation further coordinated with National Oceanic and Atmospheric Administration National Marine Fisheries Service in preparing the Final EIS. A full consultation under Section 7 of the ESA with U.S. Fish & Wildlife Service or National Oceanic and Atmospheric Administration National Marine Fisheries Service was determined not to be needed for this action because the potential impacts are within the range of impacts already observed under current operations of the CVP and are covered by the Biological Opinions on the Coordinated Long-Term Operations of the CVP and SWP.

Section 106 Compliance

Reclamation is responsible for complying with Section 106 of the National Historic Preservation Act. Alternative 4 would not result in the disturbance of land or require any construction activities; therefore, there are no impacts to cultural resources. Under Section 106 of the National Historic Preservation Act, Alternative 4 is the type of activity that does not have the potential to affect historic properties and there are no further obligations under Section 106 [36 Code of Federal Regulations Sec. 800.3(a)(1)].

Comments Received on the Final EIS

Reclamation's Notice of Availability of the Final EIS was published in the Federal Register on September 10, 2015, and the Environmental Protection Agency's Notice of Availability was published on September 18, 2015. The EIS was posted on Reclamation's website, and copies were distributed to those who requested a copy. A press release was released on September 10, 2015, and was sent to participants in public meetings and commenters on the Draft EIS.

Reclamation received comments from three entities after release of Final EIS. The commenters were: Somach Simmons & Dunn for Glenn-Colusa Irrigation District (Kelley Taber); East Bay Municipal Utility District (Michael Tognolini); and Santa Clara Valley Water District (Cindy Kao). These comments either reiterated comments previously provided during the public comment period, or supported Reclamation's choice of the Preferred Alternative. Reclamation had adequately addressed the previous comments in the Final EIS. The comments consisted of the following:

- Glenn-Colusa Irrigation District (GCID) did not agree that their comments on the Draft EIS were adequately addressed in Appendix I of the Final EIS. GCID was concerned that the M&I WSP's definition of PHS is too broad and would allow a greater amount of water than necessary for domestic use and essential public services to be included in the calculation, thereby overestimating system demands during Conditions of Shortage and influencing the allocation of water within the CVP system. Additionally, GCID was concerned that implementation of the M&I WSP could affect water supply reliability under their Settlement Contract. As described in the Final EIS, the determination of any additional CVP water supplied to M&I water service contractors during a Condition of Shortage to assist in meeting PHS needs would take into account a contractor's estimated PHS demand, as well as their non-CVP supplies available in that year, and, most importantly, the availability of CVP water in that year. Reclamation would closely review the data provided by an M&I water service contractor so that CVP water provided for PHS needs is estimated in accordance with California criteria and used appropriately during a Condition of Shortage. The Final EIS also states in Appendix B that Reclamation does not have discretion to determine water supply allocations to Sacramento River Settlement Contractors, San Joaquin River Exchange Contractors, certain named State Wildlife Areas and National Wildlife Refuges, and the privately owned/managed wetlands comprising the Grassland Resources Conservation District as identified under the CVPIA Section 3406(d). Water supply allocations for these water service contractors are determined annually based on the forecasted full natural inflow to Shasta Lake. CalSim II simulates

water supply allocations to these water service contractors based on inflow to Shasta Lake.

- East Bay Municipal Utility District (EBMUD) supports Reclamation's selection of Alternative 4 as the Preferred Alternative for the M&I WSP. However, EBMUD requested that their contractual historic use of 133,000 acre-feet (AF), per their Long Term Renewal Contract, be noted in the M&I WSP as an exception to the methodology used for calculating historical use. Reclamation, when applying the M&I WSP to EBMUD, would use EBMUD's contractual historic use of 133,000 AF as the basis for making adjustments for population growth, extraordinary water conservation measures, and use of non-CVP water supplies. But, Reclamation believes it inappropriate to specifically state or call out such an exception in the M&I WSP.
- Santa Clara Valley Water District (SCVWD) supports Reclamation's selection of Alternative 4 as the Preferred Alternative for the M&I WSP. SCVWD believes an adopted M&I WSP is critically important for water supply reliability in support of the communities and businesses in its service area.

(THIS PAGE LEFT BLANK INTENTIONALLY)

APPENDIX J

Water Conservation Ordinance

(THIS PAGE LEFT BLANK INTENTIONALLY)

Roseville Municipal Code[Up](#)[Previous](#)[Next](#)[Main](#)[Collapse](#)[Search](#)[Print](#)[No Frames](#)[Title 14 PUBLIC UTILITIES](#)**Chapter 14.09 WATER CONSERVATION**

14.09.010 Short title.

This chapter may be cited as the Water Conservation and Drought Mitigation Ordinance. (Ord. 5311 § 2, 2014; Ord. 2413 § 2, 1991.)

14.09.020 General provisions.

A. Purpose. The purpose of this chapter is to ensure compliance with all federal, state and local requirements relating to water conservation and drought mitigation for the protection of public health, safety and welfare by:

1. Reducing the per capita water consumption throughout the City of Roseville (the “city”) during years of normal precipitation and during years of drought;
2. Protecting and conserving the city’s supply of water during specified times of emergency and/or crisis;
3. Minimizing and/or eliminating the waste of water through voluntary compliance or punitive action, if necessary;
4. Promoting the use of drip irrigation and other low volume irrigation methods that reduce outdoor water use by applying water more efficiently than traditional irrigation methods;
5. No person shall use, or cause to be used, any city water for landscape irrigation between the hours of 10:00 a.m. and 8:00 p.m., unless the city manager, or designee provides prior written consent to a different time limitation. A waiver may be granted for turf areas if the landscape contains too many irrigation valves to complete an irrigation event within the watering window.
6. Upon city declaration of a water shortage, the city manager, or designee, may impose revised and/or additional limitations on outdoor water use, as specified in Section 14.09.040, and no person shall use, or cause to be used, city water in violation of such limitations while the water shortage remains in effect.

B. Scope. The provisions of this chapter shall apply to all customers, users and/or recipients (hereinafter “users”) of the city’s potable and recycled water service within the city’s territorial limits.

C. Administration and Enforcement. The city manager, or designee, including, but not limited to, an enforcement officer as defined herein, shall administer, implement, and enforce the provisions of this chapter. For purposes of this chapter an “enforcement officer” means any city employee or agent of the city with the authority to enforce any provision of this chapter and the authority to make any decision on behalf of the city manager required or called for by this chapter.

D. Compliance. All provisions of this chapter are subject to the compliance procedures set forth in this chapter unless otherwise expressly stated herein.

E. Notification. The city manager, or designee, shall determine the means by which the city shall notify its water users of drought stage determinations and any applicable upgrade or downgrade of such determinations or restrictions. Notification may be achieved through mass media, newspaper, public notice, mailings, utility billings or by any combination of such notice, or by other means as determined by the city manager, or designee. (Ord. 5491 § 1, 2015; Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.030 Definition of water waste.

Any of the following acts or omissions, whether willful or negligent, shall constitute the waste of water:

- A. Causing or permitting water to leak, discharge, flow or run to waste into any gutter, sanitary sewer, watercourse or public or private storm drain, or to any adjacent property, from any tap, hose, faucet, pipe, sprinkler, pond, pool, waterway, fountain or nozzle. In the case of irrigation, “discharge,” “flow” or “run to waste” means that the earth intended to be irrigated has been saturated with water to the point that excess water flows over or through the earth to waste. In the case of washing, “discharge,” “flow” or “run to waste” means that water in excess of that necessary to wash, wet or clean the dirty or dusty object, such as an automobile, sidewalk, or parking area, flows to waste.
- B. Allowing water fixtures (including, but not limited to, toilets, faucets, shower heads) or heating or cooling devices to leak or run to waste.
- C. Maintaining ponds, waterways, decorative basins or swimming pools without water recirculation devices.
- D. Backwashing so as to discharge to waste swimming pools, decorative basins or ponds in excess of the frequency necessary to ensure the healthful condition of the water or in excess of that required by standards for professionally administered maintenance or to address structural considerations, as determined by the city manager, or designee.
- E. Operation of an irrigation system that applies water to an impervious surface or that is in disrepair.
- F. Use of a water hose not equipped with a control nozzle capable of completely shutting off the flow of water except when positive pressure is applied.
- G. Irrigation of landscaping during rainfall or 48 hours after a measurable rain event.
- H. Overfilling of any pond, pool or fountain which results in water discharging to waste. (Ord. 5491 § 2, 2015; Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 3834 § 3, 2002; Ord. 2413 § 2, 1991.)

14.09.040 Water conservation and drought stages.

The following water conservation and drought stages are hereby established:

- A. Basic Water Conservation Stage (“Basic Stage”). The basic stage shall exist when the city’s water supply is adequate to meet all projected demands as determined by the city manager, or designee.
- B. Stage One Drought. A stage one drought shall exist when the city’s water supply is adequate to meet 90 percent of projected demands as determined by the city manager, or designee. An objective of a stage one drought condition is to reduce water usage up to 10 percent. Water shortage surcharges shall be implemented as set forth in Section 14.08.095.
- C. Stage Two Drought. A stage two drought shall exist when the city’s water supply is adequate to meet 80 percent of projected demands as determined by the city manager, or designee. An objective of a stage two drought condition is to reduce water usage up to 20 percent. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095.
- D. Stage Three Drought. A stage three drought shall exist when the city’s water supply is adequate to meet 70 percent of projected demands as determined by the city manager or designee. An objective of a stage three drought condition is to reduce water usage up to 30 percent. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095.
- E. Stage Four Drought. A stage four drought shall exist when the city’s water supply is adequate to meet 60 percent of projected demands as determined by the city manager or designee. An objective of a stage four drought condition is to reduce water usage up to 40 percent. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095.
- F. Stage Five Drought. A stage five drought shall exist when the city’s water supply is adequate to meet 50 percent or less of projected demands as determined by the city manager, or designee. An objective of a

stage five drought condition is to reduce water usage up to 50 percent. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 5491 § 3, 2015; Ord. 5311 § 2, 2014; Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.050 Determination of drought staging—Effect of well water.

In determining the water conservation and drought stage in effect, the city manager, or designee, shall take into account only surface water available and able to be delivered from the Bureau of Reclamation and the Placer County Water Agency. Well water shall not be considered. In the event that this would result in a determination of a stage three drought or higher, groundwater wells may be activated to increase the supply to a stage two drought level. However, in no case shall well water be considered as an alternative to declaration of a stage one or stage two drought. (Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.060 Basic stage restrictions.

During the basic water conservation stage, the following restrictions shall be in force:

Water shall be used for beneficial purposes only; all unnecessary and wasteful uses (as defined in Section 14.09.030) of water are prohibited.

- A. Water shall be confined to the user's property and shall not be allowed to run off to adjoining properties, or to the roadside or to the gutter. Care shall be taken not to water past the point of saturation.
- B. Free-flowing hoses for all uses are prohibited. Automatic shut-off devices shall be attached on any hose or filling apparatus in use.
- C. All leaks (including irrigation systems, pipes, fixtures, pools, ponds, fountains and waterways) shall be repaired within five calendar days or less if warranted by the severity of the problem as determined in the discretion of the city manager, or designee.
- D. All pools, spas, and ornamental fountains/ponds shall be equipped with a recirculation pump and shall be constructed to be leak-proof. Pool draining and refilling shall be allowed only to the extent required for health, maintenance, or structural considerations, and must otherwise comply with all applicable federal, state and local stormwater management program requirements, including, but not limited to, the urban stormwater quality management and discharge control ordinance set forth in Chapter 14.20 of Title 14 of the City of Roseville Municipal Code.
- E. Landscaping.
 1. All landscaping installed in the City of Roseville shall comply with the water efficient landscape requirements adopted by resolution of the city council.
 2. Irrigation of new landscaping shall be allowed on any day of the week for a period of 30 days after the new landscaping is planted, unless the city manager, or designee, provides prior written consent to extend this time period based on plant type and the season when the new landscaping is planted. After the 30 days, irrigation days and run times should be decreased to settings appropriate for an established landscape.
 3. Upon city declaration of a water shortage, the city manager may impose revised and/or additional limitations on the irrigation of new landscaping, as specified in Sections 14.09.060 through 14.09.100, and no person shall use, or cause to be used, city water in violation of such limitations while the water shortage remains in effect. A waiver may be granted to irrigate during an establishment period for actively used turf areas and/or sports fields. Allowance shall also be made for irrigation testing and repairs.
- F. All site reviews shall include an evaluation of using recycled water. Recycled water shall be required if economically feasible. (Ord. 5491 § 4, 2015; Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2762 § 1, 1993; Ord. 2413 § 2, 1991.)

14.09.070 Stage one drought restrictions.

During a stage one drought, the following restrictions may be required, as determined by the city manager and upon notification pursuant to Section 14.09.020(E):

- A. All basic stage restrictions required by Sections 14.09.030 and 14.09.060 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.
- B. Residential users and non-residential users shall reduce water usage up to 10 percent.
- C. Residential water users shall be permitted to irrigate with city water on the following schedule, unless the city manager, or designee, provides prior written consent to a different irrigation pattern:
 1. 1st day of November – last day of February: up to one day per week irrigation on Monday of each week, if needed.
 2. 1st day of March – last day of April and 1st day of September – last day of October: up to two days per week irrigation on Monday and Friday of each week, if needed.
 3. 1st day of May – last day of August: up to three days per week irrigation on Monday, Wednesday and Friday of each week, if needed.
- D. Nonresidential water users (including without limitation, commercial, industrial, church, cemeteries, and publicly owned users) shall be permitted to irrigate with city water on the following schedule, unless the city manager, or designee, provides prior written consent to a different irrigation pattern:
 1. 1st day of November – last day of February: up to one day per week irrigation on Monday of each week, if needed.
 2. 1st day of March – last day of April and 1st day of September – last day of October: up to two days per week irrigation on Monday and Thursday of each week, if needed.
 3. 1st day of May – last day of August: up to three days per week irrigation on Monday, Thursday and Saturday of each week, if needed.
- E. The limitations specified in subsections C and D shall not apply to a properly functioning low volume landscape irrigation system, the irrigation on container plants, or to the irrigation of new landscaping that is subject to the provisions of Section 14.09.060(E). Low volume irrigation means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip or drip lines irrigating at less than two gallons per hour. These systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.
- F. References in this section to any day of the week shall mean the period beginning at 12:00 a.m. on that day and ending 24 hours later.
- G. City park sites shall, as an aggregate, reduce usage up to 10 percent.
- H. Washing streets, parking lots, driveways, sidewalks or buildings, except as necessary for health or sanitary purposes or pursuant to a term or condition in a permit issued by a state or federal agency, is prohibited.
- I. Water shall not be served at restaurants except by request.
- J. Water shortage surcharges shall be implemented as set forth in Section 14.08.095. (Ord. 5491 § 5, 2015; Ord. 5311 § 2, 2014; Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2817 § 1, 1994; Ord. 2636 § 1, 1992; Ord. 2413 § 2, 1991.)

14.09.080 Stage two drought restrictions.

During a stage two drought, the following restrictions may be required, as determined by the city manager

and upon notification pursuant to Section 14.09.020(E):

A. All basic stage and stage one restrictions required by Sections 14.09.060 and 14.09.070 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. Residential users and non-residential landscapes shall reduce water usage up to 20 percent.

C. City park sites shall, as an aggregate, reduce usage up to 20 percent.

D. Residential water users shall be permitted to irrigate with city water on the following schedule, unless the city manager, or designee, provides prior written consent to a different irrigation pattern:

1. 1st day of November – last day of February: up to one day per week irrigation on Monday of each week, if needed.

2. 1st day of March – last day of April and 1st day of September – last day of October: up to two days per week irrigation on Monday and Friday of each week, if needed.

3. 1st day of May – last day of August: up to three days per week irrigation on Monday, Wednesday and Friday of each week, if needed.

E. Nonresidential water users (including without limitation, commercial, industrial, church, cemeteries, and publicly owned users) shall be permitted to irrigate with city water on the following schedule, unless the city manager, or designee, provides prior written consent to a different irrigation pattern:

1. 1st day of November – last day of February: up to one day per week irrigation on Monday of each week, if needed.

2. 1st day of March – last day of April and 1st day of September – last day of October: up to two days per week irrigation on Monday and Thursday of each week, if needed.

3. 1st day of May – last day of August: up to three days per week irrigation on Monday, Thursday and Saturday of each week, if needed.

F. The limitations specified in subsections D and E shall not apply to a properly functioning low volume landscape irrigation system, the irrigation on container plants, or to the irrigation of new landscaping that is subject to the provisions of Section 14.09.060(E). Low volume irrigation means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip or drip lines irrigating at less than two gallons per hour. These systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

G. References in this section to any day of the week shall mean the period beginning at 12:00 a.m. on that day and ending 24 hours later.

H. Washing of vehicles or boats is prohibited except:

1. When using a hose that is equipped with a control nozzle capable of completely shutting off the flow of water except when positive action or pressure to maintain the flow of water is applied; or

2. When washed in either an automatic or manual commercial car wash that recirculates its water and uses high pressure/low volume wash systems.

3. Temporary car washes, held for fundraising purposes, are encouraged to partner with an automatic commercial car wash that recirculates its water and uses high pressure/low volume wash systems. If run independently, the participants must use a hose nozzle that completely shuts off the flow of water when not in use and must comply with all applicable federal, state and local stormwater management program requirements, including, but not limited to, the urban stormwater quality management and discharge control ordinance set forth in Chapter 14.20 of Title 14 of the City of Roseville Municipal Code.

I. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 5491 § 6, 2015; Ord. 5311 § 2, 2014; Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2611 § 1, 1992.)

14.09.090 Stage three drought restrictions.

During a stage three drought, the following restrictions may be required, as determined by the city manager and upon notification pursuant to Section 14.09.020(E):

A. All basic stage, stage one, and stage two restrictions required by Sections 14.09.060, 14.09.070 and 14.09.080 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. Residential users and non-residential landscapes are to reduce water usage up to 30 percent.

C. City park sites shall, as an aggregate, reduce usage up to 30 percent.

D. Residential water users shall be permitted to irrigate with city water on the following schedule, unless the city manager, or designee, provides prior written consent to a different irrigation pattern:

1. 1st day of September – last day of April: up to one day per week irrigation on Monday of each week, if needed.

2. 1st day of May – last day of August: up to two days per week irrigation on Monday and Friday of each week, if needed.

E. Nonresidential water users (including without limitation, commercial, industrial, church, cemeteries, and publicly owned users) shall be permitted to irrigate with city water on the following schedule, unless the city manager, or designee, provides prior written consent to a different irrigation pattern:

1. 1st day of September – last day of April: up to one day per week irrigation on Monday of each week, if needed.

2. 1st day of May – last day of August: up to two days per week irrigation on Monday and Thursday of each week, if needed.

F. The limitations specified in subsections D and E shall not apply to a properly functioning low volume landscape irrigation system, the irrigation on container plants, or to the irrigation of new landscaping that is subject to the provisions of Section 14.09.060(E). Low volume irrigation means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip or drip lines irrigating at less than two gallons per hour. These systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

G. References in this section to any day of the week shall mean the period beginning at 12:00 a.m. on that day and ending 24 hours later.

H. New or expanded landscaping is limited to drought-tolerant trees, shrubs, and ground-cover and be irrigated using a low volume irrigation system. No new turf shall be planted, hydroseeded, or laid, unless prior written consent is received from the city manager. Low volume irrigation means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip or drip lines irrigating at less than two gallons per hour. These systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

I. Except where recycled water is used, golf courses shall reduce irrigation up to 30 percent.

J. All decorative fountains, decorative (i.e., nonswimming) pools, and decorative waterways shall be drained and made dry. Such fountains, pools, and waterways shall not be refilled until the city has returned to the basic water conservation stage. Fountains, ponds or pools that are filled with recycled water are not subject to this provision. Decorative ponds that contain fish as a feature shall be exempt from this restriction as long as the system is maintained in good working order with measures taken to reduce the volume of makeup water required for evaporative losses.

K. Except where recycled or other non-potable water is used or as otherwise provided in this subsection, use of water for dust control is prohibited. Dust control shall be augmented by hardened, temporary travel routes with materials that are accepted by the city manager, city engineer, or designee. Potable water is

allowed for construction water only where and to the extent required for public health and safety reasons.

L. New swimming pools and spas may be filled after construction using customer's metered water at then existing water rates. All new pools must include a means for minimizing evaporative loss, such as a pool cover, at time of final inspection by the city. After being filled with water for the first time, all pools and spas shall be subject to the requirements of Section 14.09.060(D).

M. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 5491 § 7, 2015; Ord. 5311 § 2, 2014; Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.100 Stage four drought restrictions.

During a stage four drought, the following restrictions may be required, as determined by the city manager and upon notification pursuant to Section 14.09.020(E):

A. All basic stage, stage one, stage two, and stage three restrictions required by Sections 14.09.060, 14.09.070, 14.09.080 and 14.09.090 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. Residential customers and non-residential landscapes are to reduce water usage up to 40 percent.

C. City park sites shall, as an aggregate, reduce usage up to 40 percent.

D. Residential water users shall be permitted to irrigate with city water on the following schedule, unless the city manager, or designee, provides prior written consent to a different irrigation pattern:

1. 1st day of September – last day of April: No irrigation allowed.

2. 1st day of May – last day of August: up to one day per week irrigation on Monday, if needed.

E. Nonresidential water users (including without limitation, commercial, industrial, church, cemeteries, and publicly owned users) shall be permitted to irrigate with city water on the following schedule, unless the city manager, or designee, provides prior written consent to a different irrigation pattern:

1. 1st day of September – last day of April: No irrigation allowed.

2. 1st day of May – last day of August: up to one day per week irrigation on Monday of each week, if needed.

F. The limitations specified in subsections D and E shall not apply to a properly functioning low volume landscape irrigation system, the irrigation on container plants, or to the irrigation of new landscaping that is subject to the provisions of Section 14.09.060(E). Low volume irrigation means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip or drip lines irrigating at less than two gallons per hour. These systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

G. References in this section to any day of the week shall mean the period beginning at 12:00 a.m. on that day and ending 24 hours later.

H. Installation of any new landscaping is prohibited unless irrigation is provided through connection to an active recycled water system. In the case of new construction, the city's building official will issue a temporary final upon completion of the structural development of the property. When the city has returned to a stage two drought restriction, landscaping installation can be completed and a building final will become available upon inspection by the city.

I. Except where recycled water is used, golf courses shall reduce irrigation up to 40 percent.

J. Automobiles or equipment shall be washed only at commercial establishments that recycle their water or by equipment and means that separates debris and recycles wash water for continual use.

K. Existing pools shall not be emptied and refilled using city water unless required for health or safety reasons until the city has returned to a stage two drought restriction. Pools may be re-filled only to the extent necessary to replace evaporative losses.

L. No commitments shall be made to provide water service as part of any new land use entitlement (general plan, specific plan or amendments requesting new water allocations) until the city has returned to a stage two drought restriction. Currently approved specific plans with accompanying development agreements and projects or properties that have received water allocations in advance of full entitlements may be issued building permits so long as they comply with the remainder of this chapter.

M. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 5491 § 8, 2015; Ord. 5311 § 2, 2014; Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.110 Stage five drought restrictions.

During a stage five drought, the following restrictions may be required, as determined by the city manager and upon notification pursuant to Section 14.09.020(E):

A. All basic stage, or stage one, stage two, stage three and stage four restrictions required by Sections 14.09.060, 14.09.070, 14.09.080, 14.09.090 and 14.09.100 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. Residential users are to reduce water usage up to 50 percent.

C. Except where recycled water is used, water users shall reduce landscape irrigation as follows:

1. Turf shall not be irrigated.

2. Trees and shrubs may be irrigated with a properly functioning low volume landscape irrigation system or by use of a handheld hose equipped with a nozzle capable of completely shutting off the flow of water except when positive action or pressure to maintain the flow of water is applied. Low volume irrigation means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip or drip lines irrigating at less than two gallons per hour. These systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

D. Filling new or existing swimming pools and spas with city water is prohibited.

E. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 5491 § 9, 2015; Ord. 5311 § 2, 2014; Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.120 Determination of drought tolerance.

Where this chapter permits or prohibits acts based upon whether or not a planting, tree, shrub, or groundcover is “drought tolerant” the determination shall be made based upon Sunset’s *Western Garden Book* (most recent edition), or UC Davis Arboretum’s “All Stars” plant database (www.arboretum.ucdavis.edu). Where this chapter permits or prohibits acts based upon whether a form of irrigation is “low volume drip irrigation” the determination shall be made by the director, or designee, whose determination shall be final. (Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.130 Determination of landscape water consumption reductions.

Whenever this chapter requires a reduction in consumption of water for irrigation purposes, the base year for measurement shall be the last year that the basic water conservation stage was in effect or a date specified by the Governor or state agency. If that data is not available for a property, allocations will be based on water

use for similar properties. The city manager or designee may elect to base a reduction on the base year or on a landscape water consumption calculation if use was, in the city manager's or designee's, sole opinion, either excessive or extraordinarily low. For landscaping installed subsequent to the base year, the calculations shall be based on landscape water consumption calculations submitted with the landscape plan, or water consumption the previous year, whichever is less. (Ord. 5491 § 10, 2015; Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2817 § 1, 1994; Ord. 2413 § 2, 1991.)

14.09.140 Violations.

It is unlawful for any user and/or person to violate any provision or fail to comply with any of the requirements of this chapter. Causing, permitting, aiding, abetting or concealing a violation of any provision of this chapter shall constitute a violation of this chapter. A violation of the provisions of this chapter shall occur irrespective of the negligence or intent of the violator and a violation of or failure to comply with any of the requirements of this chapter may be charged as either an infraction or a misdemeanor in the discretion of the city attorney. (Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 3834 § 3, 2002; Ord. 2413 § 2, 1991.)

14.09.150 Enforcement authority.

A. Whenever the city manager, or designee (including, but not limited to, an enforcement officer), determines that a user and/or person has violated any provision of, or failed to meet a requirement of, this chapter, an administrative citation pursuant to Chapter 2.50 or a written compliance order pursuant to Chapter 2.52 may be issued to any user and/or person responsible for the violation.

B. Any compliance order issued may require without limitation any or all of the following:

1. The allocation of a particular amount of water to a given user and/or person responsible for the violation;
2. The issuance of a fine;
3. The installation of a flow restriction device;
4. The performance of monitoring, analyses, and reporting;
5. That violations shall cease and desist; and/or
6. The discontinuation of water service.

The compliance order shall set forth a deadline within which the requirements of the compliance order must be completed. Said compliance order shall further advise that, should the violator fail to comply with the compliance order within the established deadline, a hearing on the compliance order shall be set. (Ord. 5491 § 11, 2015; Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 3034 § 3, 2002; Ord. 2817 § 1, 1994; Ord. 2413 § 2, 1991.)

14.09.160 Hearing.

If full compliance is not achieved within the time specified in the compliance order, a hearing on the compliance order shall be set pursuant to Chapter 2.52. All penalties and remedies authorized by Chapter 2.52 shall apply to violations of this chapter. (Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.170 Appeal.

Any user and/or person receiving a compliance order under Section 14.09.150 may appeal the determination of the director, or designee, to a hearing panel drawn from the membership of the board of appeals. The notice of appeal must be received by the city's environmental utilities department within 10 days

from the date of the compliance order. Notice of hearing and hearing on the appeal will be conducted pursuant to the requirements of Chapter 2.52. (Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.180 Separate offense for each day.

Any user and/or person that violates any provision of this chapter shall be guilty of a separate offense for each and every day during any portion of which any such user and/or person commits, continues, permits, or causes a violation thereof, and shall be punished accordingly. (Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.190 Public nuisance.

In addition to the enforcement processes and penalties hereinbefore provided, any condition caused or permitted to exist in violation of any of the provisions of this chapter is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored by the city at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be initiated and/or taken by the city. (Ord. 5311 § 2, 2014; Ord. 4629 § 1, 2008; Ord. 2413 § 2, 1991.)

14.09.200 Remedies not exclusive.

Remedies under this chapter are in addition to and do not supersede or limit any and all other remedies, civil or criminal. The remedies provided for herein shall be cumulative and not exclusive. (Ord. 5311 § 2, 2014; Ord. 4629 § 2, 2008.)

14.09.210 Judicial review.

Any decision of the hearing panel shall be final. Any user and/or person aggrieved by an order of the hearing panel may obtain review of the order in the Superior Court by filing with the Court a petition for writ of mandate within 90 days pursuant to California Code of Civil Procedure Section 1094.6. (Ord. 5311 § 2, 2014; Ord. 4629 § 2, 2008.)

14.09.220 Chapter severable.

The provisions of this chapter are severable. The city council declares that it would have adopted the remainder of this chapter even if any of its provisions are declared unlawful or unenforceable. (Ord. 5311 § 2, 2014; Ord. 4629 § 2, 2008.)

View the [mobile version](#).

APPENDIX K

Supplemental DMM Materials

(THIS PAGE LEFT BLANK INTENTIONALLY)

Information Only - Not a Bill



2005 Hilltop Circle
Roseville, California 95747
(916) 746-1714 Fax (916) 774-5755

Customer Information

Billing Address

ROSEVILLE, CA 95661-4603

Account#

Last Field Check 02/15/2012

Irrigated Parcel Area in Square Feet

Turf Area (sq. ft.): 3,605
Irrigated Non-Turf Area (sq. ft.): 1,463
Total Irrigated Area (sq. ft.): 5,069

Site Address:

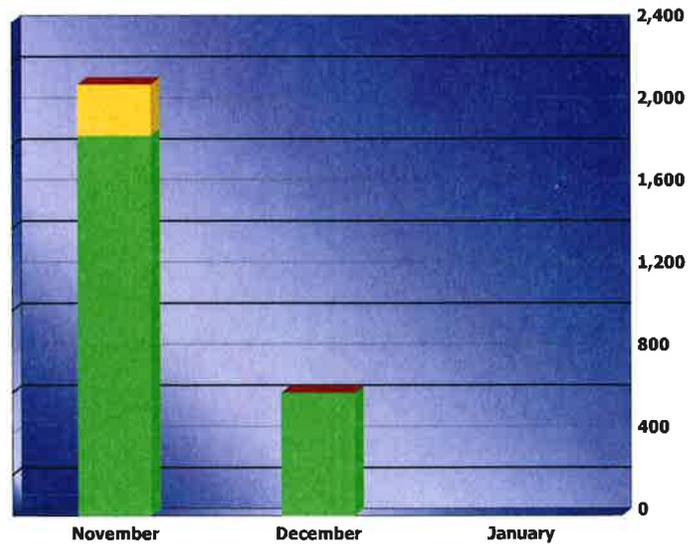
Meters	Serial #	Type	Size
	59162432	WTCI	1

Projected Use vs Actual Use

Water Budget vs. Actual Water Usage (In Cubic Feet):

Month	Est. Budget	Usage	% of Budget	Potential Savings
February 15	691	0	-%	\$-
March 15	1,513	0	-%	\$-
April 15	2,323	600	26%	\$-
May 15	3,356	1,500	45%	\$-
June 15	3,755	1,700	45%	\$-
July 15	4,701	600	13%	\$-
August 15	4,328	1,900	44%	\$-
September 15	4,110	2,000	49%	\$-
October 15	2,858	1,900	65%	\$-
November 15	1,849	2,100	114%	\$3.16
December 15	884	0	-%	\$-
January 16	598	0	-%	\$-
	36,464	14,500	40%	\$3.16

Tiered Usage - Cubic Feet



1 cubic foot = 7.48 Gallons

Last Three Months Potential Savings

November	\$3.16
December	\$0.00
January	\$0.00
Total:	\$3.16

Proposed Tiered Rate Structure

Tier	% of Budget	Rate per 100 ccf
Tier 1	0-100%	\$0.76
Tier 2	100-150%	\$1.26
Tier 3	>150%	\$1.89

If you have questions about this report or would like to schedule a free landscape irrigation review to better assist your water needs please contact John Shannon in the Water Efficiency Department at 774-5768. The City of Roseville has rebates available to help pay for efficiency upgrades at your site. Visit www.roseville.ca/bizrebates for more information.

The proposed tiered rate structure is not currently in effect. It is for demonstration purposes only. Any changes to the City's rate structure will be reviewed by the City Council.

A "-%" in the % of budget column reflects actual water usage when the weather conditions warrant no usage. This results an infinite number and cannot be reflected in the column.

(THIS PAGE LEFT BLANK INTENTIONALLY)

Water Efficiency 2015

Summary of Efforts



House Calls

- ✓ Water Wise House Calls – **989**



Water Waste

- ✓ High Use / Complaints – **4,044**
- ✓ Follow-ups – **2,348**
- ✓ Admin Warnings – **350**
- ✓ Penalties / Citations – **94**
- ✓ Dist water Leaks – **1178**



Rebates

- ✓ Cash for Grass – **288**
- ✓ High Efficiency Toilet – **145**
- ✓ Res Irrigation Efficiency – **95**
- ✓ Smart Timer – **46**
- ✓ Washing Machine – **125**

*****Please note:** Total turf removed from the Cash for Grass rebate participants was 349,362.64 sq. ft. This resulted in an estimated **water savings from 16.9M to 24.5 M gallons of water.**



Water Reduction

- ✓ Cumulative for reporting period June – Dec @ **35.9%**
- ✓ Cumulative for calendar year Jan – Dec @ **33.0%**
- ✓ Month of December tracking @ **26.13%**

*****Please note:** Water treatment plant estimated production based on two week actual (14 MGD avg 1st week, 12.5 MGD avg 2nd week) as well as two week projection.



Staffing

- Water Conservation Administrator transferred to other agency – June 2015
- Water Conservation Worker removed from field staff to assume interim role as Administrator – June 2015
- Office Assistant II out on leave and eventually resigns – April thru July 2015, resigns in July
- Required assistance from Water Distribution Office Assistants to help with call volume
- Field Tech on loan (5 years) goes back to engineering/inspections – left Water Efficiency department in December
- Hired 2 new Field Techs – Nov/Dec
- Hired new Office Assistant – Nov



Water Efficiency 2015

Summary of Efforts (cont.)

Outreach

- RUEC Adult Water Efficiency workshops – **10 including celebrate the Earth, Greener Gardens tour and Fix a Leak Week**
- HOA Educational Workshops - **5**

Commercial

- Night Patrol – **760 service calls**
- Improved water budget program
- Increased commercial landscape water audits by - **74%**

Other Notables

- Completed Water Efficiency Staff – Roles and Responsibilities Metric
- Entered and won RWA Water taste test



APPENDIX L

CUWCC Reporting Documents

(THIS PAGE LEFT BLANK INTENTIONALLY)



CUWCC BMP Retail Coverage Report 2013

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

5992 City of Roseville

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:

Title:

Email:

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.	Chapter 14.docx		Ordinance defines water waste, drought stage requirements and violation and enforcement requirements. The City has active water waste patrol throughout the year with 2 dedicated staff plus other staff as available.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.			
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.	WELO Rev 11-5-2013_under 2500 sq ft.docx		2013 CA Green Building Code: http://www.roseville.ca.us/gov/development_services/building/current_code_n_design_criteria.asp WELO revised March 2013

At Least As effective As



CUWCC BMP Retail Coverage Report 2013
Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

Exemption

Comments:



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control

ON TRACK

5992 City of Roseville

Completed Standard Water Audit Using AWWA Software? Yes

AWWA File provided to CUWCC? Yes

2013 AWWA audit.xls

AWWA Water Audit Validity Score? 75

Complete Training in AWWA Audit Method Yes

Complete Training in Component Analysis Process? Yes

Component Analysis? Yes

Repaired all leaks and breaks to the extent cost effective? Yes

Locate and Repair unreported leaks to the extent cost effective? Yes

Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. Yes

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)
93			10		162033.5	

At Least As effective As

Exemption

Comments:



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

5992 City of Roseville

Numbered Unmetered Accounts Yes

Metered Accounts billed by volume of use Yes

Number of CII Accounts with Mixed Use Meters 130

Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? Yes

Feasibility Study provided to CUWCC? Yes

Date: 6/3/2013

Uploaded file name: Copy_of_BMP_1.3_Feasibility_Study_for_mixed_use_meters_final.xls

Completed a written plan, policy or program to test, repair and replace meters Yes

At Least As effective As

Exemption

Comments:

Remaining unmetered services are upgraded to meters when a permit is pulled for a tenant improvement. Before a final inspection is given a meter is installed.



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

5992 City of Roseville

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Increasing Block	Yes	5206014	8540823
Commercial	Uniform	Yes	1945719	2262116
Single-Family	Non-Volumetric Flat Rate	No	0	2610
Commercial	Non-Volumetric Flat Rate	No	0	262838
Dedicated Irrigation	Uniform	Yes	2673739	1189379
			9825472	12257766

Calculate: $V / (V + M)$ 44 %

Implementation Option: Use Canadian Water Wastewater Association Rate Design Model

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Increasing Block	Yes	5206014	8540823
Commercial	Uniform	Yes	1945719	2262116
Single-Family	Non-Volumetric Flat Rate	No	0	2610
Commercial	Non-Volumetric Flat Rate	No	0	262838
Dedicated Irrigation	Uniform	Yes	2673739	1189379
			9825472	12257766

Calculate: $V / (V + M)$ 44 %

Exempt

Upload file:

Agency Provide Sewer Service: Yes

Customer Class	Rate Type	Conserving Rate?
Single-Family	Non-Volumetric Flat Rate	No
Commercial	Non-Volumetric Flat Rate	No
Commercial	Uniform	Yes

At Least As effective As



BMP 1.4 Retail Conservation Pricing

Exempt

Agency uses Canadian Water Wastewater Association Rate Design Model

Exemption

Yes

Legal

Comments:

The City has filed an exemption for associated sewer rates based on a legal opinion from the City Attorney's office.



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

5992

City of Roseville

Retail

Does your agency perform Public Outreach programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

California Department of Water Resources (DWR)
Regional Water Authority Amy Talbott atalbott@rwah2o.org
DWR/ACWA saveourwater program

The name of agency, contact name and email address if not CUWCC Group 1 members

RWA

Did at least one contact take place during each quarter of the reporting year? Yes

Public Outreach Program List	Number
Newsletter articles on conservation	9
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	11
Website	9
Landscape water conservation media campaigns	3
General water conservation information	32
Email Messages	5
Total	69

Did at least one contact take place during each quarter of the reporting year? Yes

Number Media Contacts	Number
Articles or stories resulting from outreach	9
News releases	14
Newspaper contacts	8
Radio contacts	7
Television contacts	10
Online Advertisings	31
Total	79

Did at least one website update take place during each quarter of the reporting year? Yes

Public Information Program Annual Budget



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Annual Budget Category	Annual Budget Amount
Consultant	188500
Consultant	50000
City of Roseville	34418.5
Total Amount:	272918.5

Public Outreach Additional Programs
High use customer notifications
WaterInsight Social Norm program
Neighborhood Association presentations/info sharing
Greener Gardens Tour & DIY Expo
Community Events
Social media

Description of all other Public Outreach programs

Blue Thumb/Be Water Smart program Sacramento Kings, Sacramento River Cats, Roseville Economic Development

Comments:

At Least As effective As

Exemption



CUWCC BMP Coverage Report 2013

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

5992 City of Roseville

Retail

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Regional Water Authority, Amy Talbott
atalbott@rwah2o.org

Materials meet state education framework requirements? Yes

Newspaper supplement, be Water Smart News, Water, the Never Ending Cycle (water cycle program); hydro heroes 1st-3rd program (water cycle/watershed/conservation; 4-6th program h2own (limitations/conservation) and Keepin It Clean (watershed)

Materials distributed to K-6? Yes

Planet Protectors comic books and lesson plans (pre/post activities) for hydro heroes, H2own and Keepin it Clean; Sac Bee newspaper supplement Water, the never Ending Cycle.

Materials distributed to 7-12 students? Yes (Info Only)

Water Spots video contest for high school students (water efficiency theme); Living Rivers of the Sacramento Valley Program (watershed, human impacts, uses)

Annual budget for school education program: 141250.00

Description of all other water supplier education programs

Utility Exploration Center interactive exhibits teaching about water efficiency; website resources and links; teacher training workshops

Comments:

At Least As effective As No

Exemption No 0



CUWCC BMP Coverage Report 2013

5992 City of Roseville

Baseline GPCD: 305.32

GPCD in 2013 257.01

GPCD Target for 2018: 250.40

Biennial GPCD Compliance Table

ON TRACK

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	294.30	100%	305.30
2012	2	92.8%	283.30	96.4%	294.30
2014	3	89.2%	272.30	92.8%	283.30
2016	4	85.6%	261.40	89.2%	272.30
2018	5	82.0%	250.40	82.0%	250.40



CUWCC BMP Retail Coverage Report 2014

Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

5992 City of Roseville

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:	Robert Alvarez
Title:	Water Conservation Administrator
Email:	balvarez@roseville.ca.us

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.		http://qcode.us/codes/roseville/	City of Roseville Water Conservation Ordinance Chapter detailing drought stages and restriction on water use to comply with the Governor's Executive Order and State Water Resource Control Board direction.
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.		http://qcode.us/codes/roseville/	City of Roseville Water Conservation Ordinance Chapter detailing drought stages and restriction on water use to comply with the Governor's Executive Order and State Water Resource Control Board direction.
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			Water Efficient Landscape Ordinance (WELO): http://qcode.us/codes/roseville/ CA Green Building Code included in our standards: http://www.roseville.ca.us/gov/development_services/building/current_code_n_design_criteria.asp



CUWCC BMP Retail Coverage Report 2014
Foundational Best Management Practices for Urban Water Efficiency

BMP 1.1 Operation Practices

ON TRACK

At Least As effective As

Exemption

Comments:



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.2 Water Loss Control

ON TRACK

5992 City of Roseville

Completed Standard Water Audit Using AWWA Software? Yes

AWWA File provided to CUWCC? Yes

2014 AWWA Water Audit.xls

AWWA Water Audit Validity Score? 72

Complete Training in AWWA Audit Method Yes

Complete Training in Component Analysis Process? Yes

Component Analysis? Yes

Repaired all leaks and breaks to the extent cost effective? Yes

Locate and Repair unreported leaks to the extent cost effective? Yes

Maintain a record keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair. Yes

Provided 7 Types of Water Loss Control Info

Leaks Repairs	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost Of Interventions	Water Saved (AF)
161			10.2	False		

At Least As effective As

Exemption

Comments:



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.3 Metering With Commodity

ON TRACK

5992 City of Roseville

Numbered Unmetered Accounts Yes

Metered Accounts billed by volume of use Yes

Number of CII Accounts with Mixed Use Meters 130

Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? Yes

Feasibility Study provided to CUWCC? Yes

Date: 6/3/2013

Uploaded file name: BMP 1.3 Feasibility Study for mixed use meters_final.xls

Completed a written plan, policy or program to test, repair and replace meters Yes

At Least As effective As

Exemption

Comments:

The remaining unmetered services are upgraded to meters when a permit is pulled for a tenant improvement. Before a final inspection is given a meter is installed at the landowners cost.



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

On Track

5992 City of Roseville

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Increasing Block	Yes	4308438.9	8998945.36
Commercial	Uniform	Yes	1932604.19	2137776.84
Single-Family	Non-Volumetric Flat Rate	No	0	122248.52
Commercial	Non-Volumetric Flat Rate	No	0	109379.45
Dedicated Irrigation	Uniform	Yes	2356359.66	1316357
			8597402.75	12684707.17

Calculate: $V / (V + M)$ 40 %

Implementation Option: Use Canadian Water Wastewater Association Rate Design Model

Use 3 years average instead of most recent year

Canadian Water and Wastewater Association

Customer Class	Water Rate Type	Conserving Rate?	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
Single-Family	Increasing Block	Yes	4308438.9	8998945.36
Commercial	Uniform	Yes	1932604.19	2137776.84
Single-Family	Non-Volumetric Flat Rate	No	0	122248.52
Commercial	Non-Volumetric Flat Rate	No	0	109379.45
Dedicated Irrigation	Uniform	Yes	2356359.66	1316357
			8597402.75	12684707.17

Calculate: $V / (V + M)$ 40 %

Upload file:

Exempt

Agency Provide Sewer Service: Yes

Customer Class	Rate Type	Conserving Rate?
Single-Family	Non-Volumetric Flat Rate	No
Commercial	Non-Volumetric Flat Rate	No
Commercial	Uniform	Yes

At Least As effective As



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 1.4 Retail Conservation Pricing

Exempt

Exemption

Yes

Legal

Comments:

The City has filed an exemption for associated sewer rates based on a legal opinion from the City Attorney's Office.



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

5992 City of Roseville

Retail

Does your agency perform Public Outreach programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

California Department of Water Resources (DWR)
Regional Water Authority Amy Talbott atalbott@rwah2o.org
DWR/ACWA saveourwater program

The name of agency, contact name and email address if not CUWCC Group 1 members

RWA

Did at least one contact take place during each quarter of the reporting year? Yes

Public Outreach Program List	Number
Newsletter articles on conservation	8
Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	12
Website	12
Landscape water conservation media campaigns	5
General water conservation information	30
Email Messages	18
Total	85

Did at least one contact take place during each quarter of the reporting year? Yes

Number Media Contacts	Number
Articles or stories resulting from outreach	6
News releases	15
Newspaper contacts	10
Radio contacts	10
Television contacts	10
Online Advertisings	35
Total	86

Did at least one website update take place during each quarter of the reporting year? Yes

Public Information Program Annual Budget



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.1 Public Outreach

ON TRACK

Annual Budget Category	Annual Budget Amount
City of Roseville	143258
Total Amount:	143258

Public Outreach Additional Programs
High use customer notifications
WaterInsight Social Norm program
Neighborhood Association presentations/info sharing
Greener Gardens Tour & DIY Expo
Community Events
Social media
Water Wise House Calls
Rebate Programs
Water Waste Patrol

Description of all other Public Outreach programs

Blue Thumb/Be Water Smart ProgramRoseville Economic Development

Comments:

At Least As effective As

Exemption



CUWCC BMP Coverage Report 2014

Foundational Best Management Practices For Urban Water Efficiency

BMP 2.2 School Education Programs

ON TRACK

5992 City of Roseville

Retail

Does your agency implement School Education programs? Yes

The list of wholesale agencies performing public outreach which can be counted to help the agency comply with the BMP

Regional Water Authority, Amy Talbott
atalbott@rwah2o.org

Materials meet state education framework requirements? Yes

Newspaper supplement, be Water Smart News, Water, the Never Ending Cycle (water cycle program); Hydro Heroes 1st-3rd program (water cycle/watershed/conservation; 4-6th program h2own (limitations/conservation) and Keepin It Clean (watershed)

Materials distributed to K-6? Yes

Planet Protectors comic books and lesson plans (pre/post activities) for Hydro Heroes, H2Own and Keepin it Clean; Sac Bee newspaper supplement Water, the never Ending Cycle.

Materials distributed to 7-12 students? Yes (Info Only)

Water Spots video contest for high school students (water efficiency theme); Living Rivers of the Sacramento Valley Program (watershed, human impacts, uses)

Annual budget for school education program: 82761.00

Description of all other water supplier education programs

Utility Exploration Center interactive exhibits teaching about water efficiency; website resources and links; teacher training workshops

Comments:

At Least As effective As No

Exemption No 0



CUWCC BMP Coverage Report 2014

5992 City of Roseville

Baseline GPCD: 305.32

GPCD in 2014 201.45

GPCD Target for 2018: 250.40

Biennial GPCD Compliance Table

ON TRACK

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	294.30	100%	305.30
2012	2	92.8%	283.30	96.4%	294.30
2014	3	89.2%	272.30	92.8%	283.30
2016	4	85.6%	261.40	89.2%	272.30
2018	5	82.0%	250.40	82.0%	250.40

APPENDIX M

UWMP Adoption Resolution

(THIS PAGE LEFT BLANK INTENTIONALLY)

RESOLUTION NO. 16-157

ADOPTING THE URBAN WATER MANAGEMENT PLAN AND AUTHORIZING
STAFF TO SUBMIT TO THE DEPARTMENT OF WATER RESOURCES

WHEREAS, the Urban Water Management Planning Act requires every urban water supplier providing water for municipal purposes to more than 3,000 customers to develop and submit an Urban Water Management Plan (UWMP) every five years to the California Department of Water Resources (DWR); and

WHEREAS, with ongoing and recent updates to the DWR Guidebook for Urban Water Suppliers, staff collaborated with a consultant on the development of the 2015 document update; and

WHEREAS, the City has prepared and circulated for public review the Urban Water Management Plan, and a properly noticed public hearing regarding said Plan was held by the City Council on May 18, 2016;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Roseville that the Urban Water Management Plan is hereby adopted and ordered filed with the City Clerk; The Mayor is hereby authorized and directed to file the Urban Water Management Plan with the California Department of Water Resources within 30 days after this date.

PASSED AND ADOPTED by the Council of the City of Roseville this 18th day of May, 2016, by the following vote on roll call:

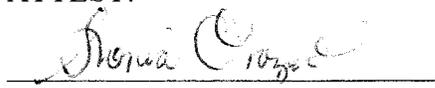
AYES COUNCILMEMBERS: Rohan, Roccucci, Garcia

NOES COUNCILMEMBERS: None

ABSENT COUNCILMEMBERS: Gore, Herman


MAYOR

ATTEST:


City Clerk

