2015 Urban Water Management Plans

Guidebook for Urban Water Suppliers

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O. Voluntary Reporting of Energy Intensity

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Abbreviations and Acronyms

AB - Assembly Bill

AF - Acre-Foot

BMP - Best Management Practice

CEHTP - California Environmental Health Tracking Program

CASGEM - California Statewide Groundwater Elevation Monitoring Program

CII - Commercial, Industrial, Institutional, water use sectors

CIMIS - California Irrigation Management Information System

CUWCC - California Urban Water Conservation Council

CWC - California Water Code

DMMs - Demand Management Measures

DOF - Department of Finance

DWR - Department of Water Resources

eARDWP - Electronic Annual Reports to the Drinking Water Program (SWRCB)

ETo - Reference Evapotranspiration

GIS - Geographic Information System

GPCD - Gallons per Capita per Day

IRWM - Integrated Regional Water Management

ITP - Independent Technical Panel

LAFCO - Local Agency Formation Commission

NOAA - National Oceanic and Atmospheric Administration

NPDES - National Pollutant Discharge Elimination System

PWS - Public Water System

RWQCB - Regional Water Quality Control Board

SB - Senate Bill

SB X7-7 - Senate Bill Seven of the Senate's Seventh Extraordinary Session of 2009

SGMA - Sustainable Groundwater Management Act

SWP - State Water Project

SWRCB - State Water Resources Control Board

RUWMP - Regional Urban Water Management Plan

UWMP - Urban Water Management Plan

WARN - Water/Wastewater Agency Response Network

WDR - Waste Discharge Requirement

WRR - Water Recycling Requirement

WSCP - Water Shortage Contingency Plan

Use of This Guidebook

The Guidebook for Urban Water Suppliers (Guidebook) has been developed by the Department of Water Resources (DWR) to assist urban water suppliers in preparing 2015 Urban Water Management Plans (UWMPs or Plans). This guidance is intended to ensure the Plans will ~~meet~~

address the requirements of the California Water Code (CWC), provide useful information to the public about water suppliers and their water management programs, and provide a framework for water planning to minimize the negative effects of potential water shortages.

Water suppliers need not limit themselves to the requirements and recommendations found in the Guidebook. Suppliers may include any additional information that will assist in providing a full description of their water resources and water management.

Section Organization

The sections of the Guidebook are laid out with the following organization:

X.X Section or Subsection Header

California Code
This text box will display requirements from California Code that apply to the section immediately following. It will also include references to regulations in the Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use.

~~RETAIL AND WHOLESALE~~ ALL URBAN WATER SUPPLIERS

Sections that provide guidance and recommendations for addressing CWC requirements that apply to both retail and wholesale agencies will be headed with "**~~RETAIL AND WHOLESALE~~ ALL URBAN WATER SUPPLIERS**", denoted with the symbols "R" "W", and marked by the color blue.

NOTE: Additional guidance and recommendations that apply only to retail or wholesale agencies are found in "Retail Only" or "Wholesale Only" text boxes.

Recommendations
This text provides recommendations from DWR for both retail and wholesale agencies. These are not required by the CWC; however, DWR includes these recommendations to address topic areas that would benefit from further clarification or elaboration.

RETAIL ONLY

Sections that provide guidance and recommendations for addressing CWC requirements that apply only to retail agencies will be headed with "**RETAIL ONLY**", denoted with the symbol "R", and marked by the color gold.

NOTE: Additional guidance and recommendations that apply to retail agencies are found in "**~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS**" text boxes.

Recommendations
This section provides recommendations from DWR for retail suppliers.

WHOLESALE ONLY

Sections that provide guidance and recommendations for addressing CWC requirements that apply only to wholesale agencies will be headed with "**WHOLESALE ONLY**", denoted with the symbol "W", and marked by the color red.

NOTE: Additional guidance and recommendations that apply to wholesale agencies are found in "**~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS**" text boxes.

Recommendations

TABLES

All required tables that apply to a section are found at the end of the section. (See section on Standardized Forms, Tables, and Displays). Both wholesale and retail versions are presented. The tables shown within the body of the guidebook are for viewing only and cannot be filled out. Excel versions of these tables are available on DWR's website at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm.

Table X-X Retail: Data Table						
	2015	2020	2025	2030	2035	2040 -Opt
Data 1						
Data 2						
TOTAL	0	0	0	0	0	0

Table X-X Wholesale: Data Table						
	2015	2020	2025	2030	2035	2040 -Opt
Data 1						
Data 2						
Data 3						
TOTAL	0	0	0	0	0	0

Definition of Wholesale Supplier and Retail Supplier

CWC 10608.12

(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.

(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.

For purposes of UWMP reporting, an agency is considered either a wholesale or retail urban water supplier, or both, based on the criteria stated in CWC 10608.12 (p) and (r). See the citation of the CWC in the text box above. This guidebook provides guidance for all urban water suppliers.

If an agency has both wholesale and retail sales, review the criteria in the CWC, and guidance below, to determine which criteria apply (wholesale and/or retail). Reporting requirements and guidance for both types of agencies are included in the paragraphs below.

1. Both Wholesale and Retail Urban Water Supplier. If an urban water supplier meets the definition of both a wholesale and retail water supplier as found in 10608.12 (p) and (r), it is considered both a wholesale and a retail urban water supplier. Such an agency must address the CWC requirements that apply to both wholesale and retail suppliers. Agencies that are both retail and wholesale will report their data using both retail and wholesale tables.

2. (Exclusively or Primarily) Retail Urban Water Supplier. If an urban water supplier meets the definition of an urban retail water supplier as found in CWC 10608.12 (p), it is considered a retail urban water supplier. Such an agency may also provide water on a wholesale basis, for example, sales to other agencies, but the wholesale volume is below the reporting threshold for the agency to be considered a wholesale supplier. This small volume of wholesale demand will be reported in the agency's retail tables 4-1 and 4-2.

3. (Exclusively or Primarily) Wholesale Urban Water Supplier. If an urban water supplier meets the definition of an urban wholesale water supplier, as found in 10608.12 (r), it is considered a wholesale urban water supplier. Such an agency may also have retail customers, but the retail volume is below the reporting threshold for an agency to be considered a retail supplier. This small volume of retail demand will be reported as "retail demand" in the agency's wholesale tables 4-1 and 4-2.

Standardized Forms, Tables, or Displays *(Appendix E)*

CWC 10644

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

CWC 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… The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

In response to the requirements of the CWC, standardized tables for the reporting and submittal of UWMP data have been developed and are required for use in 2015 UWMPs. The standardization of data tables allows for more efficient data management, expedited review of UWMPs, and easier compilation of data for regional and statewide planning.

Water agencies are required to submit UWMP data electronically to DWR using standardized tables. Water suppliers must also include the standardized tables in the body of the plan or as an appendix.

The standardized tables are compiled in Appendix E and available in Excel on DWR's 2015 UWMP webpage at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm . Water agencies will be able to cut and paste from the Excel tables to the tables on the WUEdata website.

The Guidebook displays the standardized tables in a PDF format for quick viewing, but these tables are not fillable forms.

Note for Regional Water Management Plans (RUWMPs): RUWMPs will submit data for multiple agencies. This will require a set of tables for each individual agency. UWMP preparers will identify each table with a notation to indicate the corresponding supplier. ~~Each agency will submit their data as described above.~~

RETAIL **ONLY**

Retail water suppliers are also required to submit the SB X7-7 Verification Form (Appendix E) with their 2015 UWMP. The form allows for verification that the agency's calculations are in compliance with SB X7-7, the Water Conservation Act of 2009.

Chapter 1
Introduction and Overview

This chapter contains guidance on the following topics:

1.1 Background and Purpose

1.2 Urban Water Management Planning and the California Water Code

1.3 Urban Water Management Plans in Relation to Other Efforts

1.4 Recommended UWMP Organization

1.5 UWMPs and Grant or Loan Eligibility

1.6 Tips for UWMP Preparers

1.7 DWR Contact Information

1.1 Background and Purpose

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Water planning is an essential function of water suppliers but becomes critical as California grapples with ongoing drought and expected long-term climate changes.

Prior to the adoption of the Urban Water Management Planning (UWMP) Act (Appendix A), there were no specific requirements that water agencies conduct long-term resource planning. While many water agencies conducted long-term water supply and resource planning prior to the Act, those that did not were left vulnerable to supply disruptions during dry periods or catastrophic events.

An example of local supply disruption that spurred the development of the UWMP Act can be found from the drought of 1976-1977. The Marin Municipal Water District (MMWD) faced dwindling supplies, even though water rationing strategies were successfully implemented. MMWD managers met with officials of other water districts and from the California Department of Water Resources (DWR) to quickly find a reliable alternate source of water. An agreement was reached to transport water from the State Water Project (SWP) via a temporary, 6-mile pipeline on the Richmond-San Rafael Bridge from the East Bay to Marin County.

The necessity of installing this emergency pipeline indicated that water planning had to be done at the local level as two water agencies in the same region could have very different impacts

from drought. As a result, the UWMP Act was proposed and adopted, requiring a minimum level of resource assessment and planning by water suppliers.

There is no substitute for water planning at the local water supplier level. Only a local supplier has the knowledge, ability to consider the unique circumstances of the individual agency, can provide for participation by the community, and tailor the planning to local conditions.

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 drought of 2007-2009 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 (*Appendix B*). This Act required agencies to establish water use targets for 2015 and 2020 that would result in statewide savings of 20 percent by 2020.

1.2 Urban Water Management Planning and the California Water Code

~~**RETAIL AND WHOLESALE**~~ ALL URBAN SUPPLIERS

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

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

~~**RETAIL AND WHOLESALE**~~ ALL URBAN SUPPLIERS

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

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

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

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

~~**RETAIL AND WHOLESALE**~~ ALL URBAN SUPPLIERS

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

Demand Management Measures CWC Section 10631 (f) (1) and (2) Assembly Bill 2067, 2014 *Guidebook Chapter 9*

Submittal Date CWC Section 10621 (d) Assembly Bill 2067, 2014 *Guidebook Chapter 10*

Electronic Submittal CWC Section 10644 (a) (2) Senate Bill 1420, 2014 *Guidebook Chapter 10*

Standardized Forms CWC Section 10644 (a) (2) Senate Bill 1420, 2014 *Guidebook Chapter 10*

Water Loss CWC Section 10631 (e) (1) (J) and (e) (3) (A) and (B) Senate Bill 1420, 2014, *Guidebook Appendix L*

Estimating Future Water Savings CWC Section 10631 (e) (4) Senate Bill 1420, 2014 *Guidebook Appendix K*

Voluntary Reporting of Energy Intensity CWC Section 10631.2 (a) and (b) Senate Bill 1036, 2014 *Guidebook Appendix O*

Defining Water Features CWC Section 10632 (b) Assembly Bill 2409, 2010 *Guidebook Chapter 4*

1.2.3 Water Conservation Act of 2009 (SB X7-7) (*Appendix B*)

RETAIL ONLY

The Water Conservation Act of 2009 required retail urban water suppliers to report in their UWMPs their Base Daily per Capita Water Use (Baseline GPCD), 2015 Interim Urban Water Use Target, 2020 Urban Water Use Target, and Compliance Daily per Capita Water Use. These terms are defined in *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, DWR 2011 (Methodologies*) consistent with SB X7-7 requirements. The *Methodologies* document can be found online at

http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. The complete text of the Water Conservation Act is in Appendix B. Guidance for addressing the requirements of the Act is found in Chapter 5 of the Guidebook and in the *Methodologies* document. Retail water agencies are required to set targets and track progress toward decreasing daily per capita urban water use in their service area, which will assist the State in meeting its 20 percent reduction goal by 2020.

1.3 Urban Water Management Plans in Relation to Other Planning Efforts

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

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

Each of these planning efforts is greatly enhanced when it relies upon the information found in the other documents. DWR strongly encourages water suppliers to utilize other planning processes and documents when developing their UWMPs and to share their UWMPs with other agencies.

1.4 UWMP Organization

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Recommended

DWR recommends, but does not require, that an urban water supplier use the organization outlined below to prepare its 2015 UWMP. The Guidebook is organized in the same sequence as the recommended UWMP organization.

This organization groups the requirements by topic and presents the topics in the order in which a water supplier may consider including them in an UWMP. This does not follow the order of the legislation.

The 2015 UWMP Guidebook has been updated from the 2010 version to reflect new legislation and some of the recommended organization has been modified from previous guidebooks.

Chapter 1 - Introduction and Overview *In this introductory chapter, agencies provide a discussion on the importance and extent of their water management planning efforts.*

Chapter 2 - Plan Preparation *This section will provide information on their process for developing the UWMP, including efforts in coordination and outreach.*

Chapter 3 - System Description *Suppliers may include maps of the service area, a description of the service area and climate, their Public Water System(s), and the agency's organizational structure and history.*

Chapter 4 - System Water Use *Describe and quantify the current and projected water uses within the agency's service area.*

Chapter 5 - Baselines and Targets *Retail agencies and Regional Alliances (See Appendix D for more information about Regional Alliances) will describe their methods for calculating their baseline and target water consumption. They will also demonstrate whether or not they have achieved the 2015 interim water use target, and their plans for achieving their 2020 water use target.*

Chapter 6 - System Supplies *Describe and quantify the current and projected sources of water available to the agency. A description and quantification of potential recycled water uses and supply availability is also to be included in this chapter, to the extent that it pertains to each agency.*

Chapter 7- Water Supply Reliability *Water agencies will describe the reliability of their water supply and project the reliability out 20 years. This description will be provided for normal, single dry years and multiple dry years.*

Chapter 8 - Water Shortage Contingency Planning *Provide the supplier's staged plan for dealing with water shortages, including a catastrophic supply interruption.*

Chapter 9 - Demand Management Measures Water suppliers will communicate their efforts to promote conservation and to reduce demand on their water supply and will specifically address several demand management measures.

Chapter 10 - Plan Adoption, Submittal, and Implementation *Water agencies will describe the steps taken to adopt and submit the UWMP and to make it publicly available. This chapter will also include a discussion of the agency's plan to implement the UWMP.*

Supporting Documents

Supporting documents may be included in the plan as appendices or may be referenced with a link to the webpage where the document can be found. Some examples of supporting documentation include:

Notification letters of UWMP update;

Public notice of UWMP hearing;

Adoption resolution(s) from the agency's governing body;

Water Shortage Contingency Plan (if a separate, stand-alone document from the UMWP);

Groundwater Management Plan (if applicable) *(See Section 6.2)*;

California Urban Water Conservation Council (CUWCC) Best Management Practices (BMP) Reports (if applicable) *(See Chapter 9).*

1.5 UWMPs and Grant or Loan Eligibility

1.5.1 Funding Eligibility for Retail and Wholesale Suppliers

~~**RETAIL AND WHOLESALE**~~ ALL URBAN SUPPLIERS

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

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

1.5.2 Funding Eligibility Applicable to Retail Suppliers Only

CWC 10608.56

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

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

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

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section

10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

CCR Section 596.1

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

RETAIL ONLY

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

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

1. The urban retail water supplier submits a schedule, financing plan, and budget, for achieving the per capita reductions; and/or

2. The urban retail water supplier submitted to DWR, for DWR's approval, documentation demonstrating that its entire service area qualifies as a disadvantaged community.

If an agency met its 2015 Interim Target, or met either of the exceptions above, and is participating in a multiagency water project or an Integrated Regional Water Management Plan, it shall remain eligible to receive grants or loans even though one or more of the other participating agencies is not in compliance with the SB X7-7 requirements.

1.6 Tips for UWMP Preparers

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

- **Use previous UWMPs and Regional UWMPs.** Although the 2015 UWMP should be considered as an update to an agency's previous UWMP, the 2015 UWMP should be able to be read as a stand-alone document. Preparers should ensure that information carried forward from previous UWMPs is up to date. Preparers should also, when possible and available, utilize information from Regional UWMPs or wholesale UWMPs on regional water supply sources, regional demand management programs, and other regional issues that may impact the reliability of an agency's water supply. Summaries of such information, with reference to the Regional UWMP, are acceptable to maintain the Plan's flow and readability.
- Review the legislative changes since the 2010 UWMP cycle (Appendix C).
- **Review the UWMP deadline and adoption processes during Plan development.** The adoption and notification processes are detailed in Chapter 10. Suppliers should take into account the time needed for the Plan to be developed, adopted and submitted.
- **Provide an executive summary.** An executive summary provides a useful and concise summary of the Plan for readers, but is not required.
- If a requirement does not apply to your agency, include an explanation in the UWMP.
- **Unique situations may require explanation.** In order to clarify a unique situation, UWMP preparers should consider including detailed information in an appendix or as an attachment and provide summary information in the main body of the UWMP. Including explanatory information in the UWMP will clarify the circumstances to readers and to DWR.
- **Importance of narratives and maps.** Narrative descriptions and maps are as important as the data presented in the tables and can greatly enhance the reader's understanding of the tabular data.
- **Using summaries and cross references.** Rather than repeating detailed information from other documents, summarize information and provide a reference to source documents. Avoid repeating information in more than one chapter of the UWMP; use cross references as appropriate.
- **Use the checklist.** A checklist of specific UWMP requirements is included in Appendix F. The UWMP preparer is requested to complete this checklist and enter

the page number where the required element is addressed to assist in the DWR review of the submitted UWMP.

- **Use the Guidebook appendices.** The appendices provide detailed and specific information, such as a glossary of terms (Appendix G), or supporting documents related to preparing a UWMP (Appendix H).
- **Ask for guidance or clarification**. If there is a question about what to include in an UWMP prior to adoption, please contact a DWR regional team member.

1.7 DWR Contact Information

DWR Contact Information			
Region	**DWR UWMP Staff**	**Phone**	**Email**
Statewide	Gwen Huff	(916) 651-9672	Gwen.Huff@water.ca.gov
Northern	Jessica Salinas-Brown	(530) 529-7355	Jessica.SalinasBrown@water.ca.gov
North Central	Kim Rosmaier	(916) 376-9660	Kim.Rosmaier@water.ca.gov
South Central	Luis Avila	(559) 230-3364	Luis.Avila@water.ca.gov
Southern	Sergio Fierro	(818) 500-1645	Sergio.Fierro@water.ca.gov

Chapter 2
Plan Preparation

This section provides guidance on determining whether or not a water supplier is required to write an UWMP and describes the various levels of regional coordination that an agency may employ. It also includes guidance and tables for two pieces of information that will apply throughout the UWMP; the use of fiscal or calendar year and the units of measure used by the agency to report water volumes.

Coordination and outreach are key elements to developing a useful and accurate UWMP. For example, working with neighboring water suppliers strengthens a region's ability to plan for drought and catastrophic events; city and county land use planning agencies can provide information on regional planning, demographics, and expected future development.

Because UWMP preparation and development may be accomplished in many ways, water agencies may choose to include a summary of the process they used to prepare the Plan. They may include such activities as designation of a planning team, holding public meetings, the extent of coordination with other agencies, use of this Guidebook, or the use of assistance from a consulting firm.

This chapter includes guidance on preparing the following sections:

2.1 Basis for Preparing a Plan

2.2 Regional Planning

2.3 Individual or Regional Planning and Compliance

2.4 Fiscal or Calendar Year and Units of Measure

2.5 Coordination and Outreach

2.1 Basis for Preparing a Plan

CWC 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…

CWC 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.

CWC 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).

(d) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

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

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

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

2.1.1 Public Water Systems

CWC 10644

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

CWC 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… The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

California Health and Safety Code 116275

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

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Public Water Systems (PWSs) are the systems that provide drinking water for human consumption. These systems are regulated by the State Water Resources Control Board (Board), Division of Drinking Water.

The California Health and Safety Code defines a "Public Water System" as shown in the text box above.

RETAIL ONLY

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

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

WHOLESALE ONLY

Agencies that are exclusively or primarily wholesale water agencies are not required to provide PWS information.

Recommended

PWS information from wholesale suppliers is requested available.

2.1.2 Agencies Serving Multiple Service Areas/Public Water Systems

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

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

TABLES

Table 2-1

Provide the names and numbers of each PWS (drinking water only) that is managed by the agency and reported in this UWMP. For Regional UWMPs (RUWMPs), agencies will use multiple versions of Table 2-1; one for each participating retail agency.

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
Up to 20 entries allowed.			
TOTAL		*0*	*0*
NOTES:			

2.2 Regional Planning

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

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

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

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

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

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

Section 2.3 and Appendix D of this Guidebook provide guidance to water suppliers for developing regional plans and for cooperative reporting of 2020 targets in a Regional Alliance.

2.3 Individual or Regional Planning and Compliance

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

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

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

Agencies may choose:

Individual Reporting - An agency develops an UWMP that reports solely on its service area. The individual UWMP addresses all requirements of the CWC. The agency notifies and coordinates with appropriate regional agencies and constituents.

Regional Reporting - Working with an Integrated Regional Water Management (IRWM) group, wholesaler, other retailers, or another regional entity, an agency becomes part of a regional group that may develop either a:

- **RUWMP** - A regional group develops a RUWMP that reports on their combined regional service area. The RUWMP must address~~es~~ all the requirements of the CWC, but ~~T~~the requirements of SB X7-7 may be addressed either by individual agencies or through a Regional Alliance or both (see section 2.3.2 below). RUWMPs will submit data for multiple agencies, requiring duplication of many standardized tables. ~~This will be easily accomplished when using the pending DWR online submittal tool, which will provide step by step guidance. However, if the supplier is compiling their data using the Excel spreadsheets in Appendix E.~~ The supplier will need to copy the required tables and notate each of the copies with the name of the agency to which the table pertains.
- **Regional Alliance** - A regional group develops a Regional Alliance that addresses only the requirements of the Water Conservation Act of 2009 (SB X7-7), that is, planning, reporting and complying as a Regional Alliance on 2015 and 2020 water use targets. This is done by completing the SB X7-7 Verification Form for a Regional Alliance, Option 1, 2, or 3. All other elements of the CWC must be addressed through either an individual or RUWMP. Water suppliers considering a Regional Alliance are strongly advised to read Methodology 9 of the *Methodologies* document for detailed guidance on how to proceed.

2.3.1 Regional UWMP

> *CWC 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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Water agencies may find it beneficial to collaborate with other water suppliers to develop a Regional UWMP (RUWMP or Regional Plan).

The RUWMP must address all the requirements of the CWC. ~~but~~ T~~t~~he requirements of SB X7-7 may be addressed either by individual agencies, ~~or~~ through a Regional Alliance, or both. ~~.~~ Some elements of the RUWMP, such as each agency's supply and demand information, must be reported on an individual agency- by- agency basis within the RUWMP. Providing the sum of the supplies and demands from each agency in order to report the regional supply and demand is not required, although it may be submitted.

Other elements in the RUWMP may be reported as an aggregate of all the agencies' information, such as, a regional Water Shortage Contingency Plan that clearly includes the actions and regional reliance of all agencies in response to a water shortage.

Each participating water supplier is required to adopt the RUWMP, and each adoption resolution must be submitted to DWR.

If an agency participates in a RUWMP and also prepares its own individual UWMP, its governing board must adopt both the regional and individual Plans.

RETAIL ONLY

Within the RUWMP, agencies may determine and report targets and baselines in one of two ways, either on a regional basis through a Regional Alliance (see Section 2.3.2), or by individual agency.

2.3.2 Regional Alliance

CWC 10608.20

(a) (1) …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…

CWC 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.

RETAIL ONLY

A group of water suppliers agreeing among themselves to plan, comply, and report as a region on the requirements of SB X7-7 is referred to as a "Regional Alliance." Each Regional Alliance will develop its own set of Interim 2015 and 2020 Urban Water Use Targets.

A Regional Alliance allows water suppliers to work toward cooperatively developing programs and meeting regional water conservation targets, but not necessarily submitting a Regional Plan. Being a member of a Regional Alliance does not take the place of submitting an UWMP or RUWMP.

A Regional Alliance may either be a part of a RUWMP or may be a group of suppliers that submit a Regional Alliance report and individual UWMPs.

Note that an individual supplier's compliance with an Interim 2015 Water Use Target will be assessed based upon how the individual retail water supplier performs relative to its individual target, or how the supplier's Regional Alliance performs as a whole in relation to its regional target.

Detailed guidance for a Regional Alliance, including criteria for participating in a Regional Alliance, reporting requirements, calculation of regional targets, and compliance assessment, is found in Methodology 9 of the *Methodologies* document.

TABLES

Table 2-2

UWMP preparers must complete Table 2-2: Plan Identification. Each UWMP will have only one Table 2-2; this table will not be copied for multiple agencies within an RUWMP.

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

Table 2-2 was modified in the Final version

2.4 Fiscal or Calendar Year and Units of Measure

> *CWC 1608.20*
> *(a) (1) Urban retail water suppliers…may determine the targets on a fiscal year or calendar year basis.*

~~**RETAIL AND WHOLESALE**~~ ALL URBAN SUPPLIERS

2.4.1 Fiscal or Calendar Year

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

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

For agencies that are reporting on a fiscal year basis: table columns labeled with particular years signify the end year of the fiscal year. For example, 2015 denotes the fiscal year 2014-2015. The UWMP preparer will note the start day and month of the agency's fiscal year in Table 2-3.

2.4.2 Reporting Complete 2015 Data

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

2.4.3 Units of Measure

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

Report the units of measure that the water agency will be using to report water volume throughout the UWMP in Table 2-3.

TABLES

Table 2-3

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

Complete Table 2-3 with the name of the agency, type of agency, type of reporting year, and the units of measure. RUWMPs will use multiple versions of Table 2-3; one for each participating agency.

Table 2-3 was updated in the Final Draft and the Final version

2.5 Coordination and Outreach

CWC 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).

2.5.1 Wholesale and Retail Coordination

~~**RETAIL AND WHOLESALE**~~ ALL URBAN SUPPLIERS

When a water supplier relies upon a wholesale agency for a water supply, both suppliers are required to provide each other with information regarding projected water supply and demand, as described below. These projections should be consistent with each agency's supply and demand projections as reported in the appropriate tables of Chapter 4 and Chapter 6 of this Guidebook.

RETAIL ONLY

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

WHOLESALE ONLY

Wholesale agencies are required to provide information to their customer urban water suppliers identifying and quantifying water supplies available to those agencies from the wholesaler, to the extent practicable. This information shall be projected in increments of five years, from 2015 through 2035 and for average, single, and multiple-dry years.

TABLES

Table 2-4

Complete Table 2-4: Water Supplier Information Exchange. RUWMPs will use multiple versions of Table 2-4; one for each participating agency.

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
Up to 5 entries allowed.
NOTES:

Table 2-4 Wholesaler was updated in the Final Draft

Table 2-4 Wholesale: Water Supplier Information Exchange (select one)	
☐	Supplier has informed more than 10 other water suppliers of water supplies available in accordance with CWC 10631. Completion of the table below is optional. If not completed include a list of the water suppliers that were informed.
	Provide page number for location of the list.
☐	Supplier has informed 10 or fewer other water suppliers of water supplies available in accordance with CWC 10631. **Complete the table below.**
Water Supplier Name *(Add additional rows as needed)*	
NOTES:	

2.5.2 Coordination with Other Agencies and the Community

CWC 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.

CWC 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…

~~**RETAIL AND WHOLESALE**~~ ALL URBAN SUPPLIERS

Water suppliers must coordinate the preparation of their UWMP with other appropriate agencies in the area, to the extent practicable. In order to verify that agencies have fulfilled the above CWC provisions, agencies are to include a description of their outreach and coordination activities to other agencies and the community, as described in CWC 10620(d)(2) and CWC 10642.

Recommended

UWMP preparers are strongly encouraged to solicit participation from other agencies responsible for developing related reports or planning documents such as General Plans, Water Master Plans, Groundwater Management Plans, or PWS reports. Such coordination ensures consistency in planning and reporting.

The following is a non-comprehensive list of agencies and organizations with which the supplier may seek to coordinate:

- Public agencies
- Cities and counties that are served by agency (REQUIRED)
- Local wastewater and/or stormwater entities
- Regional boards/agencies
- School districts
- Economic development agencies
- Park districts
- Councils of governments (e.g., COGs, CAGs, etc…)
- Water management organizations
- Other urban water suppliers
- Water agencies that share a common source
- IRWM groups
- Groundwater management entities
- Watershed groups
- Residential customers
- Large commercial, industrial, institutional (CII) water users
- Home owners' associations (HOAs)
- Diverse elements of the population
- Building industry
- Native American tribes
- Chambers of commerce
- Environmental organizations
- Civic organizations

2.5.3 Notice to Cities and Counties

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

~~**RETAIL AND WHOLESALE**~~ **ALL URBAN SUPPLIERS** (See also Section 10.1.1)

CWC 10621 (b) requires that agencies notify cities and counties to which they serve water that the Plan is being updated and reviewed. The CWC specifies that this must be done at least 60 days prior to the public hearing. These notifications to cities and counties will be reported in Table 10-1 (See Chapter 10).

Recommended

DWR encourages water agencies to send this notification at the start of the UWMP process, well in advance of the required 60 days prior to the UWMP public hearing.

The CWC only requires that the city or county be notified of the Plan update. However, water agencies are encouraged to include the UWMP revision schedule, contact information of the UWMP preparer, and the location where the UWMP can be viewed.

Notification letters to cities and counties may be addressed to the City Manager, County Administrator, or to other local contacts as appropriate for the service area of the water supplier.

Chapter 3
System Description

A thorough description of the water system and the service area provides information to the reader that can help in understanding various elements of water supply and demand.

Chapter 3 provides guidance for describing the urban water supplier's system, including a description of the service area, climate, and projected population. It also provides additional guidance for other items which are not required but are recommended, such as the potential impacts of climate change.

This chapter includes the following sections:

3.1 General Description

3.2 Service Area Map(s)

3.3 Service Area Climate and

3.4 Service Area Population and Demographics

3.1 General Description

CWC Section 10631
Describe the service area of the supplier…

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Provide a description of the service area of the supplier.

Recommended

Consider including a narrative description of the proportion of the area that is already built-out versus areas of future development. This will provide a clearer understanding of the extent of land use in the supplier's service area.

Water suppliers are encouraged to include information on the organizational structure of the agency. This could include the agency's history, whether or not the agency is a public or private entity, a description of the agency's governance, and a history and description of any consolidations or annexations.

Other documents, such as the General Plan or Water Master Plan, may provide greater detail on these topics. Rather than repeating this detailed information, agencies may summarize the relevant information and provide a reference to these documents.

RETAIL ONLY

If there are any significant areas within the service area boundary that are NOT served by the water supplier, (e.g., an institution served exclusively by a private well) note this in the service area description. The population in any such unserved area will be excluded when calculating the population for purposes of SB X7-7 compliance (see Chapter 5).

Recommen**ded**

Agencies may provide an overview of the service area's significant water uses. For example, some agencies may have a large CII entity that accounts for a significant portion of water demand. Others may have high water use for landscape irrigation due to large residential lots and a particularly arid climate.

3.2 Service Area Boundary Maps

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Water suppliers are encouraged to include service area boundary maps in the UWMP.

Recommended

Appropriate maps that are recommended for inclusion in the UWMP include:

- Potable Water Service Area – The boundary encompassing the entire potable water service area of the suppler. This may include multiple public water systems.
- Public Water System(s) - The boundary containing the distribution system(s) of the agency's Public Water System(s).
- Raw Water Distribution System – The boundary containing the raw water distribution system, as applicable. Note that this does not include any recycled water system(s).
- Recycled Water System – See Section 6.5.3 for guidance on mapping of a recycled water system.
- Jurisdictional Boundary - This boundary includes the potable and non-potable distribution system boundary(ies) and any additional areas that fall within the water suppliers jurisdiction.
- Service Area Changes - If there have been changes to the service area from the beginning of the baseline period through 2015, agencies are encouraged to submit maps that display these changes.

RETAIL ONLY

See Section 5.4 for guidance on the use of service area maps for estimating population for SB X7-7.

3.2.1 Map Format Recommendations

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Recommendations for map formatting are below.

Recommended

DWR's preference is to obtain electronic service area boundary maps. Note that electronic boundary maps will be needed to use DWR's Population Tool (see Section 5.4.1.2). Electronic maps can be created by using the California Environmental Health Tracking Program (CEHTP) found at http://cehtp.org/page/water, Google Earth, or other tools. Other resources to obtain electronic maps include a Local Agency Formation Commission (LAFCO), a local Council of Governments, a regional wholesale water agency, a private consulting service, or a regional

university. If an electronic, geospatial map layer (such as .shp, or KML file) of the service area is submitted, agencies are encouraged to include the following metadata:

- Map projection
- Contact information for the person that created the map

Start and end dates for which the map is valid

- Constraints
- Attribute table definitions
- Digitizing base (e.g., USGS 7.5 minute quadrangle, or 1-meter resolution 2010 digital aerial photograph)

3.3 Service Area Climate

> *CWC Section 10631*
> *Describe the service area of the supplier, including… climate…*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Agencies are required to provide information that assists in understanding the area's climate and its possible impacts on water management. Agencies may report climate information in a narrative format, in tabular format (no standardized table is provided for this), or a combination of both.

Recommended

This description could include average reference evapotranspiration (ETo), temperature, precipitation patterns, as well as a description of any challenges associated with providing water in a particular climate.

Climate information can be obtained from several sources:

- California Irrigation Management Information System (CIMIS) http://www.cimis.water.ca.gov
- Western Regional Climate Information Center
- Weather stations in the service area
- National Oceanographic and Atmospheric Agency (NOAA)
- PRISM/SIMETAW www.water.ca.gov/urbanwatermanagemnt/uwmo2015.cfm

If the water agency is reporting more than one service area in a UWMP, or a large service area with differences in climate, the agency may report the different climates separately, or may provide climate information that averages the climate of the entire service area.

3.3.1 Climate Change

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The CWC does not require that UWMPs address climate change. However, scientists and water managers are beginning to observe the effects of climate change and identifying associated risks in water planning.

Recommended

Suppliers are encouraged to include a discussion of climate change in their UWMPs.

DWR recommends that suppliers complete the IRWM Climate Change Vulnerability Assessment (see Appendix I) and include a narrative summary of relevant information such as Section IV Sea Level Rise, Section V Flooding, Section VI Ecosystem and Habitat Vulnerability, and/or Section VII Hydropower. The summary should include a discussion of any planned actions to address noted vulnerabilities from the climate change assessment.

3.4 Service Area Population and Demographics

> *CWC Section 10631*
> *Describe the service area of the supplier, including current and projected population . . . The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Provide current and projected population estimates for the service area in Table 3-1.

The CWC does not require a specific methodology for projecting future populations, but it does require that the estimates of future population be based upon data from State, regional, or local service agency population projections. Include the source(s) used to estimate the population projections (2020, 2025 etc…).

Suppliers must state their source of population data projections. If the agency does not use population projections directly from a standard source, (e.g., a general plan, or the local council of governments) but instead develops its own projections, the UWMP must describe how these projections were developed.

Recommended

Describe the proportion of the service area that is already built out versus the proportion that remains to be developed. This description is particularly useful for agencies that are fully built-out and expect a very low rate of population growth.

RETAIL ONLY

Retail suppliers must report their 2015 population in two separate areas of the UWMP:

Table 3-1: Population - Current and Projected: and

SB X7-7 Table 3: Service Area Population.

Recommended

The population calculations for SB X7-7 Table 3 require the use of a specific methodology (Methodology 2 of the *Methodologies* document) whereas the population estimates for Table 3-1 have no such methodology. Because of the specific guidance provided for SB X7-7 Table 3, DWR recommends that the 2015 population calculated for SB X7-7 Table 3 be used to complete the 2015 population in Table 3-1.

TABLES

Table 3-1

Complete Table 3-1: Population – Current and Projected. RUWMPs will use multiple versions of Table 3-1; one for each participating agency.

Table 3-1 Retail: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040(opt)
NOTES:						

Table 3-1 Wholesale: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040(opt)
NOTES:						

3.4.1 Other Demographic Factors

> *CWC 10631*
> *Describe the service area of the supplier, including. . other demographic factors affecting the supplier's water management planning.*

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Include a discussion of other demographic factors that may affect water management and planning.

RETAIL ONLY

If there are significant non-residential populations, such as seasonal populations based on vacation, agricultural, institutional, or commercial economies, provide a brief narrative describing this element of the population and how the agency's population estimates incorporated this element.

Recommended

Provide a description of the population density in the service area, such as a comparison of the number of single-family homes to multi-family homes, or large lots versus small lots. This can help explain unusually high or low water use.

Chapter 4
System Water Use

This chapter provides guidance for describing and quantifying the agency's current water use and water use projections through the year 2035 to the extent that records are available.

Accurately tracking and reporting current water demands allow a water supplier to properly analyze the use of their resources and conduct good resource planning. Estimating future demand as accurately as possible allows water agencies to manage their water supply and appropriately plan their infrastructure investments. Assessments of future growth and related water demand, done in coordination with local planning agencies, provide essential information for developing demand projections. Agencies are encouraged to coordinate and communicate with other planning agencies when developing demand projections.

Agencies are encouraged to review Appendix K - Estimating Future Water Savings. This appendix provides an optional approach for including conservation savings in water use projections. Various factors, such as codes, standards, ordinances, or transportation and land use plans may significantly reduce water use over time. Appendix K provides a method for reflecting these future savings in projected water demand.

It is also important to note that many planning agencies, whether local, regional, or statewide, rely upon water agencies' current water demand reports and demand projections in order to manage water resources on a larger scale.

For purposes of the UWMP, the terms "water use" and "water demand" will be used interchangeably. These terms will also be used to refer to all the demand sectors listed in Section 4.2.

This chapter is divided into the following subsections:

4.1 Recycled versus Potable and Raw Water Demand

4.2 Water Uses by Sector

4.3 Distribution System Water Losses

4.4 Estimating Future Water Savings

4.5 Water Use for Lower Income Households

4.6 Climate Change (Optional)

4.1 Recycled versus Potable and Raw Water Demand

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In order to clearly distinguish recycled from potable and raw water demand, guidance and suggested reporting for these demands is discussed separately in this Guidebook.

Recycled water is addressed comprehensively in Section 6.5 of Chapter 6, but a summary of recycled water demand is included in Table 4-3.

Chapter 4 addresses potable water demand and also provides for the reporting of raw water demand for the year 2015. Raw water use in 2015 is reported in Table 4-1, and will be denoted as “raw water” by using the column labeled “Level of Treatment” and selecting “Raw Water” from the drop down menu.

4.2 Water Uses by Sector

CWC 10631

(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…

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

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Water agencies must include past, current, and projected water use in the UWMP in five-year increments. Water agencies are to make their determination of the reliability of their projected water supply(ies) based upon information that is reasonably available at the time the 2015 UWMP is prepared.

Agencies will also identify the water use by sector to the extent that records are available. Suppliers are directed to use as many water demand sectors as are applicable to provide a better understanding of water use by the supplier. Suppliers are not required to enter a volume for each water sector listed, only those sectors that are used by the supplier and to the extent that records are available.

The sectors listed below and in Tables 4-1 and 4-2 are the only sectors that will be accepted by the Water Use Efficiency (WUE) Data online submittal tool. If there is a difference between the sectors used by the agency and the sectors listed in the sections below, agencies must report using the “Other” sector and provide a description of that water use.

Recommended

Include a narrative description of how demand projections are estimated.

Agencies may reference any documents used to estimate projected demands.

Appendix K provides a method for calculating expected savings from codes, standards, and land use planning (also known as “passive savings”) in estimates of future water demand. Although inclusion of these expected passive savings is optional, water agencies are encouraged to read this guidance and use this approach.

RETAIL ONLY

Some retail agencies also supply wholesale demands. If the retail supplier’s wholesale demands do not exceed 3,000 AF/year, the supplier is not considered a wholesaler and is not required to complete the standardized tables for a wholesaler. This small volume of wholesale demand will be reported in the agency’s retail Tables 4-1 and 4-2 using the appropriate water use sector.

WHOLESALE ONLY

When reporting water uses uses/demands in Table 4-1 and Table 4-2, wholesalers will only report their direct uses. They will not report the uses of other agencies to which they provide water. For example, if a wholesaler sells water to a retailer, and the retailer uses that water for their industrial customers, the wholesaler is only required to report the sale to the other agency in Table 4-1 and Table 4-2. The retailer is responsible for reporting the uses of their water supply to the industrial customer in their own UWMP.

Recommended

Wholesale agencies may report on the entirety of water use within their service area by aggregating water demand reported from all suppliers in the service area. Aggregated reporting of all water use within a wholesaler’s service area is not required by the CWC and no

standardized table is provided for compiled service area demand. Wholesale suppliers that report this aggregated service are demand may include non-standardized table for this data in their UWMP.

4.2.1 Demand Sectors Listed in Water Code

~~**RETAIL AND WHOLESALE**~~ ALL URBAN SUPPLIERS

For purposes of the 2015 UWMPs, the following definitions are used by DWR for each of the water sectors listed in the CWC. The order of the sectors follows the order found in the CWC. Each of these sectors, as well as those recommended in Section 4.2.2, are the only sectors that will be accepted by the WUE data online submittal tool. Sectors are listed in the order of the CWC.

4.2.1.1 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. This is a retail demand.

4.2.1.2 Multi-family

Multiple dwelling units contained within one building or several buildings within one complex. This is a retail demand.

4.2.1.3 Commercial

A water user that provides or distributes a product or service. CWC 10608.12 (d). This is a retail demand.

4.2.1.4 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).The following link is to the NAICS website: http://www.census.gov/cgi-bin/sssd/naics/naicsrch. This is a retail demand.

4.2.1.5 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). This is a retail demand.

4.2.1.6 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. This is a retail demand.

4.2.1.7 Sales to other agencies

Water sales made to another agency. Projected sales may be based on projected demand provided by the receiving agency. There is inherent uncertainty in future projections, therefore, any projected sales reported in the UWMP are for planning purposes only and are not considered a commitment on the part of the seller. This is a wholesale demand.

Water agencies will determine whether their demands are considered sales, transfers, or exchanges; reporting in the UWMPs will reflect the agencies' determination of these water demands.

Some retail agencies also supply water to other agencies. This is considered a wholesale demand.

4.2.1.8 Conjunctive use

A management strategy where surface water is managed in conjunction with an underground aquifer. For purposes of the UMWP, conjunctive use is seen as a management strategy rather than as a demand. Do not use the sector "conjunctive use" as a demand. The water demand would best be reported as groundwater recharge, or as "Other".

4.2.1.9 Groundwater recharge

The managed and intentional replenishment of natural groundwater supplies using man-made conveyances such as infiltration basins or injection wells. Water used for groundwater banking or storage may also be reported using this sector.

If all, or a portion of, the groundwater recharge water is subsequently pumped out of the basin in the same year, that water will be reported by the pumping agency as a supply from groundwater (Tables 6-1 and/or 6-8 and 6-9). This may be either a wholesale or retail demand.

4.2.1.10 Saline water intrusion barriers

Injection of water into a fresh water aquifer to prevent the intrusion of salt water. This may be either a wholesale or retail demand.

4.2.1.11 Agricultural

Water used for commercial agricultural irrigation. Note that water used for processing agricultural products (e.g., food, beverage, or textile manufacturing) may be considered industrial process water, rather than an agricultural water use. Industrial process water may be

excluded from gross water use for SB X7-7 calculations, see section 5.5 of Chapter 5. To be classified as industrial process water, the water use must fall under Sector 31, 32, or 33 of the North American Industry Classification System (NAICS) code. http://www.census.gov/cgi-bin/sssd/naics/naicsrch. This may be either a wholesale or retail demand.

4.2.1.12 Distribution System Losses

Reporting of system losses is required by the CWC in the 2015 UWMPs. See Section 4.3 and Appendix L for details on the required methodology for calculating system losses. The CWC requires reporting losses for the most recent 12 months for which data is available, which ~~may or may not coincide with~~ can be taken to mean the calendar year or fiscal year used for data reporting throughout the rest of the UWMP. Report the losses for the most recent 12 months available in Table 4-1~~and Table 4-4.~~ If the reported water losses are for a 12 month period that is different from the calendar or fiscal year used for data reporting throughout the rest of the UWMP, the water supplier will state this in the UWMP. This is both a wholesale and a retail demand.

4.2.2 Demand Sectors in Addition to Those Listed in Water Code

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Recommended

The water demand sectors below are not specifically listed in, nor required by the CWC. They can, however, help some agencies account for the entirety of their demand. The water use in these sectors is to be reported as records are available.

4.2.2.1 Exchanges

The agency will make a determination as to whether water sent to another agency is a sale, transfer, or exchange. This is a wholesale demand.

Water exchanges are typically water delivered by one water user to another water user, with the receiving water user returning the water at a specified time or when the conditions of the parties' agreement are met. Water exchanges can be strictly a return of water on a basis agreed upon by the participants or can include payment and the return of water. The water returned may or may not be an "even" exchange. Water can be returned on a one-for-one basis or by another arrangement (e.g., for each acre-foot (AF) of water received, 2 AF are returned).

Some retail agencies provide exchange water to other agencies. This is considered a wholesale demand.

4.2.2.2 Surface Water Augmentation

The planned placement of recycled water into a surface water reservoir that is used as a source of domestic drinking water supply. (Used in Chapter 6, Section 6.5 Recycled Water).

4.2.2.3 Transfers

The agency will make a determination as to whether water sent to another agency is a sale, transfer, or exchange. This is a wholesale demand.

The CWC defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights.

Transfers can be between water districts that are neighboring or across the State, provided there is a means to convey or store the water. A water transfer can be a temporary or permanent sale of water or a water right by the water right holder, a lease of the right to use water from the water right holder, or a sale or lease of a contractual right to water supply. Water transfers can also take the form of long-term contracts for the purpose of improving long-term supply reliability.

Some retail agencies transfer water to other agencies. This is considered a wholesale demand.

4.2.2.4 Wetlands or Wildlife Habitat

Water used for a managed environmental use to improve an environmental condition. This may be a wholesale or retail demand.

4.2.2.5 Other

Any water demand that is not adequately described by the water sectors defined above. Examples include:

The agency does not track, or may not project, water use by the individual sectors listed in Sections 4.1 and 4.2.

- An agency does not track actual water demand, and/or project water demand, by individual sectors. Such agencies will report their total demand in this category. Agencies are required to report water use by sector to the extent that records are available.
- The supplier combines commercial, industrial, and institutional into one sector called “CII”.
- An agency combines their single-family and multi-family sectors into one sector that they define as “residential”.

Unbilled, authorized consumption, such as water used for firefighting, line flushing or other unbilled uses.

When using the “Other” category as a water use sector, the agency is required to briefly describe the water uses reported in this category (i.e., firefighting). NOTE: Beginning with the 2015 UWMP cycle, system water losses are not to be reported in the “Other” category; system water losses are reported separately as “Losses”. (See Section 4.2.1.12).

TABLES

RUWMPs will use multiple versions of Tables 4-1, 4-2, and 4-3; one for each participating agency.

Table 4-1

Complete Table 4-1: Demands for Potable and Raw Water – Actual. This table is used to report the actual water demands of the supplier for the year 2015 (fiscal or calendar).

Table 4-2

Complete Table 4-2: Demands for Potable and Raw Water – Projected. This table is used to report projected water demands through the year 2035 and may be used to report projected water use for 2040. Suppliers will complete this table using as many sectors as possible, given the extent of available records and data.

Table 4-3

Total Water Demands. ~~This table will auto-fill in the online submittal tool~~ The online submittal tool and Excel version of this table will auto fill using data already reported in Table 4-1 (Potable and Raw Water - Actual), 4-2 (Potable and Raw Water – Projected) and 6-4 (Recycled Water).

Table 4-1 Retail: Demands for Potable and Raw Water - Actual			
Use Type *Drop down menu* *May select each use multiple times* ***These are the only Use Types that will be recognized by the WUEdata online submittal tool***	**2015 Actual**		
	Additional Description *(as needed)*	**Level of Treatment When Delivered** *Drop down with options of "Drinking water" or "Raw water"*	**Volume**
Single Family			
Multi-Family			
Commercial			
Industrial			
Institutional/Governmental			
Landscape			
Groundwater recharge			
Saline water intrusion barrier			
Agricultural irrigation			
Wetlands or wildlife habitat			
Sales/Transfers/Exchanges to other agencies			
Losses			
Other			
TOTAL			0
NOTES:			

Table 4-1 Wholesale: Demands for Potable and Raw Water - Actual			
Use Type *Drop down menu.* *May select each use multiple times* ***These are the only use types that will be recognized by the WUE data online submittal tool***	**2015 Actual**		
	Additional Description *(as needed)*	**Level of Treatment When Delivered** *Drop down with options of "Drinking water" or "Raw water"*	**Volume**
Sales to other agencies			
Transfers to other agencies			
Exchanges to other agencies			
Groundwater recharge			
Saline water intrusion barrier			
Agricultural irrigation			
Wetlands or wildlife habitat			
Retail demand *(for use by agencies that are primarily wholesalers with a small volume of retail sales)*			
Losses			
Other	*Required for this use*		
TOTAL			0
NOTES:			

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type *Drop down menu* *May select each use multiple times* ***These are the only Use Types that will be recognized by the WUEdata online submittal tool***	**Additional Description** *(as needed)*	**Projected Water Use** *Report To the Extent that Records are Available*				
		2020	**2025**	**2030**	**2035**	**2040**-opt
Single Family						
Multi-Family						
Commercial						
Industrial						
Institutional/Governmental						
Landscape						
Groundwater recharge						
Saline water intrusion barrier						
Agricultural irrigation						
Wetlands or wildlife habitat						
Sales/Transfers/Exchanges to other agencies						
Losses						
Other	*Required for this use*					
TOTAL		0	0	0	0	0
NOTES:						

Table 4-2 Wholesale: Demands for Potable and Raw Water - Projected						
Use Type *Drop down menu* *May select each use multiple times* ***These are the only Use Types that will be recognized by the WUEdata online submittal tool.***	**Additional Description** *(as needed)*	**Projected Water Use** *Report To the Extent that Records are Available*				
		2020	**2025**	**2030**	**2035**	**2040**-opt
Sales to other agencies						
Transfers to other agencies						
Exchanges to other agencies						
Groundwater recharge						
Agricultural irrigation						
Wetlands or wildlife habitat						
Retail demand *(for use by agencies that are primarily wholesalers with a small volume of retail sales)*						
Losses						
Other	*Required for this use*					
TOTAL		0	0	0	0	0
NOTES:						

Table 4-3 Retail: Total Water Demands						
	2015	2020	2025	2030	2035	2040 *(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	0	0	0	0	0	0
Recycled Water Demand* *From Table 6-4*	0	0	0	0	0	0
TOTAL WATER DEMAND	0	0	0	0	0	0
**Recycled water demand fields will be blank until Table 6-4 is complete.*						

Table 4-3 Wholesale: Total Water Demands						
	2015	2020	2025	2030	2035	2040*(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	0	0	0	0	0	0
Recycled Water Demand* *From Table 6-4*	0	0	0	0	0	0
TOTAL WATER DEMAND	0	0	0	0	0	0
**Recycled water demand fields will be blank until Table 6-4 is complete.*						

Tables 4-3 Retail and Wholesale were updated in the Final Version

4.3 Distribution System Water Losses

> *CWC 10631*
>
> *(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:…*
>
> *(J) Distribution system water loss*
>
> *(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.*

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Distribution system water losses (also known as "real losses") are the physical water losses from the water distribution system and the supplier's storage facilities, up to the point of customer consumption.

Water suppliers are required to quantify their distribution system losses using the ~~DWR Water Method~~ American Water Works Association Method ~~found in~~. Guidance is found in Appendix L. ~~and to submit~~ An electronic copy of the audit in Excel format shall be submitted to DWR using DWR's online submittal tool.

~~Past, current and p~~ Projected water losses, reported in five year increments, shall also be included in the UWMP to the extent that records are available. Projected ~~Losses~~ losses will be reported in Tables ~~4-1 and~~ 4-2.

In the 2015 UWMPs water agencies must ~~also~~ report their distribution system water loss for the most recent 12-month period available. This can be taken to mean the calendar year or fiscal year used for data reporting throughout the rest of the UWMP. This will be reported in Tables 4-1 and 4-4.

In 2020, and subsequent UWMP reporting cycles, agencies will be required to report losses for each of the last five years (2016, 2017, 2018, 2019, and 2020).

Note: This section on reporting water loss differs from the Demand Management Measures (DMMs) in Chapter 9. This section requires estimation of water loss, whereas, the DMM in

Chapter 9 requires retail water agencies to discuss how they will address water loss and wholesale agencies manage system assets.

TABLES

Table 4-4

Complete Table 4-4: Water Loss Summary Most Recent 12 Month Period Available using the values calculated in the AWWA ~~Appendix L~~ worksheet. RUWMPs will use multiple versions of Table 4-7; one for each participating agency.

Tables 4-4 Retail and Wholesale were updated in the Final Draft and the Final Version

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	

Table 4-4 Wholesale: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	

4.4 Estimating Future Water Savings

> *CWC 10631*
> *(e)(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.*

RETAIL ONLY

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

Water agencies ~~are not required to consider these future water savings when projecting water use in Table 4-2, but they~~ are required to state the extent to which passive savings ~~are were~~ considered in their water use projections. This will be noted in Table 4-5.

Recommended

Suppliers that include estimates of future water savings in their demand projection shall cite the codes, standards, ordinances, or transportation and land use plans utilized in making these projections. See Table 4-5.

Agencies are encouraged to review Appendix K – Estimating Future Water Savings. This appendix provides an optional approach for including estimated water savings based on codes, standards, ordinance, or transportation and land use plans in their demand projections. Appendix K provides a method to reflect these future savings which may be incorporated into a supplier's demand projections.

4.5 Water Use for Lower Income Households

CWC 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.

California Health and Safety Code 50079.5

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

RETAIL ONLY

Retail water agencies are required to include the projected water use for lower income households in projected water demands. A lower income household has an income below 80 percent of area median income, adjusted for family size.

To address this requirement, suppliers will:

Determine the number of lower income single-family and multi-family housing units projected for the service area, as identified in the housing elements of city or county General Plans.

Estimate the projected water use for those lower income housing units.

Verify that the expected water use for low income housing, as estimated above, was included in the projected water demands. Complete Table 4-5.

TABLES

Table 4-5

Complete Table 4-5: Inclusion in Water Use Projections. This table will indicate whether or not future water savings estimates and lower income residential demands are included in water demand projections. RUWMPs will use multiple versions of Table 4-5; one for each participating agency.

Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc... utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	
NOTES:	

Table 4-5 was updated in the Final Draft and Final Versions

4.6 Climate Change

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Including a discussion of potential climate change impacts on an agency's water demand is optional.

Recommended

A discussion of potential climate change impacts can assist in providing a comprehensive look at the potential impacts on projected demand. For example, hotter and drier weather may lead to an increased demand in landscape irrigation. Water agencies are encouraged, but not required, to consider potential climate change impacts to their water demand.

There is no required format for addressing climate change in an UWMP.

DWR recommends that agencies complete the IRWM Climate Change Vulnerability Assessment (see Appendix I) and include a narrative in the water use chapter of the UWMP summarizing the results of the "Water Demand" section of the Assessment.

Agencies may also attach a Vulnerability Assessment from an IRWM Plan, if available.

Chapter 5
SB X7-7 Baselines and Targets

With the adoption of the Water Conservation Act of 2009, also known as the SB X7-7, (see Appendix B), the State is required to set a goal of reducing urban water use by 20 percent by the year 2020. Each retail urban water supplier must determine baseline water use during their baseline period and also target water use for the years 2015 and 2020 in order to help the State achieve the 20% reduction.

In the 2015 Plan, water agencies must demonstrate compliance with their established water use target for the year 2015. This will also demonstrate whether or not the agency is currently on track to achieve its 2020 target. Compliance is verified by DWR's review of the SB X7-7 Verification Form submitted with an agency's 2015 UWMP. The SB X7-7 Verification Form is found in Appendix E and summarized in Tables 5-1 and 5-2 of this chapter.

Baselines and targets are to be calculated for each retail urban water supplier. This may be done individually or regionally. Regional compliance with SB X7-7 is done via a Regional Alliance and is addressed in Section 5.9.

This chapter of the Guidebook provides an overview and clarifying information regarding the requirements of the Water Conservation Act of 2009. Specific methodologies and calculations are detailed in *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use,* DWR 2011. Pending 2015 update. **Agencies are strongly advised to read the *Methodologies* document.** http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

SB X7-7 Verification Form. Retail water agencies are required to complete the tables in the SB X7-7 verification form (Appendix E). Regional Alliances are also required to complete a version of the SB X7-7 Verification Form. Not all tables will be required for every agency, depending upon the agency's methods for determining their baselines and targets. Note that the tables in the SB X7-7 Verification Form are in addition to the 2015 UWMP tables that are found throughout the guidebook which are also compiled in Appendix E. All tables in the SB X7-7 Verification Form have the prefix "SB X7-7", followed by the table number.

Calculation of baselines and targets is a very important but highly technical portion of the UWMP. To address the non-technical audience, agencies may choose to include an overview that highlights the importance of these calculations, a reference to the *Methodologies* document (DWR 2011), and the agency's efforts to meet these targeted reductions.

This chapter includes the following sections:

5.1 Guidance for Wholesale Agencies

5.2 Updating Calculations from 2010 UWMP

5.3 Baseline Periods

5.4 Service Area Population

5.5 Gross Water Use

5.6 Baseline Daily per Capita Water Use

5.7 2015 and 2020 Targets

5.8 2015 Compliance Daily per Capita Water Use

5.9 Regional Alliance

GPCD Terminology

When determining water use in a UWMP, two terms are often used interchangeably:

- Daily per Capita Water Use - the amount of water used per person per day. In the UWMP calculations, this is total water use within a service area, divided by population and is measured in gallons.
- Gallons per Capita per Day (GPCD) – This is the "Daily per Capita Water Use" measured in gallons. Therefore, the term commonly used when referring to "Daily per Capita Water Use" is "Gallons Per Capita per Day" or "GPCD."

It may also be important to distinguish GPCD (as used in Urban Water Management Plans) from the R-GPCD that is used in drought reporting to the State Water Resources Control Board.

- GPCD is the total water use within a service area (residential, commercial, institutional, etc…) minus allowable exclusions, divided by the population. This is used in UWMPs for purposes of the Water Conservation Act of 2009.
- R-GPCD is solely the estimated residential water use in a service area divided by population. R-GPCD is used in drought reporting to SWRCB for purposes of complying with the Governor's drought declarations and executive orders in 2014 and 2015 (as of the publication of this Guidebook).

5.1 Guidance for Wholesale Agencies

For purposes of identifying baselines and targets, the following definition applies:

CWC 10608.12
(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.

CWC 10608.36
Urban wholesale water suppliers shall include in the urban water management plans… an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

WHOLESALE ONLY

Wholesale water suppliers are not required to establish and meet baseline and targets for daily per capita water use, nor are wholesalers required to complete the SB X7-7 Verification Form. However, wholesale agencies are required to provide an assessment of their present and proposed future measures, programs and policies that will help the retail water suppliers in their wholesale service area achieve their SB X7-7 water use reduction targets.

Recommended

Such measures could include, but are not limited to, water conservation programs funded or supported by the wholesaler and made available to the retailers, recycled water programs supported or implemented by the wholesaler in its service area, and various policies that may be adopted by the wholesaler to encourage demand reduction in its service area.

Wholesale water suppliers may also participate in a Regional Alliance in a supportive role to assist the retail agencies in meeting their established targets. The retail suppliers are responsible for complying with the Alliance's regional target. See Section 5.9 for more on a Regional Alliance.

5.2 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.

5.2.1 Update of Target Method

RETAIL ONLY

In 2010 UWMPs, water agencies calculated a 2020 Urban Water Use Target through the use of a selected target method. In 2015 UWMPs, water agencies may update their 2020 Target and may make this calculation using a different target method than was used in 2010. (See Section 5.7.1 for a discussion of the Target Methods).

5.2.2 Required Use of 2010 U.S. Census Data

RETAIL ONLY

After examining a sample of data from Department of Finance (DOF), DWR has determined that significant discrepancies exist between DOF's projected populations for 2010 (based on 2000 U.S. Census data) and actual population for 2010, based on 2010 U.S. Census data. The average difference between projected and actual was approximately 3 percent, but the difference for some cities was as high as 9 percent.

Therefore, if an agency did not use 2010 Census data for their baseline population calculations in the 2010 UWMP (the full census data set was not available until 2012) DWR has determined that these agencies must recalculate their baseline population 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. See section 5.4 for guidance on developing baseline population estimates. Note that DWR is developing a population tool (anticipated release in December 2015) to assist agencies in estimating their service area populations, see section 5.4.1.2.

5.2.3 SB X7-7 Verification Form (Appendix E)

RETAIL ONLY

All retail agencies ~~and Regional Alliances,~~ whether updating their baselines and targets from 2010, or calculating these for the first time in 2015 UWMPs, are required to submit the standardized tables in the SB X7-7 Verification Form (see Appendix E) with their 2015 UWMPs ~~or Regional Alliance report~~. These standardized tables were not available in 2010 and are required to demonstrate compliance with the Water Conservation Act of 2009.

A Regional Alliance must report the information from this chapter in the SB X7-7 Verification Form for a Regional Alliance, Option 1, 2, or 3. This form may be included in a Regional UWMP. See Appendix D and Methodology 9 of the *Methodologies* document.

The tables in the SB X7-7 Verification Form are distinguished from the other standardized tables in this guidebook by their name, which will always begin with "SB X7-7", followed by the table number.

5.3 Baseline Periods

> *CWC 10608.20*
> *(e) An urban retail water supplier shall include in its urban water management plan due in 2010. . . the baseline daily per capita water use…along with the bases for determining those estimates, including references to supporting data.*
> *(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).*

RETAIL ONLY

In their 2015 UWMPs agencies may change the years they selected for their baseline periods as compared to their 2010 UWMPs. Agencies may choose to make this change based on changes to their calculated population (see Section 5.4) which may have affected the baseline and target GPCD values.

Water use GPCD must be calculated and reported for two baseline periods, the 10- or 15- year baseline (Baseline GPCD) and the 5-year baseline (Target Confirmation). Whether an agency uses a 10 or 15 year baseline depends on the percentage of recycled water delivered in the year 2008. See Section 5.3.1 for making this determination.

5.3.1 Determination of the 10-15 Year Baseline Period (Baseline GPCD)

CWC 10608.12
(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.

RETAIL ONLY

Water suppliers must define a 10- to 15-year baseline period for water use and calculate the average water use, in GPCD, over that length of time. This is a 10- to 15-year continuous period ending between December 31, 2004 and December 31, 2010.

To determine whether an agency must use a 10 year baseline period, or may use a 10-15 baseline, the water supplier must determine whether or not recycled water was at least 10 percent of their total water deliveries in the year 2008.

If the percentage of recycled water used in the year 2008 was at least 10 percent, the agency may use up to a 15 year baseline period. If data is not available for the entire 15 years, agencies may select a baseline period that is between 10 and 15 continuous years.

If the percentage of recycled water used in the year 2008 was less than 10 percent, the water agency must use a 10 year baseline period.

Recycled water deliveries of 2008 and the total water deliveries of 2008 will be entered into SB X7-7 Table 1. The table will calculate the percent of recycled water delivered in 2008.

5.3.2 Determination of the 5-Year Baseline Period (Target Confirmation)

> *CWC 10608.12 (b)*
> *(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.*

RETAIL ONLY

Water suppliers must also calculate water use, in GPCD, for a 5-year baseline period. This will be used to confirm that the selected 2020 target meets the minimum water use reduction requirements (see Section 5.7.2 2020 Target Confirmation). This is a continuous 5-year period that ends no earlier than December 31, 2007 and no later than December 31, 2010.

All retail agencies are required to complete SB X7-7 Table 1: Baseline Period Ranges.

5.4 Service Area Population

> *CWC 10608.20*
> *(e) An urban retail water supplier shall include in its urban water management plan due in 2010…the baseline 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.*
>
> *CWC 10644*
> *(a) (2) The plan… shall include any standardized forms, tables, or displays specified by the department.*

RETAIL ONLY

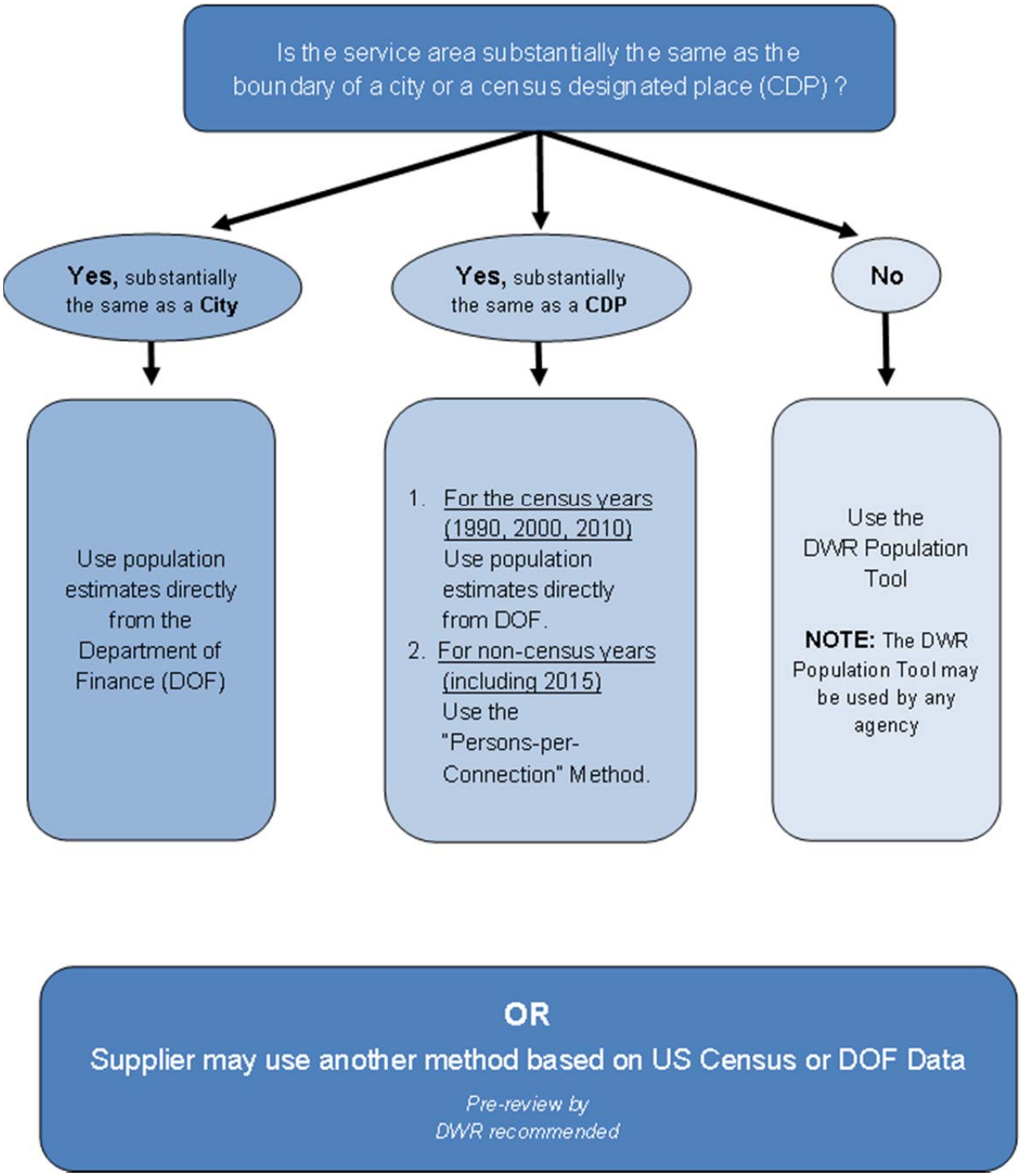
In order to correctly calculate annual GPCD, agencies must determine the population that they served for each baseline year in both of the baseline periods and for the 2015 compliance year.

If an agency did not use 2010 U.S. Census data for its baseline population calculations in the 2010 UWMP (the full census data set was not available until 2012) the agency must recalculate its baseline population 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.

Figure 5.1 was updated in the Final Draft

Figure 5. 1

Methods for Determining Service Area Population



5.4.1 Population Methodologies

RETAIL ONLY

The methodology for estimating an agency's population is provided in Methodology 2 of the *Methodologies* document. Additional guidance on population methodologies is provided below.

All suppliers may use the DWR Population Tool or a Persons-per-Connection calculation.

5.4.1.1 Department of Finance

Cities. Agencies whose service area boundaries correspond by 95 percent or more with the boundaries of a city ~~or census designated place~~ during the baseline period and the compliance year 2015 will be able to obtain population estimates directly from tables prepared by the Department of Finance (DOF).

Census Designated Places. Agencies whose service area boundaries correspond by 95 percent or more with the boundaries of a census designated place (CDP) during census years will be able to obtain population estimates for those census years directly from tables prepared by the Department of Finance (DOF). Population for non-census years may be calculated using the Persons-per-Connection method.

The DOF population tables can be found online at
http://www.dof.ca.gov/research/demographic/reports_papers/index.php

5.4.1.2 Persons-per-Connection

This method is used to determine population estimates for the non-census years, including 2015. Water suppliers must already have population estimates for the census years in order to use this method.

1. For each census year that data is available, determine the number of persons-per-connection by dividing the total population by the number of service connections.
2. For non-census years in the baseline period, determine the persons-per-connection by interpolating between the census years.
3. For the year 2015, use the same persons-per-connection that was calculated for the year 2010.
4. Determine the population for each non-census year by multiplying the number of service connections by the persons-per-connection for that year.

5.4.1.2 3 DWR Population Tool (expected release in December 2015)

~~DWR anticipates the release of a free, online population tool in adequate time for 2015 UWMP preparation.~~ Any agency may use the DWR population tool, but it is particularly useful for agencies whose service area boundaries do not match a city or CDP and cannot use DOF population data. The tool will utilize US Census data and electronic maps of the agency's service area (the tool will provide instructions for developing electronic maps) to obtain population data for census years. Using the number of agency service connections, the tool will calculate the population for the non-census years.

5.4.1.~~3~~ 4 Other Population Methods

Agencies may estimate their population using other methods developed in-house, by a wholesaler, Association of Governments, consultant, university, or other entity. However, DWR must determine that the alternate method complies with the requirements of Methodology 9 of the *Methodologies* document and is at least as accurate as the methods recommended by DWR. The agency must provide a description of the method that provides enough detail for DWR to make this evaluation. DWR recommends that the agency seek a pre-review from DWR to assess the adequacy of any proposed alternate population methodologies.

TABLES

All retail agencies ~~and Regional Alliances~~ are required to complete SB X7-7 Table 2: Method for Population Estimates and SB X7-7 Table 3: Service Area Population.

5.5 Gross Water Use

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.

RETAIL ONLY

Detailed guidance for gross water calculations is found in Methodology 1: Gross Water of the *Methodologies* document.

Gross water use is a measure of water that enters the distribution system of the supplier over a 12 month period (either fiscal or calendar year) with certain allowable exclusions. These exclusions are:

- Recycled water delivered within the service area. Recycled water use has been excluded from all calculation of gross water, as reflected in the SB X7-7 Tables. Water supplier are not required to report their recycled water use, nor demonstrate any reduction in recycled water use for purposes of SB X7-7;
- Indirect recycled water (see Methodology 1 from the *Methodologies* document, DWR 2011);
- Water placed into long term storage (surface or groundwater);
- Water conveyed to another urban supplier;
- Water delivered for agricultural use;
- Process water.

Gross water use must be reported for each year in the baseline periods as well as 2015, the compliance year.

5.5.1 Gross Water Tables

RETAIL ONLY

There are several tables from the SB X7-7 Verification Form that are related to gross water calculations.

Agencies that will deduct indirect recycled water and/or process water from their gross water will complete additional tables, as found in the subsections below.

5.5.1.1 Indirect Recycled Water Use Deduction

If the agency uses indirect recycled water and will deduct it from their gross water use, they must complete SB X7-7 Table 4-B: Indirect Recycled Water Use Deduction.

5.5.1.2 Process Water Use Deduction

The Process Water tables are not on the WUEdata online submittal tool, but can be found on the DWR website at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

Agencies that will be subtracting process water from their gross water use must submit additional tables SB X7-7 Table 4-C and one associated sub-table (SB X7-7 Table 4-C.1, SB X7-7 Table 4-C.2, SB X7-7 Table 4-C.3, or SB X7-7 Table 4-C.4) as well as SB X7-7 Table 4-D.

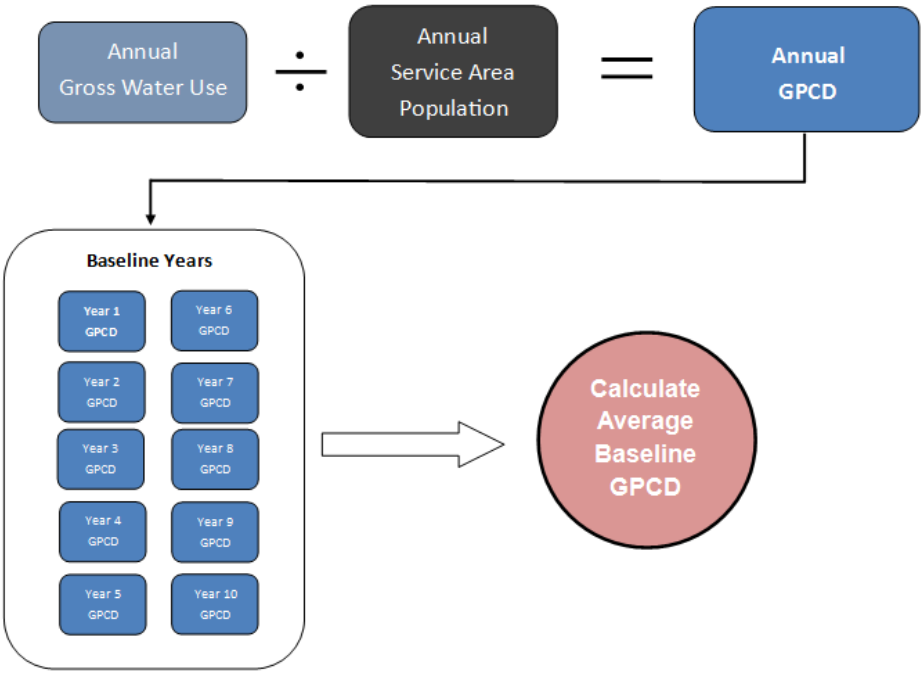
5.6 Baseline Daily Per Capita Water Use

RETAIL ONLY

The final step in baseline calculations is determining the daily per capita water use in each of the baseline years. All agencies must complete SB X7-7 Table 5 (Appendix E). Once population and gross water have been determined and entered into SB X7-7 Table 5, the GPCD for each baseline year will automatically be calculated in the table.

Figure 5.2 Calculate Baseline GPCD

Daily per Capita Water Use is reported in gallons and is referred to as “Gallons per Capita per Day” or “GPCD”. The GPCD is calculated for each year in the baseline periods and for the compliance year 2015.



5.7 2015 and 2020 Targets

> *CWC 10608.20*
> *(e) An urban retail water supplier shall include in its urban water management plan due in 2010. . . urban water use target, interim urban water use target,…along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*
> *(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan…*

RETAIL ONLY

A water supplier may select a different target method in its 2015 plan than it selected in its 2010 Plan. Once the 2015 UWMP is submitted, the target method may not be changed in any amendments to the 2015 Plan or in the 2020 Plan.

5.7.1 Select and Apply a Target Method

RETAIL ONLY

The water supplier has four different methods to choose from when determining the 2020 Urban Water Use Target. Identify which of the following four methods was used to determine the Urban Water Use Target. See CWC Section 10608.20(b) in Appendix E and *Methodologies* document for details. All retail suppliers must complete SB X7-7 Table 7 to identify the target method that has been selected.

5.7.1.1 Target Method 1

80 percent of 10- to 15- Year Baseline GPCD *CWC 10608.20 (b) (1)*

Calculate 80 percent of the base daily per capita water use. Agencies using Target Method 1 must complete SB X7-7 Table 7-A.

5.7.1.2 Target Method 2

Performance Standards *CWC 10608.20 (b) (2)* Tables for Target Method 2 are posted at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

The sum of the following three performance standards:

- Efficient Indoor Residential Use (Methodology 5: Indoor Residential Use)

- Landscape Water Use Equivalent to Model Ordinance (Methodology 6: Landscaped Area Water Use)
- 10% reduction in Commercial, Industrial, and Institutional (CII) Water Use from baseline CII use (Methodology 7: Baseline CII Water Use)

Agencies using Target Method 2 must complete SB X7-7 Tables 7-B and 7-C.

5.7.1.3 Target Method 3

95 percent of Hydrologic Regional Target from the 20 X 2020 Water Conservation Plan, State of California Agency Team, 2010. *CWC 10608.20 (b) (3)*

- Identify the hydrologic region where the water agency is located. Online tools are available at http://www.water.ca.gov/urbanwatermanagement/technicalassistance/ to help water suppliers identify their hydrologic region.
- If the water supplier's service area is within more than one hydrologic region, then proportionally calculate the 2020 urban water use target using the proportion that lies within each hydrologic region.
- Agencies using Target Method 3 must complete SB X7-7 Table 7-E.

5.7.1.4 Target Method 4

Savings by Water Sector DWR Method 4 *CWC 10608.20 (b) (3)*

DWR was directed in CWC 10608.20 (b) (4) to develop a fourth Target Method to calculate 2020 water use targets. This method identifies water savings obtained through identified practices and subtracts them from the agency's baseline GPCD.

Agencies that use Target Method 4 must use the procedures described in *Provisional Method 4 for Determining Water Use Targets*, DWR 2011, and include the worksheets from the Method 4 Calculator found on DWR's website at www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

5.7.2 5 -Year Baseline – 2020 Target Confirmation

CWC 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.

RETAIL ONLY

This step verifies that the 2020 water use target that has been calculated will reduce the agency's 2020 water use by a minimum of 5 percent from the 5-year baseline. This confirmation is automatically calculated in SB X7-7 Table 7. All retail suppliers are required to complete SB X7-7 Table 7-F: Confirm Target.

5.7.3 Calculate the 2015 Interim Urban Water Use Target

RETAIL ONLY

The 2015 Interim Target is the value halfway between the 10- to 15-year Baseline GPCD (from SB X7-7 Table 5) and the confirmed 2020 Target (SB X7-7 Table 7).

To determine the Interim 2015 Target, calculate the midpoint between the 10- to 15-year Baseline and the 2020 Target GPCD. Include the value of the Interim 2015 Target in the 2015 UWMP.

5.7.4 Baselines and Targets Summary

RETAIL ONLY

The SB X7-7 verification tables (see Appendix E) must be submitted in the 2015 UMWPs in

order to determine compliance with the Water Conservation Act of 2009.

Recommended

DWR recommends that the SB X7-7 Verification Form be submitted as an appendix to the UWMP. The summary information from the form will be reported in Table 5-1 and may be included in the body of the UWMP.

TABLES

Table 5-1

Complete Table 5-1: Baselines and Targets Summary.

RUWMPs may either submit:

- One version of Table 5-1 if complying as a Regional Alliance
- Multiple versions on Table 5-1; one for each participating agency.
- Both

Table 5-1 was updated in the Final Draft

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	*From SB X7-7 Table 1*	*From SB X7-7 Table 1*	*From SB X7-7 Table 5*	*From SB X7-7 Table 8*	*SB X7-7 Table 7-F*
5 Year	*From SB X7-7 Table 1*	*From SB X7-7 Table 1*	*From SB X7-7 Table 5*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES:					

5.8 2015 Compliance Daily per Capita Water Use (GPCD)

CWC 10608.12
(e)"Compliance daily per-capita water use" means the gross water use during the final year of the reporting period…

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

CWC 10608.20
(e) An urban retail water supplier shall include in its urban water management plan due in 2010 . . . compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

5.8.1 Meeting the 2015 Target

RETAIL ONLY

Criteria and methods for determining compliance with the 2015 Interim Target are detailed in Methodology 4 of the *Methodologies* document. Water suppliers must calculate their actual 2015 water use (2014-2015 fiscal or 2015 calendar year) to determine whether or not they have met their per capita 2015 target water use and to assess their progress toward meeting their 2020 target water use. All retail suppliers are required to complete SB X7-7 Table 9: 2015 Compliance.

5.8.2 2015 Adjustments to 2015 Gross Water Use

CWC 10608.24

(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.

~~Methodologies Document~~ Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, Methodology 4

This section discusses adjustments to compliance-year GPCD because of changes in distribution area caused by mergers, annexation, and other scenarios that occur between the baseline and compliance years.

RETAIL ONLY

In 2015 (and 2020) there are several allowable adjustments that can be made to an agency's gross water use. These are detailed in the *Methodologies* document (Methodology 8: Criteria for Adjustment to Compliance Daily Per capita Water Use, and Methodology 4: Compliance Daily Per Capita Water Use).

In case of a change in the service area from the baseline period to the compliance year, as discussed in Methodology 4 of the *Methodologies* document, water suppliers must provide adequate documentation of their calculations for DWR review. This may require multiples of some tables in the SB X7-7 Verification Form, or additional tables if using weighted averages. DWR recognizes that this may not be compatible with the WUEdata upload tool for UWMPs and will accept these additional tables as an attachment to the UWMP.

In the UWMP, discuss the agency's progress toward meeting its 2020 water use target.

5.9 Regional Alliance

RETAIL ONLY

Agencies that are choosing to comply with SB X7-7 requirements through a Regional Alliance must report the information from this chapter in the Regional Alliance Report. The report will ~~that~~ include~~s~~ the SB X7-7 Verification Form for a Regional Alliance, Option 1, 2, or 3. DWR recognizes that the SB X7-7 Verification Form for a Regional Alliance is not compatible with the WUEdata upload tool and will accept these tables as an attachment in WUEdata, rather than as entries into the WUEdata tables. This report may be included in a Regional UWMP. See Appendix D, E, and Methodology 9 of *Methodologies*.

TABLES

Table 5-2

Complete Table 5-2: 2015 Compliance.

RUWMPs may either submit:

- One version of Table 5-2 if complying as a Regional Alliance
- Multiple versions of Table 5-2; one for each participating agency
- Both

Table 5-2 was updated in the Final Draft

Table 5-2: 2015 Compliance *Retail Agency or Regional Alliance Only**								
Actual 2015 GPCD	2015 Interim Target GPCD	**Optional Adjustments to 2015 GPCD** Enter "0" for adjustments not used *From Methodology 8*					2015 GPCD *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events	Economic Adjustment	Weather Normalization	TOTAL Adjustments	Adjusted 2015 GPCD		
					0	0	0	No
**All values are in Gallons per Capita per Day (GPCD)*								
NOTES:								

Chapter 6
System Supplies

This chapter provides guidance for describing and quantifying the sources of water available to the urban water supplier, including supplies from other agencies, surface water, groundwater, recycled water, desalinated water, transfers and exchanges, and any other source water the supplier considers part of its supply portfolio.

For each water source, provide a narrative description that may include a discussion of the origin of the water supply, water quality, or quantity issues. Agencies will also include any actions or projects that are anticipated to meet future water demands.

Water volumes presented in Chapter 6 must reflect expectations for average year conditions. Discussion of supply reliability is discussed in Chapter 7, and water shortage contingency planning is discussed in Chapter 8.

The UWMP preparer may choose to present portions of the water supplies derived from alternative or non-traditional sources (recycled water, stormwater, graywater, or desalinated water) in separate sections of the Plan. This may be preferable for the UWMP preparer, especially if the alternate water supply system is complex or involves detailed discussion. If some water supplies are discussed separately, summary information must be included in the water supply overview at the end of the water supply chapter.

This chapter covers the following topics:

6.1 Purchased or Imported Water

6.2 Groundwater

6.3 Surface Water

6.4 Stormwater

6.5 Wastewater and Recycled Water

6.6 Desalinated Water Opportunities

6.7 Exchanges or Transfers

6.8 Future Water Projects

6.9 Summary of Existing and Planned Sources of Water

6.10 Climate Change Impacts to Supply (Optional)

6.1 Purchased or Imported Water

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Urban water suppliers may import or purchase water from other water suppliers or other entities. Agencies will make their own determination as to whether a water supply is purchased, imported, transferred, or exchanged. Agencies may provide a narrative description of their purchased water supplies.

Provide the volumes of purchased or imported water in Table 6-8: Water Supplies – Actual and Table 6-9: Water Supplies – Projected. If an agency has more than one source of purchased or imported water, add additional rows to the tables.

6.2 Groundwater

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Only an agency that pumps groundwater, or expects to pump groundwater, must address the requirements in this section. An agency that uses groundwater pumped by another agency must report this as a purchased or imported supply from another agency.

Groundwater UWMP reporting requirements apply to any groundwater an agency pumps, including alluvial groundwater basins, fractured volcanics, and bedrock. The UWMP must provide an overview of the groundwater resource, the agency's reliance on the groundwater source, any groundwater management framework or strategies, and include, or provide links to, documents that have been developed specifically for groundwater management.

Groundwater management requirements are covered in detail in Section 10750, et seq., of the CWC and more information can be found at the DWR Groundwater Information Center website at http://www.water.ca.gov/groundwater/. Changes to groundwater management under the Sustainable Groundwater Management Act (SGMA) are beginning to be implemented. Several of the activities, including adoption of regulations for Groundwater Sustainability Plans, are not expected to be finalized until June 30, 2016, which is when the 2015 UWMPs are due to DWR (July 1, 2016). Therefore, new requirements for groundwater management under SGMA will not apply to the 2015 UWMPs.

Recommended

The groundwater portion of a Plan is best prepared by summarizing information from other professionally prepared documents, including those prepared by federal, State, or local agencies, or the water supplier. Documents used as references to summarize the hydrogeologic conditions may be cited and included as either an appendix or a link to its web location.

6.2.1 Basin Description

> *CWC 10631*
> *(b) 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:*
> *(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The UWMP must include a description of the basin or basins used by the supplier. A description of the agency's source groundwater basin(s) includes the basin and sub-basin name(s). If the agency pumps from an alluvial groundwater basin, the agency must include the name of the basin and sub-basin as identified in DWR Bulletin 118. If the agency pumps groundwater from fractured rock or volcanics, the agency only needs to indicate that the source is fractured bedrock or volcanics. If an agency needs additional guidance identifying the groundwater basin, they may contact DWR staff in the respective Regional Office. See Section 1.8 for DWR contact information.

Recommended

A thorough basin description may include a map of the basin, a list of other known users of the basin, and a discussion of any known issues, including changes in groundwater levels, water quality issues, yield, subsidence, or any information which may impact present or future use of groundwater. DWR Bulletin 118 ~~Update 2003~~, California's Groundwater (available from http://www.water.ca.gov/groundwater/) may be used to provide background and general information for describing the basin(s) if more current information is not available.

6.2.2 Groundwater Management

> *CWC 10631*
> *(b)… 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… or any other specific authorization for groundwater management.*
> *(2)…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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

An adopted groundwater management plan or final judgement for an adjudicated basin must be included in the UWMP, if one exists. This may be done by either including the document as an appendix to the UWMP or providing a website link to the location of the document.

If a groundwater management plan has not been adopted, include a brief discussion of the status of current or planned groundwater management actions occurring within the groundwater basin, if any. Groundwater management actions include groundwater level and water quality monitoring, metering or measuring groundwater pumping, groundwater recharge, conjunctive use programs, water conservation, subsidence monitoring, and use of alternative water supplies.

Recommended

Water agencies are encouraged to include a brief summary in the UWMP of the groundwater management plan and/or the basin adjudication, if either of these applies to the groundwater source.

As part of the groundwater basin management discussion, the UWMP may include a discussion of any activities occurring in the basin(s) pertaining to the California Statewide Groundwater Elevation Monitoring Program (CASGEM). These include groundwater monitoring activities and the respective Basin Prioritization ranking. The basin prioritization results are posted at http://water.ca.gov/groundwater/casgem/basin_prioritization.cfm.

Although specific SGMA regulations may still be under development, discussion of current or planned activities to meet anticipated SGMA requirements may be included in a 2015 UWMP.

6.2.3 Overdraft Conditions

> *CWC 10631*
> *(b)(2) For basins that have not been adjudicated, (provide) 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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Agencies that draw water from a groundwater basin that is not adjudicated are to provide, in the UWMP, a discussion of DWR's current assessment of critically overdrafted basins. As of the publication of this guidebook, DWR's most current assessment of critically overdrafted basins is in Bulletin 118 ~~(DWR, 2003)~~. Agencies with groundwater supplies should refer to

http://www.water.ca.gov/groundwater/ for the current status of DWR's review of overdrafted basins and Bulletin 118.

These agencies must also include a detailed description of their efforts to eliminate long-term overdraft conditions.

6.2.4 Historical Groundwater Pumping

> *CWC 10631*
> *(b) …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:*
> *(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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Water agencies that have pumped groundwater at any time during the years 2011-2015 are required to complete Table 6-1 with the volume of water pumped from each source for each year within that time period. This reporting will be based on information that is reasonably available.

Water agencies are also required to discuss the sufficiency of groundwater pumped for the last five years. This may be addressed by describing any limitations or challenges, if any, such as brackish water, or a dropping water table, which were encountered in obtaining groundwater during this time.

TABLES

Table 6-1 Actual groundwater volumes pumped in the last five years must be reported in Table 6-1: Groundwater Volume Pumped. RUWMPs will use multiple versions of Table 6-1; one for each participating agency.

Table 6-1 Retail: Groundwater volume pumped						
☐	Supplier does not pump goundwater. The supplier will not complete the table below.					
Groundwater Type *Drop Down List* *May use each category multiple times*	**Location or Basin Name**	**2011**	**2012**	**2013**	**2014**	**2015**
Alluvial Basin						
Fractured Rock						
TOTAL		0	0	0	0	0
NOTES:						

Table 6-1 Wholesale: Groundwater volume pumped						
☐	Supplier does not pump goundwater. The supplier will not complete the table below.					
Groundwater Type *Drop Down List* *May use each category multiple times*	**Location or Basin Name**	**2011**	**2012**	**2013**	**2014**	**2015**
Alluvial Basin						
Fractured Rock						
TOTAL		0	0	0	0	0
NOTES:						

6.3 Surface Water

ALL URBAN SUPPLIERS

Water drawn from streams, lakes, and reservoirs is considered a surface water supply. If a water agency uses, or plans to use, self-supplied surface water as part of its water supply, the volume of that supply will be reported in Table 6-8: Water Supplies – Actual and Table 6-9: Water Supplies - Projected.

Surface water that is not self-supplied, such as purchases from a wholesaler, transfers, or exchanges, will be reported as “Purchased or Imported Water” in Tables 6-8 and 6-9. If an agency has more than one source of surface water, use additional rows in the table.

Recommended

The agency may choose to describe the surface water system in the UWMP. Such a description may include maps, an overview of the water conveyance system(s), the name of the surface water source (i.e., name of stream and/or reservoir), a brief description of the watershed that supplies the source, and a discussion of water rights to that source.

The water agency may also include the name(s) of any agency(ies) responsible for management of the water source and include a link or appendix of any management plans for the surface water source, if any.

6.4 Stormwater

ALL URBAN SUPPLIERS

Communities are increasingly implementing opportunities to beneficially use stormwater to meet local water supply demands. These actions are motivated by constrained local water resources, new regulations, and relieving strain on overburdened stormwater infrastructure. If stormwater is being intentionally diverted for beneficial reuse, that volume of stormwater can be reported as a water source in Table 6-8: Water supplies – Actual, and Table 6-9: Water supplies - Projected. (See Section 6.9). Beneficial reuses include blending with other water supplies for groundwater recharge, redirecting it into constructed wetlands or landscaping, and diverting it to a treatment facility for subsequent reuse.

Recommended

DWR recommends that the UWMP preparer provide a narrative description of the stormwater recovery system, if any.

6.5 Wastewater and Recycled Water

ALL URBAN SUPPLIERS

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

There are two requirements treated municipal wastewater must meet to be classified as recycled water. It must be reused:

- Beneficially, in a manner consistent with Title 22;
- In accordance with a Regional Water Quality Control Board (RWQCB) permit such as National Pollutant Discharge Elimination System (NPDES), waste discharge requirement (WDR), or water recycling requirement (WRR).

Both recycled water supplies and uses are presented in this section, which combines aspects of both Chapter 4 (System Water Uses) and Chapter 6 (System Supplies). Because recycled water is primarily maintained separately from the potable system, DWR prefers that agencies address both aspects of recycled water within one portion of an UWMP, which could be in Chapter 6 or a separate UWMP chapter.

There have been no legislative changes to the CWC regarding recycled water since the preparation of the 2010 UWMPs. However, because of challenges with some recycled water data reporting in 2010, changes to the recycled water tables have been made to improve data reporting in the 2015 UWMPs. Columns have been added to provide additional clarification, such as the level of treatment to support assessment of the potential use of the water for water supply benefit. Some of the additional information is optional and is marked as such. The additional information will improve and support consistency in how UWMPs quantify recycled water and facilitate use of the data provided in the UWMPs.

Appendix M is included in the 2015 Guidebook to clarify uncertainty and variability in how recycled water is to be reported in 2015 UWMPs. Topics in Appendix M include:

- What is considered recycled water?
- What are beneficial uses of recycled water?
- How is recycled water accounted for in the UWMP if multiple agencies are involved in the collection, treatment, and distribution of recycled water?

Water suppliers are advised to review Appendix M before completing the recycled water section of the UWMP. Appendix M also includes comprehensive guidance for how best to complete the wastewater and recycled water tables (Tables 6-2 through 6-6).

DWR and the SWRCB are cooperatively completing a statewide survey of 2015 recycled water use. For water suppliers with recycled water in their water supply portfolios, it is DWR's objective that there is consistency between the data compiled for the survey and the data reported in the UWMPs. Please see Appendix M for additional discussion of the survey. If there are additional questions during preparation of an UWMP, please contact Toni Pezzetti at (916) 651-7024 or toni.pezzetti@water.ca.gov .

The following sections are recommended for presenting recycled water information in an UWMP. They do not have to be labeled as 6.5.1, 6.5.2, etc., but the organization is provided as a reference both for the Guidebook and as potential UWMP sections.

RETAIL ONLY

Retail UWMPs are to include a discussion of wastewater and recycled water in the UWMP as follows:

If recycled water is currently or planned to be used in the service area of the UWMP:

Address parts 6.5.1 through 6.5.5 (described below),

Complete Tables 6-2 to 6-6

If recycled water is not used and there are no plans for use within the planning horizon of the UWMP:

Address parts 6.5.1, 6.5.2, and 6.5.5 (described below),

Complete Tables 6-2, 6-3, and 6-6.

WHOLESALE ONLY

A wholesale UWMP is not required to summarize wastewater generation or treatment within its service area, unless it provides supplemental treatment to recycled water prior to its distribution. Each wholesale UWMP preparer is to address recycled water as follows:

If recycled water is currently or planned to be used in the service area of a wholesale supplier:

Describe how recycled water is or will be used within the service area;

If not directly involved with the treatment or distribution of recycled water, provide a list of the wholesale and retail recycled water agencies;

If any supplemental treatment is provided by the wholesale UWMP preparer, complete Table 6-3 for the supplemental treatment only;

If recycled water is treated or distributed by the wholesale UWMP preparer, complete Tables 6-4.

If recycled water is not used and there are no plans for use within the planning horizon of the UWMP, provide a summary statement to that effect.

6.5.1 Recycled Water Coordination

CWC 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.

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

To the extent available, each UWMP preparer is to:

Coordinate with any wastewater facility or agency that collects or treats wastewater within the urban water supplier's service area regarding the quality and availability of wastewater for beneficial reuse. In addition, other water supply and planning agencies should be contacted regarding the existing and potential availability and uses of recycled water. These discussions can occur within the framework of an IRWM or other local and regional planning organization. Each of the types of organizations identified in the CWC 10633 should also be contacted.

Identify in a bulleted list or similar format the agencies collecting, treating, or discharging municipal wastewater both generated and treated within the service area, and indicate their roles.

6.5.2 Wastewater Collection, Treatment, and Disposal

CWC 10633
(a) (Describe) the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

CWC 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.

RETAIL ONLY

6.5.2.1 Wastewater Collected Within Service Area

This section summarizes collection and treatment of wastewater generated within the service area.

Describe how the agencies identified in Section 6.5.1 interact to collect wastewater within the service area, including and any joint ventures or joint operations. For example, one agency collects wastewater and delivers it to another agency that operates the treatment facility.

Provide a general description of wastewater collection, treatment, and disposal within the service area.

TABLES

Table 6-2

RUWMPs will use multiple versions of Table 6-2; one for each participating agency.

This table summarizes information on collection of wastewater within the service area. It is to be completed for each retail supplier for all wastewater COLLECTED within the UWMP area, to the extent that information is available, whether recycled water is used within the service area or not. To complete Table 6-2:

- Contact the owners and operators of each agency that collects or treats wastewater in the supplier's service area regarding the volume of wastewater collected within the service area, to the best of the UWMP preparer's ability. Identify the facility that treated the collected wastewater;
- If wastewater generated from outside the service area is treated within the service area, indicate that.

Recommended

Table 6-2

Estimate, to the best of the UWMP preparer's ability, the percentage of the service area and the population percentage served by the wastewater collection system;

Indicate if a third-party organization operates a facility under contract (yes or no).

Table 6-2 was updated in the Final Draft and in the Final Version

Table 6-2 Retail: Wastewater Collected Within Service Area in 2015						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2015 service area covered by wastewater collection system *(optional)*					
	Percentage of 2015 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Add additional rows as needed						
Total Wastewater Collected from Service Area in 2015:		0				
NOTES:						

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

6.5.2.2 Wastewater Treatment and Discharge Within Service Area

Table 6-3 identifies the volume of treated wastewater either recycled or disposed of within the service area. This may include wastewater that originated from outside the water supplier's area. Complete Table 6-3, to the extent that information is available. This table is to be completed by retailers for all wastewater TREATED OR DISPOSED within the UWMP area. If neither occurs, the table does not have to be completed. If a wholesale supplier provides additional treatment to recycled water, then it is to complete Table 6-3 only for the water receiving supplemental treatment.

RETAIL ONLY

If wastewater is not treated or disposed within the service area, Table 6-3 does not need to be completed. Instead, provide in the narrative a brief discussion of the disposal and/or recycling of treated wastewater at the facility that receives the service area wastewater.

WHOLESALE ONLY

Complete Table 6-3 only if the wholesale agency provides additional treatment.

TABLES

Table 6-3

Complete Table 6-3: Wastewater Treatment and Discharge Within Service Area 2015. RUWMPs will use multiple versions of Table 6-3; one for each participating agency.

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

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

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Dispoal *Drop down menu with these options*	Does This Plant Treat Wastewater Generated Outside the	Treatment Level *Drop down menu with these options*	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
				Ocean outfall	Drop down yes/no	Secondary, Undisinfected				
				River or creek outfall		Secondary, Disinfected - 23				
				Bay or estuary outfall		Secondary, Disinfected - 2.2				
				Lake outfall		Tertiary				
				Wetlands		Advanced				
				Subsurface infiltration gallery						
				Land disposal						
				Percolation ponds						
				Deep injection well						
				Other						
						Total	0	0	0	0

NOTES:

Table 6-3 Wholesale was updated in the Final version

Table 6-3 Wholesale: Wastewater Treatment and Discharge Within Service Area in 2015										
☐	Wholesale supplier ~~does not~~ neither distributes ~~recycled water~~ nor provides supplemental treatment to recycled water ~~it distributes~~. The supplier will not complete the table below.									
							2015 volumes			
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level *Drop down list*	Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
						Total	0	0	0	0
NOTES:										

CWC 10633(c) (Describe) the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

For UWMP preparers implementing or planning recycled water use within the service area, this section provides an overview of the current recycled water system. The UWMP preparer shall:

Provide text describing the recycled water system operating in the service area;

Identify each agency involved in the recycled water system collection, treatment, and distribution, including wholesalers, retailers, special districts, or joint ventures;

Provide information on the system's history and operation.

Recommended

Provide a map or specific physical description of the coverage of the distribution system providing recycled water in 2015.

Attach or provide a reference by website link to a Recycled Water Master Plan or similar document, if one has been prepared.

6.5.4 Recycled Water Beneficial Uses

CWC 10633

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

CWC 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 pursuant to this subdivision.

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

6.5.4.1 Current and Planned Uses of Recycled Water

This section discusses current and planned recycled water uses within the service area of urban water suppliers where recycled water use is implemented or planned and provides an overview of the current recycled water system.

The definition of recycled water (see Appendix M) includes the term "direct beneficial use", which is defined in the *California Code of Regulations*, Title 22, §60301.200 as "the use of recycled water that has been transported from the point of treatment or production to the point of use without an intervening discharge to waters of the State." Appendix M provides a more detailed discussion of how to apply these terms to recycled water.

RETAIL ONLY

Provide beneficial use information for recycled water delivered within the service area. If more than one supplier provides recycled water within the service area, separate tables may be provided for each (e.g., duplicating Table 6-4 and referring to the resulting tables as Table 6-4a and Table 6-4b to correspond to data from two different recycled water suppliers). Please refer to Appendix M before completing Table 6-4. Appendix M provides additional discussion on how recycled water should be quantified and discusses common errors in evaluating recycled water volume and uses.

Recommended

The UWMP preparer may consider highlighting innovative uses of recycled water or a particular organization that has demonstrated commitment to the use of recycled water;

Provide information on the specific types of recycled water uses, including such information as crops irrigated or type of landscapes irrigated.

WHOLESALE ONLY

For wholesale agencies that provide recycled water, include the name of the retail agency and the volume of water to which recycled water will be provided in Table 6-4. Beneficial uses do not need to be included. Wholesale agencies not directly involved in recycled water do not need to complete Table 6-4, but in the recycled water section of the UWMP should provide a list of the agencies that provide wholesale or retail recycled water within the UWMP preparer's service area. Volumes of recycled water these agencies provide in 2015 could be included, but is not required.

TABLES

Table 6-4

This table is to be completed for all recycled water USED within the UWMP area~~. If recycled water is not used or planned to be used, the table does not have to be completed.~~ RUWMPs will use multiple versions of Table 6-4; one for each participating agency.

Text accompanying Table 6-4 should include a narrative overview of the level, or levels, of treatment (there may be more than one) of recycled water used and the types of uses.

The total recycled water use for each of the 5-year increments shown in Table 6-4 is to be included in Table 4-5 in Chapter 4.

Complete Table 6-4 for each direct beneficial use. To the best of the UWMP preparer's ability, quantify the amount of recycled water currently being used within the urban water supplier's service area, as well as projected volumes and uses into the future.

Table 6-4 Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area*								
☐ Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.								
Name of Agency Producing (Treating) the Recycled Water:								
Name of Agency Operating the Recycled Water Distribution System:								
Supplemental Water Added in 2015								
Source of 2015 Supplemental Water								
Beneficial Use Type *Drop Down with the following use types These are the only Use Types that will be recognized by the WUEdata online submittal tool*	**General Description of 2015 Uses**	**Level of Treatment** Drop dow n menu w ith these options	**2015**	**2020**	**2025**	**2030**	**2035**	**2040 (opt)**
Agricultural irrigation		Secondary, Undisinfected						
Landscape irrigation (exc golf courses)		Secondary, Disinfected - 23						
Golf course irrigation		Secondary, Disinfected - 22						
Commercial use		Tertiary						
Industrial use		Advanced						
Geothermal and other energy production								
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR)								
Surface water augmentation (IPR)								
Direct potable reuse								
Other *use type*								
		Total:	0	0	0	0	0	0
IPR - Indirect Potable Reuse								
** This may include use outside the the UWMP area that is NOT included in another UWMP area. It is to be noted in the general description cell.*								
NOTES:								

Table 6-4 Wholesale: Current and Projected Retailers Provided Recycled Water Within Service Area*							
☐	Recycled water is not directly treated or distributed by the supplier. The supplier will not complete the table below.						
Name of Receiving Supplier or Direct Use by Wholesaler	**Level of Treatment** *Drop Down menu with these options*	**2015**	**2020**	**2025**	**2030**	**2035**	**2040** *(opt)*
	Secondary, Undisinfected						
	Secondary, Disinfected - 23						
	Secondary, Disinfected - 22						
	Tertiary						
	Advanced						
	Total:	0	0	0	0	0	0
** This may include use outside the the UWMP area that is NOT included in another UWMP area. It is to be noted in the general description cell.*							
NOTES:							

6.5.4.2 Planned Versus Actual Use of Recycled Water

> *CWC 10633*
> *(e)(Provide) a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Each UWMP which has recycled water use is to provide a comparison of earlier projected use of recycled water to actual uses. This is accomplished by completing Table 6-5. From the urban water supplier's 2010 UWMP, provide the 2015 projected estimates of recycled water use. Compare those estimates to the actual 2015 recycled water use as reported in Table 6-4.

Note that the highlighted cells in the total rows of Tables 6-3, 6-4, and 6-5 should be the same.

RETAIL ONLY

For retail UWMP preparers that have more than one recycled water provider within its service area, Table 6-5 can be submitted either as a compiled table or as separate tables for each provider.

WHOLESALE ONLY

Wholesale UWMP preparers are to provide total recycled water ~~use for~~ delivered to each retailer or wholesaler, without identification of beneficial use

TABLES

Table 6-5

Complete Table 6-5: 2010 Recycled Water Use Projection Compared to 2015 Actual. RUWMPs will use multiple versions of Table 6-5; one for each participating agency.

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 *Drop Down with the following use types* *These are the only Use Types that will be recognized by the WUEdata online submittal tool*	**2010 Projection for 2015**	**2015 actual use**
Agricultural irrigation		
Landscape irrigation (ex golf courses)		
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Other *use type*		
Total	0	0
NOTES:		

Table 6-5 Wholesale: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual		
☐ Recycled water was not used or distributed by the supplier in 2010, nor projected for use or distribution in 2015. The supplier will not complete the table below.		
Name of Receiving Supplier or Direct Use by Wholesaler	**2010 Projection for 2015**	**2015 actual use**
Total	0	0
NOTES:		

6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

CWC 10633

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

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

RETAIL ONLY

Each retail agency is to complete this section, whether recycled water is used, planned for use, or not planned for use.

Describe the approaches the urban water supplier is implementing or is planning to implement to increase or encourage the use of recycled water within its service area, building upon the discussion of planned future expansion of recycled water use in the service area. Summarize these approaches in Table 6-6. These actions may include financial incentives, funding for onsite retrofits for industrial or commercial users, public outreach, demonstration projects, building code modification, ordinances, etc.;

Discuss the issues constraining recycled water implementation and expansion and what could be done to address those limitations.

Assess potential uses of recycled water, whether or not it is currently being used in the service area;

Provide estimates of the volume of additional recycled use that could be realized by implementing any of the actions (Table 6-6);

If recycled water use is not planned to be implemented within the planning horizon of the UWMP, identify the reasons recycled water is not being considered as a potential water supply;

Identify the nearest known availability of recycled water and the obstacles (if any) to accessing this resource;

If a feasibility study has been prepared, include a reference and website link or attachment (optional).

The water supplier may not be the organization responsible for the treatment or distribution of recycled water in the service area. However, water agencies coordination with the local wastewater treatment operator and recycled water purveyors can identify opportunities to expand recycled water use, assess revenue impacts to both agencies, and recognize common benefits. These actions can include supporting the wastewater agencies plant upgrades to increase recycled water use. These actions should be included in Table 6-6, as applicable.

TABLES

Table 6-6

This table is to be completed by UWMP preparers whether recycled water is or is not planned to be used. RUWMPs will use multiple versions of Table 6-6; one for each participating agency.

Table 6-6 was updated in the Final Draft

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.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Add additional rows as needed			
		Total	0
NOTES:			

6.6 Desalinated Water Opportunities

> *CWC 10631*
> *(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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

UWMP preparers are required to consider the potential for desalinated water as a water supply option. Identify and discuss opportunities for development of desalinated water supplies from ocean water, brackish surface water, and brackish groundwater. Indicate the level to which desalination is being considered.

If the water supplier determines that there are no opportunities for development of desalinated water sources within the planning horizon of the 2015 UWMP, the supplier is to clearly indicate that desalination is not being considered and discuss why.

If surface water, groundwater, or seawater is being desalinated, or planned to be desalinated, the current and/or projected volume(s) will be reported in the desalinated water entry on Table

6-8: Water Supplies – Actual and Table 6-9 Water Supplies - Projected. (See Section 6.9) The source of the water and the measurement of total dissolved solids (TDS) may be included in the "Detail" column of the tables, or as a narrative.

6.7 Exchanges or Transfers

> *CWC 10631*
> *(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Describe any planned or potential future water exchanges or transfers.

For purposes of the UWMP, water agencies will make their own determination as to whether a water source is a purchase, import, exchange, or transfer.

6.7.1 Exchanges

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Water exchanges are typically water delivered by one water user to another water user, with the receiving water user providing water in return at a specified time or when the conditions of the parties' agreement are met. Water exchanges can be strictly a return of water on a basis agreed upon by the participants or can include payment and the return of water. The water returned may or may not be an "even" exchange. Water can be returned on a one-for-one basis or by another arrangement (e.g., for each acre-foot [AF] of water received, 2 AF are returned). Enter exchange information into Table 6-8: Water Supplies – Actual, and Table 6-9 Water Supplies - Projected.

6.7.2 Transfers

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The CWC defines a water transfer as a temporary or long-term change in the point of diversion, place of use, or purpose of use due to a transfer, sale, lease, or exchange of water or water rights. Temporary water transfers have a duration of one year or less (CWC Section 1725). Long-term water transfers have a duration of more than one year (CWC Section 1728).

Transfers can be between water districts that are neighboring or across the State, provided there is a means to convey or store the water. A water transfer can be a temporary or permanent sale of water or a water right by the water right holder, a lease of the right to use water from the water right holder, or a sale or lease of a contractual right to water supply. Water

transfers can also take the form of long-term contracts for the purpose of improving long-term supply reliability. Enter transfer information into Table 6-8: Water Supplies – Actual, and Table 6-9: Water Supplies - Projected.

6.7.3 Emergency Interties

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Emergency interties are addressed in Chapter 7, Water Supply Reliability.

Recommended

The narrative description may include the name(s) of any other agencies participating in the transfer or exchange, the volume of water expected to be transferred or exchanged, a description of the expected time frame, whether the exchange or transfer is long or short term, and over what time period it is expected to occur.

6.8 Future Water Projects

> *CWC 10631*
> *(g) …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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Provide a narrative description of expected future projects and programs that the supplier may implement to increase water supply for average, single-dry and/or multi-dry years.

Complete Table 6-7: Expected Future Water Supply Projects or Programs for projects or programs that have a quantifiable increase in water supply to the agency and can reasonably be expected to be implemented within the 20-year time frame of the UWMP. Examples include desalination plants, recycled water treatment plants or infrastructure, or a known increase in a water right or contractual agreement~~. Projects or programs that may not be quantifiable, such as outreach and education, or that increase water supply to the region, but not to the agency, such as wholesaler assistance to member agencies, will be described in narrative format.~~

Recommended

Capital improvement projects that do not increase the agency's water supply should not be included in this section.

TABLES

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

RUWMPs will use multiple versions of Table 6-7; one for each participating agency.

Tables 6-7 Retail and Wholesale were updated in the Final Version

Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Agency *This may be a range*
	Drop Down List (y/n)	*If Yes, Agency Name*				
Add additional rows as needed						
NOTES:						

Average Year
Single-Dry Year
Multi-Dry Year
All Year Types
Average and Single-Dry
Average and Multi-Dry
Single-Dry and Multi-Dry

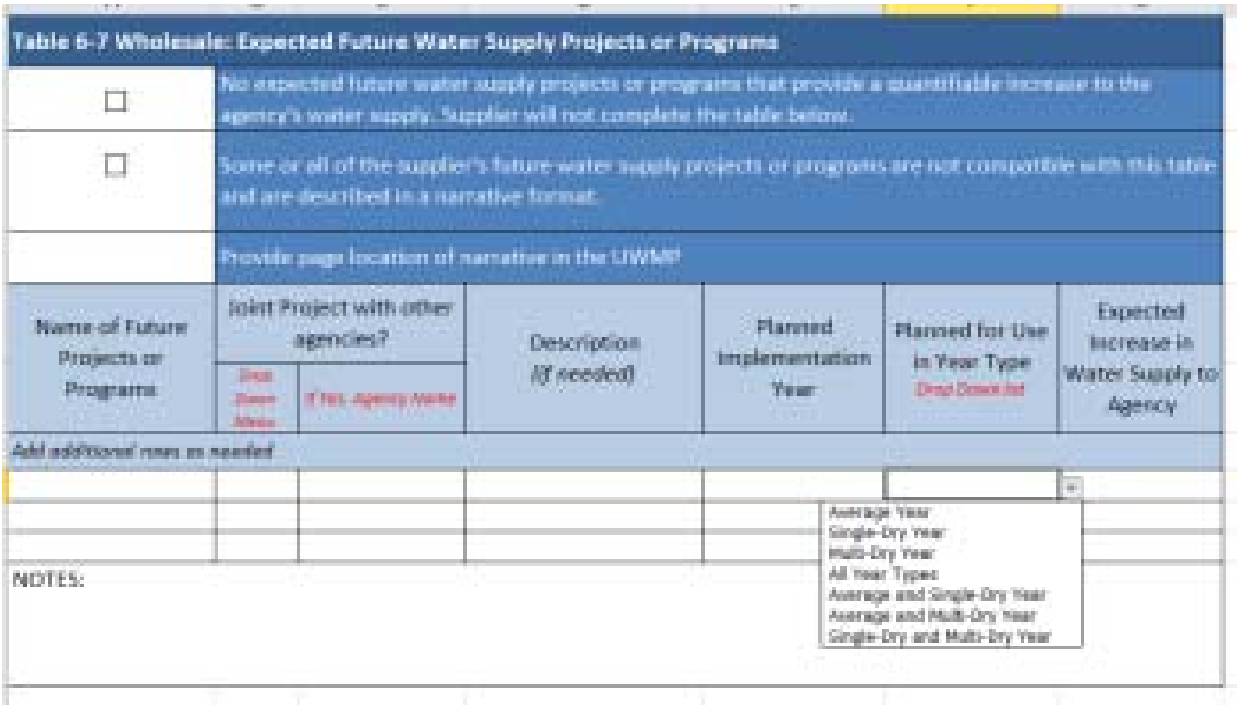


Table 6-7 Wholesale: Expected Future Water Supply Projects or Programs

☐ No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.

☐ Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.

Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
	Drop Down Menu	If Yes, Agency Name			Drop Down list	
Add additional rows as needed						

Average Year
Single-Dry Year
Multi-Dry Year
All Year Types
Average and Single-Dry Year
Average and Multi-Dry Year
Single-Dry and Multi-Dry Year

NOTES:

6.9 Summary of Existing and Planned Sources of Water

> *CWC 10631*
>
> *(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 10631(a).*
>
> *(4) (Provide 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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Provide the actual source and volume of water for the year 2015 in Table 6-8: Water Supplies – Actual. In Table 6-9: Water Supplies – Projected, provide the volume of water, by source, that is reasonably available based on historical deliveries for average years. The tables also provide a column for optional reporting of the volume of the agency's total water right or total capacity. For some agencies, these values will be identical. Water supply projections from wholesale agencies are a source for reasonably available supply data for retail agencies that receive water from wholesalers. The State Water Project (SWP) Delivery Capability Report 2015 (Report) is also a source of data that can be used to estimate future water supplies from the SWP. Note that the format and the content of the Report have changed from previous reports. Most significantly, the 2015 report does not provide projections of SWP deliveries; rather, it provides SWP delivery capability under several possible scenarios that address changes in climate,

regulations, and facilities. (See Report Final Appendices https://msb.water.ca.gov/documents/86800/c97c3baa-0189-4154-bf19-aa88392026ac)

TABLES

RUWMPs will use multiple versions of Tables 6-8 and 6-9; one for each participating agency.

Table 6-8

Water Supplies – Actual

Complete Table 6-8 with information on the actual water supplies for the year 2015.

Table 6-8 Retail: Water Supplies — Actual				
Water Supply *Drop down menu* *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality *Drop Down Potable or Raw*	Total Right or Safe Yield (optional)
Purchased or Imported Water	*Name of Supplying Agency*			
Supply from Storage				
Groundwater	*Name of Basin or Area*			
Surface water				
Recycled Water	*Name of Supplying Agency*		*Auto fill "Recycled"*	
Desalinated Water				
Stormwater Use				
Transfers	*Name of Supplying Agency*			
Exchanges	*Name of Supplying Agency*			
Other				
Total		*0*		*0*
NOTES:				

Table 6-8 Wholesale: Water Supplies — Actual				
Water Supply *Drop down menu* *May use each category multiple times.* ***These are the only water supply categories that will be recognized by the WUEdata online submittal tool***	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality *Drop Down* *Potable or Raw*	Total Right or Safe Yield (optional)
Purchased or Imported Water	*Name of Supplying Agency*			
Supply from Storage				
Groundwater	*Name of Basin or Area*			
Surface water				
Recycled Water	*Name of Supplying Agency*		*Auto fill "Recycled"*	
Desalinated Water				
Stormwater Use				
Transfers	*Name of Supplying Agency*			
Exchanges	*Name of Supplying Agency*			
Other				
Total		*0*		*0*
NOTES:				

Table 6-9

Projected groundwater supplies will be reported in Table 6-9 Water Supplies – Projected. When listing groundwater sources, basin names are to be taken from DWR Bulletin 118. If an agency has more than one source of groundwater, add additional rows to the tables.

Complete Table 6-9 with information on projected water supplies. The projections will be based on information that is reasonably available to the supplier, including, but not limited to, historical use records.

Note: For purposes of the UWMP, water conservation is not classified as a source of water but should be reflected as a decrease in demand, as described in Chapter 4.

Table 6-9 Retail: Water Supplies — Projected

Water Supply *Drop down menu* *May use each category multiple times.* *These are the only water supply categories that will be recognized by the WUEdata online submittal tool*	Additional Detail on Water Supply	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	*Name of Supplying Agency*										
Supply from Storage											
Groundwater	*Name of Basin or Area*										
Surface water											
Recycled Water	*Name of Supplying Agency*										
Desalinated Water											
Stormwater Use											
Transfers	*Name of Supplying Agency*										
Exchanges	*Name of Supplying Agency*										
Other											
Total		*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

NOTES:

Table 6-9 Wholesale: Water Supplies — Projected

Water Supply *Drop down menu* *May use each category multiple times.* *These are the only water supply categories that will be recognized by the WUEdata online submittal tool*	Additional Detail on Water Supply	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	*Name of Supplying Agency*										
Supply from Storage											
Groundwater	*Name of Basin or Area*										
Surface water											
Recycled Water	*Name of Supplying Agency*										
Desalinated Water											
Stormwater Use											
Transfers	*Name of Supplying Agency*										
Exchanges	*Name of Supplying Agency*										
Other											
Total		0	0	0	0	0	0	0	0	0	0
NOTES:											

6.10 Climate Change Impacts to Supply

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

A discussion of climate change impacts to an agency's water supply is not required by the CWC.

Recommended

DWR recommends that water agencies complete the IRWM Climate Change Vulnerability Assessment (Appendix I) and include in this chapter a narrative summary of "Section II Water Supply".

Chapter 7
Water Supply Reliability Assessment

Assessment of water supply reliability is complex and dependent upon a number of factors, such as the number of water sources, regulatory and legal constraints, climate change, and expected growth, among others. Water agencies are to make their best determination of the reliability of their water supply(ies) based upon what is known by the agency at the time the 2015 UWMP is prepared.

This chapter of the Guidebook provides guidance for describing the long term reliability of an urban water supplier's water supplies. Shorter term reliability planning that may require immediate action, such as drought or a catastrophic supply interruption, is addressed in Chapter 8, Water Shortage Contingency Planning.

Specific guidance an urban water supplier may consider in preparing this part of a UWMP includes:

- DWR's State Water Project Delivery Capability Report 2015 https://msb.water.ca.gov/documents/86800/c97c3baa-0189-4154-bf19-aa88392026ac

Weather information from The National Weather Service http://www.nws.noaa.gov/

- Runoff data from:
    - DWR http://cdec.water.ca.gov/
    - US Geological Survey //http://waterdata.usgs.gov/ca.nwis/sw
    - Operators of local dams

The following subsections are included in this chapter:

7.1 Constraints on Water Sources

7.2 Reliability by Type of Year

7.3 Supply and Demand Assessment

7.4 Regional Supply Reliability

7.1 Constraints on Water Sources

CWC 10631
(c)(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.

CWC 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.

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Provide, to the extent practicable, a description of any constraints on the agency's water supply, such as inconsistent availability or water quality issues, that have been identified by the water agency. Also include the management strategies that have been, or will be, employed to address the constraint. This narrative description is critical to explaining the degree and probability of any constraint to a water source.

Agencies that are both wholesalers and retailers should clearly identify if a particular constraint is related to their wholesale or retail operation.

The narrative will include:

A description of any particular circumstances that would make a source inconsistent; for example, a legal, environmental or climatic factor. This estimation of inconsistent sources is determined by the water agency, is based on the information known by the water agency at the time the 2015 UWMP is prepared, and projects to the foreseeable future;

Known future constraints on water supplies, such as declining groundwater levels, sea level rise, or diminishing snow pack;

A description of the quality of source water and how the water quality may affect water management strategies and/or supply reliability for the water agency. This estimation is determined by the water agency based on the information reasonably available at the time the 2015 UWMP is prepared;

Planned actions and water management strategies to address noted vulnerabilities and inconsistencies.

A description of plans to supplement or replace these sources with alternative sources or water demand management measures, to the extent practicable.

If there is another section within the UWMP that describes a constraint on a particular water source and/or plans to supplement this source, there is no need to repeat this information in this section. Refer the reader to the other sections within the UWMP that provide these details.

Recommended

Agencies may choose to include the most recent Consumer Confidence Report for water supplies as an appendix.

Maps, charts, graphs, or other visual tools are recommended when they can illustrate a water quality issue.

Include a summary of the water quality information from such documents as the Climate Change Vulnerability Assessment, Groundwater Management Plans, Salt and Nutrient Plans, and other relevant documents, as applicable.

7.2 Reliability by Type of Year

CWC 10631
(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.

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Describe the historic reliability of the water supply and any vulnerability to seasonal or climatic shortage, to the extent practicable.

Complete Table 7-1: Bases of Water Year Data. This table lists the years that the agency identifies as their historical average, single driest year, and driest multi-year period. These years are known as the “Base Years”. In the “Base Year” column of the table, the UWMP preparer will specify the years that represent each year type. Historic hydrologic data are commonly used to establish water year types.

In the “Available Supplies” column of Table 7-1, the preparer will specify the percentage and/or volume of water supply expected if there were to be a repeat of the hydrology from that type of year.

Percentage - The percentage of an average year water supply that would be available if the dry year hydrology were repeated.

Volume - The volume of water that would be available from all sources if the dry year hydrology were to occur again.

Recommended

Provide the source, or describe the method used, to estimate water reliability and to determine which years represent the agency's average, single-dry and multiple-dry years.

7.2.1 Types of Years

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

7.2.1.1 Average Year

A year, or an averaged range of years, that most closely represents the ~~median~~ average water supply available to the agency. The UWMP Act uses the term "normal" conditions. Within this guidebook the terms "normal" and "average" are used interchangeably.

7.2.1.2 Single-dry year

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

7.2.1.3 Multiple-dry year period

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

7.2.1.4 Sources for Water Data

For State Water Project contractors, information on water supply capacity of the SWP under several scenarios is available in the SWP Delivery Capability Report 2015.

Weather information is available at:

The National Weather Service website http://www.nws.noaa.gov/

California Irrigation Management Information Systems (CIMIS) http://www.cimis.water.ca.gov/

Runoff data is available at:

DWR http://cdec.water.ca.gov/

US Geological Survey http://waterdata.usgs.gov/ca/nwis/sw

Operators of local dams

Groundwater information is available at:

State of California Sustainable Groundwater Management website http://groundwater.ca.gov/cagroundwater/index.cfm

California Statewide Groundwater Elevation Monitoring (CASGEM)
http://www.water.ca.gov/groundwater/casgem/

7.2.2 Agencies with Multiple Sources of Water

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Many agencies have multiple water sources and each may have a different hydrology, resulting in different base years for each source. For example, an imported water source may have experienced its single driest year in the same year that a local surface water source experienced a normal year. Reporting of different base years for multiple water sources in Tables 7-1~~, 7-2, 7-3, and 7-4~~ may be done ~~by either providing aggregated information for all sources, or by individual water source. If an agency chooses to report the bases by individual water source,~~ by including multiple versions of Table 7-1. ~~additional tables may be included in the UWMP.~~

TABLES

Table 7-1: Bases of Water Year Data

RUWMPs will use multiple version of Table 7-1; one for each participating agency.

Tables 7-1 Retail and Wholesale have been updated in the Final Draft and Final Draft

Table 7-1 Retail: Basis of Water Year Data			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal or water year, for example, water year 1999-2000, use 2000*	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☐ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year			100%
Single-Dry Year			
Multiple-Dry Years 1st Year			
Multiple-Dry Years 2nd Year			
Multiple-Dry Years 3rd Year			
Multiple-Dry Years 4th Year *Optional*			
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			
Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			

Table 7-1 Wholesale: Basis of Water Year Data			
Year Type	**Base Year** *If not using a calendar year, type in the last year of the fiscal or water year, for example, water year 1999-2000, use 2000*	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☐ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year			100%
Single-Dry Year			
Multiple-Dry Years 1st Year			
Multiple-Dry Years 2nd Year			
Multiple-Dry Years 3rd Year			
Multiple-Dry Years 4th Year *Optional*			
Multiple-Dry Years 5th Year *Optional*			
Multiple-Dry Years 6th Year *Optional*			
Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.			

7.3 Supply and Demand Assessment

CWC 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.

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Provide the water supplier's expected water supply reliability for normal (average), single-dry year, and multiple-dry years for 2020, 2025, 2030 and 2035.

Water agencies are to make the best determination of the reliability of their water supply(ies)

based upon what information is reasonably available at the time the 2015 UWMP is prepared.

The water service reliability assessment shall be based upon the agency's compiled information regarding the service area, water sources, water supply reliability, and water demand as described in CWC Section 10631, including available data from State, regional or local agency population projections within the service area of the urban water supplier.

Include a brief narrative describing the information and process used to develop the supply and demand reliability assessment.

Recommended

If Tables 7-2, 7-3, or 7-4 show a surplus or a shortage when comparing projected supply and demand, DWR recommends that the UWMP preparer include a discussion of management actions that the agency may take in response to the surplus or shortage.

Some factors to consider in the assessment include the potential for acquiring supplemental water supplies, potential for increased irrigation demand because of low rainfall, expected demand reduction due to increased implementation of demand management measures, implementation of drought stages, savings from codes and standards, and increased drought messaging.

TABLES

RUWMPs will use multiple versions of Tables 7-2, 7-3, and 7-4; one for each participating agency.

Tables 7-2, 7-3, and 7-4

Include a quantification of supply and demand for the various types of years using Table 7-2: Normal Year Supply and Demand Comparison, Table 7-3: Single Dry Year Supply and Demand Comparison, and Table 7-4: Multiple Dry Years Supply and Demand Comparison.

Table 7-2

Table 7-2 records the data for a normal year. These values will already have been entered into Table 4-2 (Demand) and Table 6-8 (Supply) and will be copied to this table. This will be done manually in the Excel spreadsheets and will be automated in the WUEdata online submittal tool.

Tables 7-3 and 7-4

The UWMP preparer will enter the estimated dry and multiple dry water year supplies and demands for the 20 year planning horizon.

Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill fm Table 6-9)*	0	0	0	0	0
Demand totals *(autofill fm Table 4-3)*	0	0	0	0	0
Difference	*0*	*0*	*0*	*0*	*0*
NOTES:					

Table 7-2 Wholesale: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill fm Table 6-9)*	0	0	0	0	0
Demand totals *(autofill fm Table 4-3)*	0	0	0	0	0
Difference	*0*	*0*	*0*	*0*	*0*
NOTES:					

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals					
Demand totals					
Difference	*0*	*0*	*0*	*0*	*0*
NOTES:					

Table 7-3 Wholesale: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals					
Demand totals					
Difference	*0*	*0*	*0*	*0*	*0*
NOTES:					

Tables 7-4 Retail and Wholesale have been updated in the Final Draft

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Second year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Third year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fourth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fifth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
NOTES:						

Table 7-4 Wholesale: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Second year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Third year	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fourth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Fifth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
Sixth year *(optional)*	Supply totals					
	Demand totals					
	Difference	0	0	0	0	0
NOTES:						

7.4 Regional Supply Reliability

> *CWC 10620*
> *(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Provide a summary of the water management tools and options that are being implemented, or are planned for implementation, that maximize the use of local water resources and minimize the need to import water from other regions. For example, this description may include actions such as increased implementation of demand management measures, increased use of recycled water, enhanced groundwater management, or improvements in regional water management and coordination.

Recommended

Water suppliers may quantify increased regional supply reliability by completing the optional tables in Appendix P. These optional tables may be completed for an individual agency, whether retail or wholesale, or may be completed for a region.

Chapter 8
Water Shortage Contingency Planning

Water shortage contingency planning is a strategic planning process to prepare for and respond to water shortages. Good planning and preparation can help agencies maintain reliable supplies and reduce the impacts of supply interruptions.

This chapter provides guidance for describing the water shortage contingency planning of an urban water supplier. Guidance is included for reporting the staged response to a water shortage, such as a drought, that occurs over a period of time, as well catastrophic supply interruptions which occur suddenly.

A water shortage contingency plan (WSCP) is a document that can be created separately from the UWMP and amended as needed without amending the corresponding UWMP. However, the most current version of the WSCP must be included as part of the UWMP when the UWMP is submitted to DWR.

Specific guidance for consideration in preparing this part of a UWMP includes:

DWR Urban Drought Guidebook (2008 Edition) – This publication provides extensive guidance on water shortage contingency planning for urban water suppliers. http://www.water.ca.gov/pubs/planning/urban_drought_guidebook/urban_drought_guidebook_2008.pdf

DWR California Drought Contingency Plan (2010) http://www.water.ca.gov/waterconditions/docs/Final_CA_Drought_Contingency_Plan-11-18-2010a.pdf

California's Most Significant Droughts: Comparing Historical and Recent Conditions, DWR 2015 http://www.water.ca.gov/waterconditions/docs/California_Signficant_Droughts_2015_small.pdf

> *CWC 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.*

Water agencies are only required to submit information in a WSCP that is within their authority.

The following sections are included in this chapter:

8.1 Stages of Action

8.2 Prohibitions on End Uses

8.3 Penalties, Charges, Other Enforcement of Prohibitions

8.4 Consumption Reduction Methods by Agencies

8.5 Determining Water Shortage Reductions

8.6 Revenue and Expenditure Impacts

8.7 Resolution or Ordinance

8.8 Catastrophic Supply Interruption

8.9 Minimum Supply Next Three Years

8.1 Stages of Action

> *CWC 10632*
> *(a) (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 which are applicable to each stage.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The number of stages of action in a WSCP is at the discretion of the water supplier. Typically, water agencies will include between three and five stages of action in a WSCP. The stages reflect decreasing water supplies with increasing levels of prohibitions and consumption reduction methods. Agencies must include a stage that addresses a reduction of 50 percent in the water supply.

Indicate the specific water supply conditions applicable to each stage. Many agencies have more than one water source and will rely on the different sources as they are available. This situation provides a level of complexity that is not easily captured in a data table. Therefore, a narrative description is necessary. Some examples of water supply conditions include specific reservoir levels, levels of precipitation, groundwater availability, or water delivery estimates from other water agencies.

Recommended

DWR recommends that a narrative description of the stages include an outline of the process that will be used to implement the stages of action. For example, moving from one stage to another may be automatically triggered once water supplies have reached a certain percent of average supply, or, perhaps the governing board is required to make the determination that it is necessary to move to a different stage.

An agency may designate the first stage in their WSCP as a stage that is in force at all times and prohibits water waste.

Though not required by the CWC, DWR recommends that water agencies include a stage, or a plan of action to address severe water shortages of over a 50 percent reduction in water supply. This can be especially important in a series of dry years and particularly for water agencies that have only one source of supply. A description of this stage, or plan of action, may include a discussion of possible sources of additional water supply and a discussion of actions that may be implemented to address basic health and safety needs of the community.

TABLES

Table 8-1

Complete Table 8-1: Stages of WSCP. This table identifies the water supply conditions associated with each stage of action. In this table, water agencies will identify each stage by ~~either~~ the ~~percent~~ supply reduction~~, or~~ and the water supply condition. RUWMPs will use multiple versions of Table 8-1; one for each participating agency.

Tables 8-1 Retail and Wholesale have been updated in the Final Draft

Table 8-1 Retail **Stages of Water Shortage Contingency Plan**		
Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition (*Narrative description)*
Add additional rows as needed		
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES:		

Table 8-1 Wholesale was updated in the Final Version

Table 8-1 Wholesale Stages of Water ~~Storage~~ Shortage Contingency Plan		
Stage	Complete ~~One or~~ Both	
	~~Percent~~ Supply Reduction[1] ~~*Numerical value as a percentage*~~	Water Supply Condition (*Narrative description*)
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES:		

8.2 Prohibitions on End Uses

CWC 10632

(a) (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.

RETAIL ONLY

Agencies will make their own determination as to which prohibitions, and which stage for each prohibition, are most appropriate for their service area. Agencies may reference any document in this section that provides additional details of prohibitions and stages.

Recommended

Agencies may discuss the expected water savings at each stage based on the actions that will be taken. These expected savings may be estimated based on an agency's past experiences, or from studies and reports that have determined savings based on specific implementation.

TABLES

Table 8-2

Complete Table 8-2: Restrictions and Prohibitions on End Uses. RUWMPs will use multiple versions of Table 8-2; one for each participating agency. This table reports the prohibitions that the agency places on end uses in each stage. Categories of prohibitions are provided in Table 8-2 in a drop down menu. Agencies are not required to ~~implement~~ select any of these categories of prohibitions. The categories provided are a compilation of common categories that were reported in the 2010 UWMPs and are the only prohibitions that will be accepted by the online submittal tool. If an agency utilizes a prohibition that is not listed, this will be reported using "Other".

A column in Table 8-2 provides an optional field for the UWMP preparer to include additional detail about the restriction or prohibition category selected, if needed. This table also includes a column for reporting of any penalties, charges, or other enforcement (see Section 8.3) that may be associated with the listed prohibitions.

These categories are described, with examples, in the sections below.

Table 8-2 Retail Only: Restrictions and Prohibitions on End Uses			
Stage	**Restrictions and Prohibitions on End Users** *Drop down menu with categories* *These are the only categories that will be accepted by the WUEdata online submittal tool*	**Additional Explanation or Reference** *(optional)*	**Penalty, Charge, or Other Enforcement? Y/N**
	Landscape Irrigation		
	Restrict or prohibit runoff from landscape irrigation		
	Limit landscape irrigation to specific times		
	Limit landscape irrigation to specific days		
	Prohibit certain types of landscape irrigation		
	Prohibit all landscape irrigation		
	Other landscape restriction or prohibition		
	CII		
	Lodging establishment must offer opt out of linen service		
	Restaurants may only serve water upon request		
	Commercial kitchens required to use pre-rinse spray valves		
	Other CII restriction or prohibition		
	Water Features and Swimming Pools		
	Restrict water use for decorative water features, such as fountains		
	Require covers for pools and spas		
	Allow filling of swimming pools only when an appropriate cover is in place.		
	Other water feature or swimming pool restriction		
	Other		
	Customers must repair leaks, breaks, and malfunctions in a timely manner		
	Require automatic shut of hoses		
	Prohibit use of potable water for construction and dust control		
	Prohibit use of potable water for washing hard surfaces		
	Prohibit vehicle washing except at facilities using recycled or recirculating water		
	Other		
NOTES:			

8.2.1 Landscape Irrigation

RETAIL ONLY

The following categories of prohibitions on landscape irrigation are provided in a drop down menu in Table 8.2. The section below includes examples of restrictions or prohibitions that may fall within these categories. Agencies are not required to select ~~implement~~ any of these categories of prohibitions. Note that "Other landscape restriction or prohibition" is a category that will be used to include prohibitions that do not fall into the listed categories.

Restrict or prohibit runoff from landscape irrigation - Examples include: Irrigation runoff is to be prevented; Excessive irrigation runoff is prohibited; Irrigation runoff is prohibited.

Limit landscape irrigation to specific times - Examples include: Landscape irrigation is limited to between the hours of 9:00pm and 6:00am; Landscape irrigation is limited to eight minutes per day duration.

Limit landscape irrigation to specific days - Examples include: Even numbered addresses are allowed to water only on Tuesday, Thursday, and Saturday; Landscape irrigation is allowed only two days per week; Landscape irrigation is allowed only one day per week.

Prohibit certain types of landscape irrigation - Examples include: The use of sprinkler irrigation is prohibited; Irrigation of turf is prohibited, except with recycled water; Only irrigation of trees and shrubs is allowed.

Prohibit all landscape irrigation - Examples include: All landscape irrigation using potable water is prohibited: All landscape irrigation is prohibited.

Other landscape restriction or prohibition - Examples include: Any other landscape restriction or prohibition utilized by the agency.

Recommended

Key savings are to be found in restrictions and prohibitions on irrigation of landscape, particularly turf. Water agencies are encouraged to include measures that limit turf and other landscape irrigation.

8.2.2 Commercial, Industrial, and Institutional (CII)

RETAIL ONLY

The following categories of prohibitions on CII are provided in a drop down menu in Table 8.2. The section below includes examples of restrictions or prohibitions that may fall within these categories. Agencies are not required to ~~implement~~select any of these categories of prohibitions. Note that "Other CII restriction or prohibition" is a category that will be used to include prohibitions that do not fall into the listed categories.

- Lodging establishments must offer opt out of linen service – Examples include: Lodging establishments are required to place notices in each room that inform the guest that they may opt out of linen service.
- Restaurants may only serve water upon request – Examples include: Restaurants may not serve water to customers unless requested.
- Commercial kitchens are required to use pre-rinse spray valves – Examples include: Any commercial kitchen is required to use a pre-rinse spray valve as part of their dish washing operation.
- Other CII restriction or prohibition – Examples include: Any other CII restriction or prohibition selected by the agency that does not fall into the categories listed above.

8.2.3 Water Features and Swimming Pools

The following categories of prohibitions on water features and swimming pools are provided in a drop down menu in Table 8.2. The section below includes examples of restrictions or prohibitions that may fall within these categories. Agencies are not required to ~~implement~~select any of these categories of prohibitions. Note that "Other water feature or swimming pool restriction" is also a category to include prohibitions that do not fall into the listed categories.

- Restrict water use for decorative water features, such as fountains – Examples include: Decorative water features may only be operated if they use recirculating water; Decorative water features shall not be allowed to operate.
- Require covers for pools and spas – Examples include: Every swimming pool and spa is required to cover the surface of the pool or spa with a cover that reduces evaporation during hours that the pool or spa is not in use; Allow filling of swimming pools only when an appropriate pool cover is in place.
- Other water feature or swimming pool restriction – Examples include: Any other restriction or prohibition selected by the agency for reducing water use in water features or swimming pools.

8.2.4 Defining Water Features

CWC 10632

(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.

Health and Safety Code Section 115921

As used in this article the following terms have the following meanings:

(a) "Swimming pool" or "pool" means any structure intended for swimming or recreational bathing that contains water over 18 inches deep. "Swimming pool" includes in-ground and aboveground structures and includes, but is not limited to, hot tubs, spas, portable spas, and non-portable wading pools.

RETAIL ONLY

If an agency includes a limitation on, or prohibition of, water use for water features, this prohibition or limitation is limited to decorative water features only and does not apply to swimming pools or spas, which must be listed separately.

Agencies that wish to include limitations on pools or spas must specifically list those limitations separately from limitations on water features.

Recommended

Agencies may provide terminology in their WSCP that distinguishes water features from swimming pools, for example, “decorative water features” and “recreational water features.”

8.2.5 Other

The following categories of other prohibitions or restrictions are provided in a drop down menu in Table 8.2. The section below includes examples of restrictions or prohibitions that may fall within these categories. Agencies are not required to ~~implement~~ select any of these categories of prohibitions. Note that “Other” is a category that will be used to include prohibitions that do not fall into the listed categories.

- Customers must repair leaks, breaks, and malfunctions in a timely manner – Examples include: Broken or malfunctioning sprinkler heads must be repaired within 48 hours after the customer receives a notification from the water agency; All leaks or breaks must be repaired by the customer within 48 hours of receiving a notification from the water agency.
- Require hoses to have automatic shut off nozzles – Examples include: Hoses may only be operated out of doors if they are equipped with an automatic shut off nozzle.
- Prohibit use of potable water for construction and dust control – Examples include: Potable water may not be used for construction or dust control.
- Prohibit use of potable water for washing hard surfaces – Examples include: Potable water may not be used to wash hard surfaces, such as driveways or sidewalks, except in cases of health and safety.
- Prohibit vehicle washing except at facilities using recycled or recirculating water – Examples include: Vehicles may not be washed except at a facility that uses recycled or recirculating water.
- Other – Examples include: Any other restriction or prohibition selected by the water agency to reduce water consumption that does not fall into the categories above.

8.3 Penalties, Charges, Other Enforcement of Prohibitions

> *CWC 10632*
> *(a) (6) Penalties or charges for excessive use, where applicable.*

RETAIL ONLY

Include a narrative description of the supplier's method(s) for enforcing the prohibitions listed in Table 8-2, where applicable. For example, an agency may issue a warning for violating a prohibition followed by increasing levels of fines for repeat offenses.

If an agency utilizes their rate structure as an enforcement mechanism, they may provide detailed information of their drought and/or conservation rate structures in an appendix and summarize the key points in the main body of the UWMP in the following sections, as applicable:

Section 8.3 Penalties, Charges, and Other Enforcement

Section 8.6 Impacts to Revenue and Expenditure

Section 9.2.3 Conservation Rate Structures

Agencies will indicate whether or not the water agency has a penalty, charge, or other mechanism for enforcing the stated limitation or prohibition in Table 8.2**.**

8.4 Consumption Reduction Methods

> *CWC 10632*
> *(a)(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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Consumption reduction methods are actions that are taken by the water agency to reduce ~~their consumption~~ water demand within the service area , whereas prohibitions ~~on end uses~~, addressed in Section 8.2, ~~restricts end uses that are the responsibility of end users~~ limit specific uses of water.

Agencies will make their own determination as to which consumption reduction methods, and which stages for employing the methods, are most appropriate for their service area. Agencies

may reference any document in this section that provides additional details of methods and stages in order to capture specific language.

Recommended

The agency may discuss the expected water savings at each stage based on the actions that will be taken. These expected savings may be estimated based on an agency's past experiences, or from studies and reports that have determined savings based on implementation of specific consumption reduction methods.

8.4.1 Categories of Consumption Reduction Methods

RETAIL ONLY

The following categories of consumption reduction methods are provided in a drop down menu in Table 8.3. These are the only consumption reduction methods that will be accepted by the WUEdata online submittal tool. The section below includes examples of consumption reduction methods that fall within these categories. Agencies are not required to implement any of these categories of consumption reduction methods. Note that "Other" is a category that will be used to include consumption reduction methods that do not fall into the listed categories.

- Expand Public Information Campaign – Examples include: Begin or enlarge media campaign; Create bill insert with conservation information; Write articles for local newspaper; Conduct water efficiency workshops for different customer sectors.
- Improve Customer Billing – Examples include: Increase billing frequency; Change bill format to report consumption in gallons per capita per day; Add information to the bill that compares the customer's use to the water use of similar customers.
- Increase Frequency of Meter Reading – Examples include: Change from bi-monthly to monthly meter reading; Employ Advance Metering Infrastructure (AMI) so that meters are read in real time.
- Offer Water Use Surveys – Examples include: Actively reach out to high water users to offer water use surveys; Expand water use survey program to include new sectors.
- Provide Rebates or Giveaways of Plumbing Fixtures and Devices – Examples include: Implement new (toilet, clothes washer, etc.) rebate programs; Implement new (shower head, aerator, etc.) giveaway programs; Expand rebate programs by including new types of rebates; Offer a higher dollar value for each rebate; Expand funding for existing rebate or giveaway programs.
- Provide Rebates for Landscape Irrigation Efficiency – Examples include: Implement a new landscape efficiency rebate program that provides rebates for landscape conversion, irrigation controllers, sprinkler heads, etc.; Expand an existing rebate program that provides rebates for landscape conversion, irrigation controllers, sprinkler heads, etc.
- Decrease Line Flushing – Examples include: Decrease the length of time for each line flushing; Decrease the frequency of line flushing.

- Reduce System Water Loss – Examples include: Implement a water audit program to identify leaks in the water system; Expand the leak repair program to control system losses. Refer to Chapter 4, Section 4.3 for required distribution system audit protocols.
- Increase Water Waste Patrols – Examples include: Implement a Water Waste Patrol program; Increase staffing for Water Waste Patrol; Increase authority of Water Waste Patrol.
- Moratorium or Net Zero Demand Increase on New Connections – Examples include: The water supplier will only approve a new connection if the applicant can demonstrate a net zero demand increase for the new connection. ("Net Zero Demand Increase" requires that a project's water use is offset with conservation projects inside or outside of the project area); The water supplier does not approve new water service connections.
- Implement or Modify Drought Rate Structure or Surcharge – (see "Note ~~Below~~ on Drought Rate Structures or Surcharges" on the next page) Examples include: Implement a drought rate structure; Modify a drought rate structure; Implement a drought surcharge on all customers.
- Other – Any other consumption reduction method that the agency may take that does not fall into the categories listed above.

Note on Drought Rate Structures or Surcharges

A drought rate structure or surcharge that is implemented in times of water shortage differs from a conservation rate structure, which is in place at all times. When considering a new rate structure, some agencies have embedded a drought rate structure within their proposed conservation rate structure. This avoids the difficulty and delay of instituting a drought structure during an emergency and streamlines the public process so that all rate structures are reviewed together.

Appendix N provides a case study of a retail water agency's experience changing to a new rate structure which includes a drought rate structure embedded in the WSCP.

Agencies may provide detailed information of their drought and/or conservation rate structures in an appendix and summarize the key points in the main body of the UWMP where applicable.

WHOLESALE ONLY

The water shortage contingency analysis for wholesale agencies must describe the agency's plan for reducing consumption, or, perhaps more aptly for a wholesaler, the agency's strategy for supply management.

Recommended

If the wholesale agency has a study or report addressing planned consumption reduction/ supply management by the agency, this may be briefly summarized in this section and either included as an attachment to the UWMP or referenced within the UWMP.

TABLES

Table 8-3: Stages of WSCP – Consumption Reduction Methods

RUWMPs will use multiple versions of Table 8-3; one for each participating agency.

Table 8-3 Retail Only: Stages of WSCP - Consumption Reduction Methods		
Stage	**Consumption Reduction Methods by Water Supplier** *Drop down menu with categories These are the only categories that will be accepted by the WUEdata online submittal tool*	**Additional Explanation or Reference** *(optional)*
	Expand Public Information Campaign	
	Improve Customer Billing	
	Increase Frequency of Meter Reading	
	Offer Water Use Surveys	
	Provide Rebates on Plumbing Fixtures and Devices	
	Provide Rebates for Landscape Irrigation Efficiency	
	Provide Rebates for Turf Replacement	
	Decrease Line Flushing	
	Reduce System Water Loss	
	Increase Water Waste Patrols	
	Moratorium or Net Zero Demand Increase on New Connections	
	Implement or Modify Drought Rate Structure or Surcharge	
	Other	
NOTES:		

8.5 Determining Water Shortage Reductions

> *CWC 10632*
> *(a)(9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Discuss how the water supplier will measure and determine actual water savings made from implementing the stages of the water shortage contingency plan.

This requirement may be addressed by relying upon water meters to record the production and consumption of water. UWMP preparers will state that fact in the UWMP, if applicable. If the water agency is not metered, a description of the method used to measure consumption reduction must be included in the UWMP. Consumption reduction may be measured by tracking any decrease in water production.

8.6 Revenue and Expenditure Impacts

> *CWC 10632*
> *(a)(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*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Discuss the expected change in revenue and expenditure to the water agency as a result of implementing the WSCP. Depending on their rate structures, some agencies may experience a decrease in revenue with reduced water sales. Expenditures may also be expected to increase during water shortages as a result of increased outreach to customers about water conservation, purchases of more expensive water supplies, and possibly, developing and/or implementing a drought rate structure.

8.6.1 Drought Rate Structures and Surcharges

RETAIL ONLY

Well-designed drought rate structures can reduce the potential financial effects of water shortages and enable the supplier to recover its purchase, treatment, and delivery costs, as well as the additional costs related to the water shortage response program.

If an agency includes a discussion of rate structures as part of the revenue and expenditure discussion, it may provide detailed information of its drought and/or conservation rate structures in an appendix and summarize the key points in the main body of the UWMP in the following sections, as applicable:

- Section 8.3 Penalties, Charges, and Other Enforcement
- Section 8.6 Revenue and Expenditure Impacts
- Section 9.2.3 Conservation Rate Structures

Drought surcharges are added to customers' water bills to ensure sufficient revenue to operate, manage, and maintain infrastructure and services even when volumetric sales are low. If an agency includes a drought surcharge as part of its WSCP, UWMP preparers will provide a narrative description of the surcharge.

8.6.2 Use of Financial Reserves

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Discuss the agency's planned use of financial reserves to address decreased water sales during a water shortage (if applicable).

8.6.3 Other Measures

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Include a discussion of any other proposed measures that the water agency may take to overcome impacts to revenues and expenditures. For example, some agencies may consider postponement of capital improvements or other reductions in agency ~~staff~~costs.

8.7 Resolution or Ordinance

> *CWC 10632*
> *(a)(8) A draft water shortage contingency resolution or ordinance.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Water agencies are required to develop a water shortage contingency resolution or ordinance for submittal with the UWMP. Include a draft or approved/adopted water shortage contingency resolution or ordinance in the UWMP.

It is at the discretion of the agency to choose to adopt a water shortage contingency resolution or ordinance in advance of a water shortage, or to hold it as a draft to be adopted when needed. The WSCP and the resolution or ordinance may be adopted with the UWMP or may be adopted separately. The WSCP is considered a stand-alone document; if the WSCP is updated after the

UWMP has been submitted to DWR, it is not necessary to amend the UWMP. The most recent WSCP (draft or adopted) must be included when a UWMP is adopted by the governing body of the water agency.

8.8 Catastrophic Supply Interruption

> *CWC 10632*
> *(a)(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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Identify what actions will be taken by a water supplier if there is a catastrophic reduction in water supplies. Catastrophic supply interruptions differ from the staged drought responses addressed earlier in this chapter in that catastrophic interruptions occur suddenly and can immediately jeopardize a large portion, or all, of an agency's water supply.

The CWC requires that agencies specifically address catastrophic interruptions due to a regional power outage or an earthquake.

Some actions that agencies may have in place include system interconnections with other suppliers in the region, participation in comprehensive regional disaster plans, or participation in the Water/Wastewater Agency Response Network (WARN). WARN is a network of agencies that supports and promotes statewide emergency preparedness, disaster response, and mutual assistance for public and private water and wastewater utilities. More information on WARN can be found at their website: www.calwarn.org.

To address catastrophic interruptions, an agency may summarize language from its Emergency Response Plan (ERP), as required by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188). Section 1433(b) requires community water systems serving populations greater than 3,300 to either prepare or revise an ERP that incorporates the results of its Vulnerability Assessment, found in Section 1433(a).

8.9 Minimum Supply Next Three Years

> *CWC 10632*
> *(a)(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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Water agencies must provide an estimate of the minimum water supply available during each of the next three water years, 2016, 2017, and 2018. This will reflect the combined availability of all water sources and will assume the same hydrology as was noted during the historical multiple-dry year period. (Chapter 7, Section 7.3).

The estimate of the minimum supply for the next three years is based on data that is reasonably available to the water supplier at the time the 2015 UWMP is written.

TABLES

Table 8-4

Complete Table 8-4: Minimum Supply Next Three Years. RUWMPs will use multiple versions of Table 8-4; one for each participating agency.

Table 8-4 Retail: Minimum Supply Next Three Years			
	2016	**2017**	**2018**
Available Water Supply			
NOTES:			

Table 8-4 Wholesale: Minimum Supply Next Three Years			
	2016	**2017**	**2018**
Available Water Supply			
NOTES:			

Chapter 9
Demand Management Measures

The goal of the Demand Management Measures (DMM) section in a UWMP is to provide a comprehensive description of the water conservation programs that a supplier has implemented, is currently implementing, and plans to implement in order to meet its urban water use reduction targets. This chapter provides the opportunity for water suppliers to communicate their efforts to promote conservation and to reduce the demand on the water supply.

The section of the CWC addressing DMMs was significantly modified in 2014, based on recommendations from the Independent Technical Panel (ITP) to the legislature. The ITP was formed by DWR to provide information and recommendations to DWR and the Legislature on new demand management measures, technologies and approaches to water use efficiency (see http://www.water.ca.gov/wateruseefficiency/sb7/committees/urban/u2/). In its report to the Legislature, the ITP recommended that the UWMP Act should be amended to simplify, clarify, and update the demand management measure reporting requirements. The ITP recommended, and the legislature enacted, streamlining the retail agency requirements from 14 specific measures to six more general requirements plus an “other” category. For wholesalers, the requirements changed to three specific measures, an “other” category, as well as a requirement for a narrative description of asset management and wholesale supplier assistance programs.

The following organization is not required. Agencies may use other types of organization, such as organizing by type of DMM.

This chapter contains the following sections:

9.1 Demand Management Measures for Wholesale Agencies

9.2 Demand Management Measures for Retail Agencies

9.3 Implementation over the Past Five Years

9.4 Planned Implementation to Achieve Water Use Targets

9.5 Members of the California Urban Water Conservation Council

9.1 Demand Management Measures for Wholesale Agencies

CWC 10631

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

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

(ii) Metering.

(iv) Public education and outreach.

(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, (provide) 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.

WHOLESALE ONLY

Wholesale agencies must provide narrative descriptions of four specific measures, metering, public education and outreach, water conservation program coordination and staffing support, and other demand management measures, as well as a narrative of asset management and wholesale supplier assistance programs.

Additionally, wholesale suppliers are required to address their DMM implementation over the past five years. Guidance to address this requirement is described in Section 9.3.

9.1.1 Metering

WHOLESALE ONLY

A wholesale agency that is fully metered should state that fact in the UWMP. If an agency is not yet fully metered, it should discuss its plans for becoming fully metered.

Recommended

Agencies are encouraged to include a discussion of their programs for meter replacement and/or calibration.

9.1.2 Public education and outreach

WHOLESALE ONLY

Describe the public education and outreach efforts by the wholesale water agency, if any. This may include actions that are taken to assist the retail agencies that are served by the wholesaler.

Examples include:

- Mass media campaigns encouraging conservation;
- School education programs;
- Information booths at fairs and public events;
- Newsletters;
- Informative websites, online tools, or social media;
- Newspaper articles;
- Other activities not listed here.

9.1.3 Water conservation program coordination and staffing support

WHOLESALE ONLY

Describe the activities of the wholesale supplier's water conservation coordinator, if any.

Recommended

The description may include the name and contact information of the water conservation coordinator(s), the number of staff in the program and a description of program funding.

9.1.4 Other demand management measures

WHOLESALE ONLY

This category provides wholesale agencies the ability to report additional or innovative approaches to demand management that do not belong to the categories listed above.

If a wholesale agency includes a discussion of rate structures or supply management as part of its demand management measure discussion, it may provide detailed information of the rate structure in an appendix and summarize the key points in the main body of the UWMP.

9.1.5 Asset management

WHOLESALE ONLY

Provide a narrative description of the wholesale supplier's distribution system asset management program, including distribution system maintenance and improvements. Asset management programs will vary greatly from one supplier to another, from responding to

needed repairs as they arise, to sophisticated GIS mapping with a structured improvement and repair program.

Recommended

Provide, or reference, any appropriate documentation related to the agency's asset management program.

9.1.6 Wholesale supplier assistance programs

WHOLESALE ONLY

Provide a description of the wholesale supplier's assistance programs to the retail water agencies that it serves. This may include assistance with rebate programs, public education and outreach on water conservation, or other efforts to reduce water demand. It is not necessary to duplicate descriptions that may have been provided in Section 9.1.2 Public Education and Outreach. UWMP preparers may simply provide a reference to that section, as applicable.

9.2 Demand Management Measures for Retail Agencies

CWC 10631

(f)(A) …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.

RETAIL ONLY

Describe the planned efforts of the retail water agency in implementing each of the following DMM categories to meet water use targets. Agencies are also required to report these efforts over the previous five years. Guidance for this is provided in Section 9.3.

9.2.1 Water waste prevention ordinances

RETAIL ONLY

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

A water waste prevention ordinance is in place at all times and is not dependent upon a water shortage for implementation. However a water waste ordinance may include increasingly restrictive prohibitions that may be implemented in response to shortages.

If the water supplier has a water waste prevention ordinance in place, or another equivalent mechanism, include it as an attachment in the UWMP.

Recommended

Some agencies include a water waste prohibition in the first stage of their WSCP and this stage remains in place at all times.

9.2.2 Metering

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

RETAIL ONLY

An agency that is fully metered will state that fact in the UWMP. If an agency is not yet fully metered (the CWC requires full metering by 2025), it will discuss its plans for becoming fully metered in accordance with CWC 527.

Recommended

Agencies are encouraged to include a discussion of their programs for meter replacement and/or calibration.

Agencies may include a discussion of any significant sub-metering programs, especially landscape irrigation sub-metering, that they have implemented or plan to implement.

Agencies are also encouraged to include a discussion of any innovative metering programs, such as Advanced Metering Infrastructure (AMI), or Automatic Meter Reading (AMR) that are employed within their service area.

9.2.3 Conservation pricing

RETAIL ONLY

In this section, describe the pricing structure that is used by the water agency. A conservation pricing structure is always in place and is not dependent upon a water shortage for implementation, although a conservation rate structure could include drought rate structures. See Appendix N for an example of a conservation rate structure that includes a drought rate structure to be implemented as needed. Drought rate structures and surcharges are addressed in Chapter 8, Water Shortage Contingency Planning.

Conservation pricing sends a signal to customers regarding their water use. A common example of conservation pricing is a tiered rate structure, where efficient water use is billed at a low price and higher water use billed at progressively higher prices. Another example is the use of water budgets, wherein each customer is given a water budget and if that budget is exceeded, the customer must pay a penalty, or a higher water rate, for that portion of water that exceeds the water budget.

Agencies may provide detailed information of their drought and/or conservation rate structures in an appendix and summarize the key points in the main body of the UWMP in the following sections, as applicable:

- Section 8.4 Penalties, Charges, and Other Enforcement
- Section 8.6 Impacts to Revenue and Expenditure
- Section 9.2.3 Conservation Rate Structures

The UWMP preparer may use the language from the agency's California Urban Water Conservation Council (CUWCC) report, if applicable, when describing the agency's conservation rate structure.

9.2.4 Public education and outreach

RETAIL ONLY

Describe the public education and outreach efforts by the water agency.

This may include:

- Marketing of rebates and giveaways;
- Communicating water use via water bills (e.g., increased frequency of billing, an easy to understand bill format, or bills that compare a customer's water use to the water use of similar customers);
- Providing school education programs;

- Information booths at fairs and public events;
- Newsletters;
- Informative websites, online tools, or social media;
- Newspaper articles;
- Other activities not listed here.

9.2.5 Programs to assess and manage distribution system real loss

RETAIL ONLY

Describe the agency's programs to detect and repair distribution system leaks. A reference to the distribution system losses reported in Chapter 4 is appropriate to include here.

Recommended

An agency may also include a description of routine and planned system maintenance to prevent losses.

9.2.6 Water conservation program coordination and staffing support

RETAIL ONLY

Describe the activities of the water conservation program, if any.

Recommended

The description may include the name and contact information of the water conservation coordinator(s), the number of staff in the program and a description of program funding.

9.2.7 Other demand management measures

RETAIL ONLY

This category provides agencies the ability to report additional or innovative approaches to demand management that do not belong to any of the categories above. This may include rebate programs offered by the agency.

9.3 Implementation over the Past Five Years

> *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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Suppliers shall provide a narrative description addressing the nature and extent of each DMM implemented over the past five years, from 2010 through 2015. Each DMM listed in section 9.1 for wholesalers and 9.2 for retailers must be addressed.

Retail water suppliers should clearly describe those DMMs that are implemented by a wholesale agency on their behalf. This will avoid double counting DMM implementation.

- **Nature** – Describe the DMM program (e.g. the dollar value for individual toilet replacements, the process used to inform customers of a landscape water budget program, or the content of a school education program.)
- **Extent** – Quantify the implementation of the DMM (e.g., the number of customers that have used the toilet rebate program, the number of large landscape accounts that have been assigned a water budget, or the number of school presentations given by the agency).

9.4 Planned Implementation to Achieve Water Use Targets

> *CWC 10631*
> *(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:*
> *(1) (A) …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.*

RETAIL ONLY

Using the list of DMMs in Section 9.2, describe the DMMs that the agency plans to implement in order to achieve its water use targets (as described in CWC 10608.20 and Chapter 5 Baselines and Targets).

Recommended

Additional information, such as a description of the methods used to estimate the expected water savings from DMMs, or the agency's implementation plan for a particular DMM, may also be included.

9.5 Members of the California Urban Water Conservation Council

> *CWC 10631*
> *(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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

CUWCC members have the option of submitting their 2013–2014 Best Management Practice (BMP) annual reports in lieu of, or in addition to, describing the DMMs in their UWMP. The option of submitting the CUWCC BMP report in lieu of describing the DMMs is only available if the supplier is in full compliance with the CUWCC's Memorandum of Understanding (MOU). The submitted reports must include documentation from the CUWCC that the supplier has met the MOU coverage requirements and is in full compliance with the MOU.

Chapter 10
Plan Adoption, Submittal, and Implementation

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

This chapter includes the following sections:

10.1 Inclusion of all 2015 Data

10.2 Notice of Public Hearing

10.3 Public Hearing and Adoption

10.4 Plan Submittal

10.5 Public Availability

10.6 Amending an Adopted UWMP

10.1 Inclusion of All 2015 Data

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

2015 UWMPs must include the water use and planning data for the entire year of 2015. If an agency is reporting on a calendar year basis, the 2015 UWMP cannot be completed before the end of the calendar year 2015. If an agency is reporting on a fiscal year basis, they may complete their 2015 UWMP at the end of their fiscal year.

10.2 Notice of Public Hearing

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Water suppliers must hold a public hearing prior to adopting the Plan. The public hearing provides an opportunity for the public to provide input to the plan before it is adopted. The governing body shall consider all public input.

There are two audiences to be noticed for the public hearing; cities and counties, and the public.

10.2.1 Notice to Cities and Counties

> *CWC 10621*
> *(b) Every urban water supplier required to prepare a plan shall… at least 60 days prior to the public hearing on the plan … notify any city or county within which the supplier provides waters supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*
>
> *CWC 10642*
> *…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…*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The following subsections provide guidance for the two required notices to cities and counties.

10.2.1.1 60 Day Notification

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The CWC states that cities and counties must be notified that the supplier will be reviewing the UWMP and considering amendments to the Plan. This notice must be sent AT LEAST 60 days prior to the public hearing. (See also Section 2.5.3).

Recommended

In order to provide cities and counties ample opportunity to participate in the UWMP process, water agencies are encouraged to send this notification at the beginning of the UWMP planning process, well in advance of the required 60 day prior to the public hearing.

10.2.1.2 Notice of Public Hearing

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The water supplier shall provide notice of the time and place of the public hearing to any city or county within which the supplier provides water. This applies to both public and private water suppliers.

Recommended

The notices to the cities and counties should include the location where the 2015 UWMP can be viewed, the UWMP revision schedule, and contact information of the UWMP preparer.

Notification letters can be addressed to the City Manager, County Administrator, or other local contacts, as appropriate for the supplier's service area.

TABLES

Table 10-1

Complete table 10-1: Notification to cities and counties. RUWMPs will use multiple versions of Table 10-1; one for each participating agency.

Tables 10-1 Retail and Wholesale have been updated in the Final Draft

Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
	☐	☐
	☐	☐
	☐	☐
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
	☐	☐
	☐	☐
	☐	☐
NOTES:		

Table 10-1 Wholesale: Notification to Cities and Counties (select one)		
☐	Supplier has notified more than 10 cities or counties in accordance with CWC 10621 (b) and 10642. **Completion of the table below is not required. Provide a separate list of the cities and counties that were notified.**	
	Provide the page or location of this list in the UWMP.	
☐	Supplier has notified 10 or fewer cities or counties. **Complete the table below.**	
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
	☐	☐
	☐	☐
	☐	☐
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
	☐	☐
	☐	☐
	☐	☐
NOTES:		

10.2.2 Notice to the Public

CWC 10642

…Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection… 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…

Government Code 6066

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

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The public hearing must be noticed in a local newspaper as prescribed in Government Code 6066. This notice must include time and place of hearing, as well as the location where the plan is available for public inspection.

In order to verify that this notification has taken place, the UWMP shall include a copy of the public notice.

10.3 Public Hearing and Adoption

> *CWC 10642*
> *…Prior to adopting a plan, the urban water supplier…shall hold a public hearing thereon.*
>
> *CWC 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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The public hearing may take place at the same meeting as the adoption hearing of the governing board. If a water supplier chooses to combine these meetings, the agenda must include the public hearing as an agenda item.

RETAIL ONLY

As part of the public hearing, the retail supplier shall provide information on their baseline values, water use targets, and implementation plan required in the Water Conservation Act of 2009. This information is fully explained in Chapter 5, Baselines and Targets.

10.3.1 Adoption

> *CWC 10642*
> *…After the hearing, the plan shall be adopted as prepared or as modified after the hearing.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

The adoption hearing of the governing body may be combined with the public hearing; however the public hearing portion must take place before the adoption portion. This allows the governing body the opportunity to modify the UWMP in response to public input before adoption. Before submitting the UWMP to DWR, the governing body must formally adopt the Plan.

Water agencies shall include the adoption resolution in the UWMP. This may be included as an attachment to the WUMP or as a web address indicating where the adoption resolution can be found online.

10.4 Plan Submittal

> *CWC 10621*
> *(d) An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.*
>
> *CWC 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…*
>
> *CWC 10635*
> *(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.*

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

10.4.1 Submitting a UWMP to DWR

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

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

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

10.4.2 Electronic Data Submittal

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

DWR is in the process of developing an online submittal tool, WUEdata, which will be used for the 2015 UWMPs. The tool will accept complete UWMPs ~~in Word or PDF form~~, as well

~~submission of~~ tabular data from all the data tables. The WUE data online submittal tool is online at https://wuedata.water.ca.gov/secure/

The availability of the tool will be announced to the Guidebook Advisory Committee, the Urban Stakeholder Committee, DWR's UWMP list serve, the Water Plan ENews, and the posted on the DWR Urban Water Management webpage

http://www.dwr.water.ca.gov/urbanwatermanagement/uwmp2015.cfm

10.4.3 Submitting a UWMP to the California State Library

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

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

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

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

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

10.4.4 Submitting a UWMP to Cities and Counties

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

No later than 30 days after adoption, the water agency shall submit a copy of the adopted 2015 UWMP to any city or county to which the supplier provides water. This copy may be in an electronic format. This will also satisfy Water Code Section 10635(b).

10.5 Public Availability

> *CWC 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.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

Include a statement in the UWMP describing the availability of the adopted UWMP for public review during normal business hours. Examples of public availability include placing a copy of the UWMP at the front desk of the agency's office, or posting the UWMP on the agency's website for public viewing.

10.6 Amending an Adopted UWMP

> *CWC 10621*
> *(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).*
>
> *CWC 10644*
> *(a)(1)…Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.*

~~RETAIL AND WHOLESALE~~ ALL URBAN SUPPLIERS

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