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2015 Urban Water Management Plans

Guidebook for Urban Water Suppliers

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Guidebook Advisory Committee

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Abbreviations and Acronyms

AF – Acre-Foot

BMP – Best Management Practice

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)

GIS – Geographic Information System

GPCD – Gallons per Capita per Day

IRWM – Integrated Regional Water Management

NPDES - National Pollutant Discharge Elimination System

PWS – Public Water System

RWQCB - Regional Water Quality Control Board

SB – Senate Bill

SGMA - Sustainable Groundwater Management Act

SWRCB – State Water Resources Control Board

UWMP – Urban Water Management Plan

WDR – Waste Discharge Requirement

WRR – Water Recycling Requirement

WSCP – Water Shortage Contingency Plan

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*Water suppliers with **both wholesale and retail** operations are directed to Chapter 2, Section 2.1.1. This document provides guidance for all urban water suppliers; however, there is streamlined guidance for agencies that are exclusively or primarily wholesale urban water suppliers. (link to wholesale guidebook)*

Chapter 1
Introduction and Overview

1.1 Background and Purpose

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

Prior to the adoption of the Urban Water Management Planning Act (Appendix A), there were no specific requirements that water agencies conduct long-term resource planning. While many water agencies had conducted long-term water supply and resource planning prior to the Act, those who had 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) was facing dwindling supplies, even though water rationing had been successfully implemented. MMWD managers met with officials of other water districts and from 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 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 some water agencies may not have been prepared for prolonged drought or catastrophic events, and the Urban Water Management Planning 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 local knowledge, the ability to consider the unique circumstances of the individual agency, provide for participation by the local community, and tailor the planning to local conditions.

The Urban Water Management Planning Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the drought of 2007-2009, and as a result of the governor's call for a statewide 20% reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as SBX 7-7 (Appendix B). This Act required agencies to establish water use targets for 2015 and 2020 that would result in statewide savings of 20% by 2020.

The Urban Water Suppliers Guidebook has been developed by the California Department of Water Resources (DWR) to assist urban water suppliers in preparing Urban Water Management Plans (UWMPs or Plans). This guidance is intended to ensure the Plans will meet 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 better describe their agency and water management to the reader.

1.2 Urban Water Management Planning and the California Water Code

The following are summaries of CWC sections applicable to UWMPs. Urban water suppliers are advised to consult legal counsel prior to and during the development of their UWMPs, as they are solely responsible for ensuring that all CWC requirements and applicable laws have been met.

Urban Water Management Planning Act of 1983 *(Click for link to code in Appendix A)*

This legislation requires water agencies to develop UWMPs which provide a framework for long term water planning and provide a vehicle that informs the public how agencies are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future demands.

Comment [g1]: JSC suggests removing this language.

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
- Water shortage contingency planning

Water Conservation Bill of 2009 (SBX 7-7) *(Appendix B)*

RETAIL

The Water Conservation Bill of 2009 requires retail urban water suppliers to report in their UWMPs their Base Daily per Capita Water Use (Baseline GPCD), Urban Water Use Target, Interim Urban Water Use Target, and Compliance Daily per Capita Water Use. These terms are defined in the *Methodologies*, consistent with SBX7-7 requirements. Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SBX 7-7 in order to be eligible for State water grants or loans. 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% reduction goal by 2020.

Applicable Changes to the Water Code since 2010 UWMPs

See Appendix C for a detailed table of these changes. These changes will be highlighted in their related chapters.

- Demand Management Measures CWC Section 10631 (f) (1) and (2) – AB 2067
- Submittal Date – CWC Section 10621 (d) AB 2067
- Standardized Forms – CWC Section 10644 (a) (2) SB 1420
- Water Loss – CWC Section 10631 (e) (1) (J) and (e) (3) (A) and (B) SB 1420
- Voluntary reporting of passive savings CWC Section 10631 (e) (4) SB 1420
- Voluntary reporting of energy intensity CWC Section 10631.2 (a) and (b) (SB 1036
- Voluntary reporting of decreased reliance on the Delta- CCCR~~WC~~ Title 23 Division 6 Section 5003(c) (1) (C)

Comment [g2]: Awaiting guidance from DWR Management

1.2.1 Urban Water Management Plans in Relation to Other Planning Efforts

~~Urban Water Management Plans~~UWMPs provide information specific to water management by the urban water supplier. 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 they rely upon the information found in the other documents. In fact, existing code requires that cities and counties use the UWMP as a source document when writing or updating their general plans. DWR strongly encourages water suppliers to utilize other planning processes and documents when developing their UWMPs, and to share their UWMPs with other agencies.

1.2.2 Regional Planning

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

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

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

- more reliable water supplies
- increased regional self-reliance
- improved water quality
- better flood management
- increased economic stability
- restored and enhanced ecosystems
- reduced conflict over resources

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

Comment [g3]: From JSC - Has this term been defined or used previously? If not, recommend either defining or not capitalizing.

Section 2.2 and Appendix D provide additional guidance to water suppliers for developing regional plans and for cooperative reporting.

1.3 Standardized Forms, Tables, or Displays

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.

DWR, in collaboration with the Guidebook Advisory Committee, has developed standardized tables for the reporting and submittal of UWMP data. 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.

In submitting data required by the UWMP Act, water agencies are required to use the standardized tables in their UWMPs. However, water agencies may include the standardized tables in an appendix and present adapted versions of the standardized tables in the body of the Plan.

The Guidebook sections contain the applicable standardized tables in a PDF format for quick viewing, and active tables in the form of Excel spreadsheets in Appendix E.

RETAIL

Retail water suppliers are also required to complete additional tables that show the background calculations for compliance with the conservation targets, as specified in the Water Conservation Act of 2009.

DWR also requires that retail water agencies submit a GIS map of their service areas (see Chapter 5, Section 5.2.1 and Appendix E for details) in order to assess compliance with the Water Conservation Act of 2009.

1.4 Consistency in Reporting

Data reported in the UWMP should be consistent throughout the document and with other reports of water data.

Some examples of consistency within the document include:

- Reported water use for the years 2010 and 2015 equivalent to the reported water supply for 2010 and 2015.

Some examples of consistency with other reports of water data include:

- Local planning documents, such as a Water Master Plan
- The electronic Annual Reports to the Drinking Water Program (eARDWP) to the State Water Resources Control Board (SWRCB) for Public Water Systems (PWS) ~~and~~
- **RETAIL** The Monthly Urban Water Conservation Reporting to SWRCB for the Drought Emergency Water Conservation Regulations. Though the monthly conservation report uses a different methodology for calculating GPCD, the underlying water consumption data should be consistent with the UWMP.

Comment [g4]: From JSC - Not always – for instance, they do not appear to allow IPR or DPR discounts to production, whereas DWR's Methodologies do.

~~1.5 Using Calendar Year or Fiscal Year~~

Comment [g5]: From JSC – this is repetitive of Section 2.3.

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

~~If a water agency is reporting on a fiscal year basis, the UWMP preparer will note the start day and month of the agency's fiscal year in Table 2-3.~~

~~Because it provides consistency with other State reporting, DWR prefers that agencies report on a calendar year basis. However, DWR also understands that agencies may prefer to report on a fiscal year basis in order to maintain consistency with their own internal reporting, data management, and financial management plans and processes.~~

1.6 Recommended UWMP Organization

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 manner.

This organization groups the requirements by topic and presents the topics in the order in which a water supplier may consider including them in a 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 *short narrative*

Chapter 2- Plan Preparation *short narrative*

Chapter 3 - System Description *short narrative*

Chapter 4 - System ~~Demands~~ Water Use *short narrative*

Chapter 5- RETAIL Baselines and Targets *short narrative*

Comment [g6]: From JSC - This section might belong before Section 4, as some of the Baseline/Target calculations are determinative of System Demand projections/estimates.

Chapter 6 - System Supplies *short narrative*

Chapter 7— Water Supply Reliability *short narrative*

Chapter 8 – Water Shortage Contingency Planning *short narrative*

Chapter 9 — Demand Management Measures *short narrative*

Chapter 10 — Plan Adoption, Submittal, and Implementation *short narrative*

Comment [g7]: From JSC -Classically, this section was included in Section 2, as it covers similar procedural information.

Supporting Documents

Energy Intensity (voluntary)
Adoption resolution
CUWCC BMP Reports (if applicable) *(See Chapter 9)*
Water Shortage Contingency Plan (if a separate, stand-alone document from the UMWP)

Comment [g8]: From JSC - Might want to make a recommendation on how to include and order appendices (e.g., provision of required or necessary background information in a way that does not interrupt the narrative flow of the Plan so as to aid in readability; appendices should appear in the order in which they are referenced in the Plan; etc.)

1.7 UWMPs and Grant or Loan Eligibility

A UWMP is required for an urban water supplier to be eligible for a water management grant or loan administered by DWR. A current UWMP must also be maintained by the water supplier throughout the term of any grant or loan administered by DWR.

Comment [g9]: From JSC - Only? I thought it was any State water-related grant or loan program (e.g., including SRF loans administered by the SWRCB). If I remember correctly, DWR administers this prerequisite for grant/loan funding, even if it does not manage the grant/loan funding program itself (correct?).

RETAIL

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).

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 will mean that a retail water agency has met its 2015 Interim Urban Water Use Target (see Chapter 5).

However, if either of the following conditions is met, the retail agency will be eligible for water grants or loans, even if their 2015 Interim Water Use Target has not been met:

1. The urban retail water supplier has submitted to ~~the department~~DWR for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions; and/or
2. The urban retail water supplier has submitted to ~~the department~~DWR for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

Comment [g10]: From JSC - Do we need a reference to the CWC section that defines DAC?

If an agency has met their 2015 Interim Target, or has met either of the exceptions above, and is participating in a multiagency water project, or an ~~integrated~~ Integrated ~~regional~~ Regional ~~water~~ Water ~~management~~ Management ~~plan~~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 requirements listed above.

Comment [g11]: From JSC – ensure consistency throughout document with capitalization of IRWM

1.8 Tips for UWMP Preparers

Use of previous UWMPs and Regional UWMPs.

Under the CWC, the 2015 UWMP should be considered as an update to an agency's previous UWMPs. Nevertheless, the 2015 UWMP should be able to be read as a stand-alone document. Preparers should ensure that information carried forward from previous UWMPs be up to date. Preparers should also, when possible and available, utilize information from Regional 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.

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Comment [JSC12]: Not sure if this is appropriate, but it is something I think about as an UWMP preparer

Review the legislative changes since the 2010 UWMP cycle *(Appendix C).*

Changes to the California Water Code directly addressing preparation of UWMPs are discussed in Appendix C.

Review the UWMP deadline and adoption processes during Plan development. (Chapter 10)

Suppliers must submit their UWMPs to DWR by Friday, July 1, 2016. The adoption and notification processes are detailed in Chapter 10. Suppliers should take into account the time needed for the ~~plan~~ 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 seem to apply to your agency, include an explanation in the UWMP.

If an urban water supplier considers that a UWMP requirement does not apply to it, a useful approach is to identify the requirement and provide a brief description of why the requirement

does not apply. If a required element is not discussed, DWR may determine that the ~~plan~~ Plan has not addressed that element of the ~~water~~ Water ~~code~~Code.

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 assist readers and DWR in understanding the situation.

Importance of narratives and maps.

Narrative descriptions and maps are as important as data presented in tables~~,~~ and can greatly enhance the public's understanding of what tabular data means.

Using summaries and cross references.

Rather than repeating detailed information from other documents, summarize the information and provide a reference to the source document. 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 with the page number where the required element is addressed to assist in the DWR review of the submitted UWMP.

Use the Guidebook ~~appendixes~~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 a UWMP prior to adoption, please contact a DWR regional team member. Doing this could avoid the need to have additional information requested by DWR during the review process and the subsequent need to adopt an amendment to an adopted UMWP.

1.9 DWR Contact Information

DWR Contact Information			
Region	**DWR UWMP Staff**	**Phone**	**Email**
Statewide	Peter Brostrom	(916) 651-7034	Peter.Brostrom@water.ca.gov
	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

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Chapter 2
Plan Preparation

This section provides guidance on determining whether or not a water supplier is required to write a 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~~ city and county land use planning agencies can provide information on regional planning, demographics, and expected future development.

Because UWMP~~plan~~ 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~~Plan, which may include such things as designation of a planning team, holding public meetings, the extent of coordination with other agencies, use of this Guidebook, or ~~possibly~~ 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 Individual or Regional Planning and Compliance

2.3 Fiscal or Calendar Year and Units of Measure

2.4 Coordination and Outreach

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

Provide a discussion of the basis for preparing a UWMP in this chapter. In accordance with the California Water Code, 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 a UWMP every five years. The 2015 UWMP ~~shall~~ must be updated by July 1, 2016.

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

2.1.1 Agencies that Supply both Wholesale and Retail Customers

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, a~~A~~n 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). If an agency has both wholesale and retail customers, review the criteria in the CWC and guidance below to determine the type of water agency and the UWMP reporting requirements and guidance that apply.

1. Both Wholesale and Retail Urban Water Supplier. If an urban water supplier meets the definition of both 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~~d~~ agency must address all the ~~water~~ Water ~~code~~ Code requirements that apply to both wholesale and retail suppliers. Guidance for such agencies is found in the Guidebook for Urban Water Suppliers.

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 10608.12 (p), it is considered a retail urban water supplier. Such an agency may also wholesale water to other agencies, but the wholesale volume is below the reporting threshold and will be reported as "sales to other agencies" in Table 4-2. Only the ~~water~~ Water ~~code~~ Code requirements that apply to retail suppliers must be addressed. Guidance for such agencies is found in the Guidebook for Urban Water Suppliers.

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 and will be reported in "retail sales" Table 4-1. Only the ~~water~~ Water ~~code~~ Code requirements that apply to wholesale suppliers must be addressed. Guidance for such agencies is found in the Guidebook for Wholesale Water Suppliers.

Complete Table 2-1

Table 2-1: Type of Agency *Agency may select one or both*	
	Wholesale
	Retail

2.1.2 Public Water Systems

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.

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

The ~~State Water Resources Control Board (~~Board~~)~~, Division of Drinking Water, requires reporting on the public water systems (PWS). Reporters file electronic Annual Reports to the Drinking Water Program (eARDWP) to the Board, which include annual reports of water usage and other information. The information provided in the UWMP should be consistent with the data reported in the eARDWP.

RETAIL

For purposes of the UWMP, ~~the~~ PWS(s) reporting data is ~~are~~ used to determine whether or not a retail supplier has reached the threshold (3,000 or more connections or 3,000 acre-feet of water supplied) for submitting a UWMP. This is done by reviewing the number of connections and volume of water supplied by each public water system that is managed by the water supplier.

Chapter 5, Baselines and Targets, outlines a specific mapping requirement that is based on the area served by each individual PWS~~the public water system.~~ The PWS(s) that the preparer will include in Table 2-2 should be the same PWS(s) used for the mapping requirement in Chapter 5.

2.1.3 Agencies Serving Multiple Service Areas/Public Water Systems

Many water suppliers within the state have more than one public water system.

NOTE: The same target method must be used for each planning unit managed by a water agency.

Comment [g13]: Waiting for guidance from DWR management.

Table 2-2 Provide the names and numbers of each PWS~~public water system~~ (drinking water only) that is managed by the agency and reported in this UWMP.

Table 2-2: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
	TOTAL		

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2.2 Individual or Regional Planning and Compliance

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

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

Agencies may choose:

- Individual Reporting – An agency develops a UWMP covering only its agency service area and addresses all requirements of the Water Code. The agency notifies and coordinates with appropriate regional agencies and constituents.
- Regional Reporting - Working with an IRWM, wholesaler, other retailers, or another regional entity, an agency becomes part of a regional group that may develop either a:
    - Regional UWMP - Develops a regional UWMP that addresses all the requirements of the Water Code; and/or,
    - Regional Alliance - Develops a Regional Alliance that addresses only the requirements of the Water Conservation Act of 2009 (SBX 7-7), that is, planning, reporting, and complying as an Alliance with 2015 and 2020 water use targets. (See Methodology 9). **All other elements of the Water Code must be addressed through either an individual or regional UWMP.**

2.2.1 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.

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 Water Code. Some elements of the RUWMP, such as each agency's supply and demand information, must be reported on an agency by agency basis within the RUWMP. The RUWMP preparers may also choose to provide the sum of the supplies and demands from each agency in order to report the regional supply and demand.

Other elements in the RUWMP may be reported as an aggregate of all the agencies' information;~~,~~ for example, 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 Regional Plan, and each adoption resolution must be submitted to DWR.

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

RETAIL

Within the RUWMP agencies may elect to determine and report targets and baselines (~~See~~ see Chapter 5) on a regional basis, or by individual agency.

2.2.2 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

A group of water suppliers agreeing among themselves to plan, comply, and report as a region on the requirements of the Water Conservation Act of 2009, SBX 7-7, 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~~ Regional UWMP. Being a member of a Regional Alliance does not take the place of submitting a UWMP, whether individually or regionally.

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.

2.3 Fiscal or Calendar Year and Units of Measure

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2.3.1 Fiscal or Calendar Year

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

If a water agency is reporting on a fiscal year basis, the UWMP preparer will note the start day and month of the agency's fiscal year in Table 2-3.

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. It is completely up to the agency to choose whether to report calendar year or fiscal year data in its UWMP.

For agencies that are reporting on a fiscal year basis, where a column in a table is labeled with a particular year, this will signify the end year of the fiscal year. For example, 2015 denotes the fiscal year 2014-2015.

Table 2-3: Fiscal or Calendar Year	
☐	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
If Using Fiscal Years Provide Month and Day that the Fiscal Year Begins	
Day	*Month*

Units of Measure

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

Table 2-4 Report the units of measure that the water agency will be using to report water volume throughout the UWMP.

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Table 2-4: Units of Measure
Drop Downwith the following options
Acre Feet (AF)
Million Gallons (MG)
Hundred Cubic Feet (CCF)

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2.4 Coordination and Outreach

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 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~~s~~ supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.

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.

In order to verify that agencies have fulfilled the above CWC provisions, agencies are required to provide the~~n~~ names of each agency and organization contacted or involved in the development of the UWMP in Table 2-4.

> *Government Code Section 65302.2 (a)*
> *Upon the adoption, or revision, of a city or county's general plan, on or after January 1, 1996, the city or county shall utilize as a source document any urban water management plan submitted to the city or county by a water agency.*

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 Public Water Systems reports. Such coordination ensures consistency in planning and reporting.

Comment [g14]: From JSC - Make sure these terms are consistently capitalized elsewhere in the document

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~~governments (COGs, CAGs, etc…)
- Water Management Organizations
  - Other urban water suppliers
  - Water agencies that share a common source
  - Integrated regional water management groups
  - Groundwater management entities
  - Watershed groups
- Customers
  - Large CII water users
  - Home ~~Owners'~~ owners' ~~Associations~~associations (HOAs)
- Diverse Elements of the Population
  - Building industry
  - Native American tribes

- Chambers of commerce
- Environmental organizations
- Civic organizations

2.4.1 Notice to Cities and Counties See also Section 10.1.1

CWC 10621 (b) requires that agencies notify cities and counties within 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. However, 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.

Table 2-5: Coordination and Notification for Plan Preparation	
Organization/Agency Name	Level of Participation
	drop down menu with options for differing levels of participation
This table will be expandable.	

2.4.2 Coordination between Retailers and their Wholesalers

CWC 10631~~(j)~~
(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).

When a retail agency relies on a wholesale agency for a water supply, both the retail and the wholesale agencies are required to provide each other with information regarding projected water use and supply, as described below.

RECOMMENDED

The UWMP should include a statement or copy of the communication;~~,~~ to verify that this exchange of information has taken place.

RETAIL

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 use, from that source, in five-year increments for 20 years, or as far as data is available.

WHOLESALE

Wholesale agencies are required to provide information to their retail customers identifying and quantifying water supplies available to the retailer from the wholesaler, to the extent practicable. This information shall be over 5 year periods, from 2015 through 2035 and for average, single and multiple-dry years.

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Chapter 3
System Description

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.

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.

This chapter includes the following sections:

3.1 General Description

3.2 Service Area Map(s)

3.3 Service Area Climate

3.4 Service Area Population and Demographics

DRAFT

3.1 General Description

CWC Section 10631 (a)
Describe the service area of the supplier…

Provide a description of the service area of the supplier. If the service area is comprised of more than one PWS~~public water system~~, this information may be included here.

RETAIL

Describe any significant areas that are surrounded by the service area boundary, but are NOT served by the water agency;~~,~~ for example, institutions or industries served exclusively by a private well or by other water suppliers. These described areas should only include populations that are significant when compared to the entire service area. The population in such areas will be excluded when calculating the population for purposes of SBX7-7 compliance~~,~~ (see Chapter 5).

Recommended

Water suppliers should consider including 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.

It may be useful to include context for past or future investments in the water system or the water supply.

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

RETAIL

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

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

3.2 Service Area Maps

RETAIL

In Chapter 5, this guidebook addresses a specific mapping requirement for estimating an agency's population in order to comply with the Water Conservation Act of 2009 (SBX 7-7). Details about this mapping requirement are found in Section 5.~~3~~4.1 of Chapter 5.

Recommended

Maps can reduce the complexity of a service area into a simple visual statement. For this reason, DWR recommends that water agencies consider including any information that would add to the understanding of their water system to the map required in Chapter 5.

Agencies that deliver recycled water should refer to Chapter 6, Section 6.5.3, for guidance on mapping of the recycled water system.

3.3 Service Area Climate

CWC Section 10631 (a)
Describe the service area of the supplier, including… climate…

Agencies are required to provide information that assists in understanding the area's climate and its possible impacts on water management.

Recommended

This description could include average evapotranspiration (ETo), temperature, precipitation patterns, as well as 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)

Table 3-1: OPTIONAL Monthly Average Climate Data Summary				
Month	Standard Monthly Average ETo (inches)	Average Total Rainfall (inches)	Average Temperature (degrees Fahrenheit)	
			Max	Min
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				
Note:	Evapotran	http://wwwcimis.water.ca.gov/		

Agencies may report climate information in a narrative format, in OPTIONAL Table 3-1, or a combination of both. 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 use multiple versions of Table 3-1 or provide an average of the service areas.

3.3.1 Climate Change (optional)

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

DWR recommends that suppliers include in this chapter a narrative summary of relevant information from the IRWM Climate Change Vulnerability Assessment (see Appendix I), including 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 (a)
Describe the service area of the supplier, including current and projected population . . . The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available .

Provide current and projected population estimates for the service area in Table 3-2.

Include the source(s) used to estimate the population projections (2020, 2025 etc…). The estimates of future population must be based upon data from state, regional, or local service agency population projections. If the agency's service area matches the boundaries of a city, data from the Department of Finance (DOF) or city's general plan may be used. If the agency does not take population projections directly from a standard source, such as DOF, a general plan, or the local council of governments, but instead develops its own projections, the UWMP should describe how these projections were developed. DWR encourages suppliers to report population estimates and projections consistently across all ~~state~~ State reports to all ~~state~~ State reporting entities.

RETAIL

The 2015 population estimate reported in Table 3-2 must be consistent with the estimate provided in the SBX7-7 Verification Tables (Appendix E) as related to Chapter 5 - Baselines and Targets.

Comment [g15]: From JSC - Meaning, exactly the same? If so, then should probably mention that this will determine how they agency will estimate population (i.e., the agency really doesn't have the options listed above, but will be required to follow the Methodologies). I'd recommend that this be explicitly stated to avoid any misunderstandings.

Table 3-2: Population - Current and Projected

	2015	2020	2025	2030	2035	2040
Population Served						

3.4.1 Other Demographic Factors

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

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

RETAIL

If there are significant non-resident populations, such as populations based on vacation, agricultural, institutional, or commercial economies, provide a brief narrative describing this element of the population. For purposes of SBX7-7 calculations, DWR is developing a methodology for population estimates that considers the non-resident population. This will be presented in the 2015 update to the Methodologies document.

Providing 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, can help explain unusually high or low water use.

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Chapter 4
System Water Use

This chapter provides guidance for describing and quantifying the current system water use and then projecting those uses through at least the year 2035.

Accurately reporting current water uses allows a retail water supplier to correctly track their compliance with water use reduction targets, as determined in Chapter 5, emergency drought reporting, and provides information for 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.

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.

This chapter is divided into the following subsections:

4.1 Water Uses by Sector

4.2 Distribution System Water Losses

4.3 Water Savings from Codes, Ordinances, or Transportation and Land Use Plans (Optional) *(This section does not apply to wholesale agencies)*

4.4 Water Use for Lower Income Households *(This section does not apply to wholesale agencis)*

4.5 Climate Change (optional)

Definitions

Potable Water - Water intended for human consumption, delivered through a public water system, and regulated by a State or local health agency.

Raw Water - Water that is untreated and used in its natural state. This may also be called "Source Water." Some water agencies supply raw water to customers for non-potable uses.

Recycled Water - Municipal wastewater that has been treated to a specified quality to enable it to be used again.

Sectors - Classifications of water use that are clearly distinct from other water uses.

Water demand/use - Water conveyed by a distribution system that is used by a water agency and its customers for any purpose, including non-potable water uses, water losses, and other non-revenue water.

Recycled versus Potable and Raw Water Demand

In order to clearly distinguish between the potable and raw water demand and recycled water demand, guidance and suggested reporting for these demands is divided in this guidebookGuidebook. Chapter 4 primarily addressed potable water demand, but also allows for the reporting of actual raw water demand in 2015. Raw water is called out in Tables 4-1, 4-2, and 4-3 in the column labeled "Level of Treatment," where the user may select "Raw Water". Recycled water is addressed comprehensively in Chapter 6 (Section 6.5), but summarized in Chapter 4 in Table 4-5.

4.1 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).

For retail agencies that provide water to other agencies or for other wholesale uses, but whose wholesale deliveries fall under the UWMP reporting threshold for a wholesale agency, the supplier is not considered a wholesale urban water supplier, but may report the wholesale deliveries in their UWMP, Table 4-2.

4.1.1 Demand Sectors Listed in Water Code

Suppliers are encouraged to use as many water demand sectors as are applicable to provide a full accounting of the total demand.

Agencies are directed to use the water sectors listed in the ~~water~~ Water ~~code~~ Code (above), to the extent that these are applicable. If there is a difference between the sectors used by the agency and the sectors listed in the ~~water~~ Water ~~code~~Code, agencies may report using the "Other" sector in the required tables.

Unless indicated otherwise, the following are DWR's definitions for each of the water sectors listed in the CWC. Retail agencies are strongly encouraged to report sector use based on these definitions. If an agency chooses to report using a different definition(s) for one or more sectors, the agency must provide such definitions in the text of the UWMP.

Comment [JSC16]: Either this language needs to be included, or a citation needs to be provided as a basis for requiring the following definitions for UWMP reporting purposes.

(a) Single-family residential – A water connection to a single family dwelling unit, i.e., a lot with a free-standing building containing one dwelling unit and may include a detached secondary dwelling.

(b) Multifamily – Multiple dwelling units contained within one building or several buildings within one complex and served by one or more water connections.

(c) Commercial – A water user that provides or distributes a product or service. *CWC 10608.12 (d)*

(d) Industrial – A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development. *CWC 10608.12 (h)* *http://www.census.gov/cgi-bin/sssd/naics/naicsrch*

(e) 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 (~~h~~i)*

(f) Landscape – Water connections supplying water solely for landscape irrigation. ~~.~~ Such landscapes may be associated with multifamily, commercial, industrial, or institutional/governmental sites, but should be considered a separate water use sector for the purpose of UWMP reporting.

(g) Sales to other agencies – Agencies will make their own determination as to whether a water demand is a transfer, exchange, or sale.

Comment [g17]: From MWD Note in Table 4-2 below that projected future "sales to other agencies" can be based on anticipated demand.]

For purposes of UWMP reporting, this is considered a "Wholesale Use," ~~,~~ even if the agency is not considered a wholesale water agency as per the definition in CWC 10608.12 (p) and (r). Sales to other agencies, transfers, exchanges, and unallocated water will be reported in Table 4-2.

(h) 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 water use. The water use would most likely be reported as groundwater recharge, or other.

(i) Groundwater recharge – The intentional replenishment of natural groundwater supplies using man-made conveyances such as infiltration basins or injection wells.

(j) Saline water intrusion barriers – Injection of water into a fresh water aquifer to prevent the intrusion of salt water.

(k) Agricultural – Water used for commercial agricultural production ~~where $1000 or more of agricultural products were sold, or normally would have been sold, during the year~~. If water is used for processing agricultural products (food, beverage or textile manufacturing) it may be considered industrial process water (see Chapter 5, Section 5.4). 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

4.1.2 Demand Sectors in Addition to Those Listed in Water Code

The water demand sectors below, though not specifically listed in, nor required by the CWC, can help some agencies account for the entirety of their demand.

Exchanges - 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). Agencies will make their own determination as to whether water sent to another agency is a sale, transfer, or exchange.

For purposes of UWMP reporting, this is considered a “Wholesale Use,”, even if the agency is not considered a wholesale water agency as per the definition in CWC 10608.12 (p) and (r). Sales to other agencies, transfers, exchanges, and unallocated water will be reported in Table 4-2.

Long-Term System Storage- Water that has entered the distribution system but has not been delivered to customers, indicated by system storage (groundwater or surface water) being greater at the end of the year than at the beginning.

Surface Water Augmentation - The planned placement of recycled water into a surface water reservoir used as a source of domestic drinking water supply.

Transfers - Agencies will make their own determination as to whether water sent to another agency is a sale, transfer, or exchange.

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.

For purposes of UWMP reporting, this is considered a “Wholesale Use”, even if the agency is not considered a wholesale water agency as per the definition in CWC 10608.12 (p) and (r). Sales to other agencies, transfers, exchanges, and unallocated water will be reported in Table 4-2.

Unallocated Water – Water that a supplier reasonably expects to have available for wholesale, but has not yet been allocated to any particular use. For purposes of UWMP reporting, this is considered a "Wholesale Use", even if the agency is not considered a wholesale water agency as per the definition in CWC 10608.12 (p) and (r). Sales to other agencies, transfers, exchanges, and unallocated water will be reported in Table 4-2.

Wetlands or Wildlife Habitat – Water used for a managed environmental use to improve an environmental condition.

Comment [g18]: Regarding wetlands and wildlife habitat, is it required to report this use if it is raw water?

Other – Any water demand that does not fall into a sector defined above. This may include unbilled, authorized consumption, such as water used for firefighting, line flushing, or other uses that do not generate revenue. When using the "Other" category for a water use sector, the agency should include a narrative description of that water use category (i.e., mixed-use).

Comment [g19]: From JSC - Want to make sure this aligns with "Water Loss" as defined in the CWC. Might need further explanation, as many agencies are used to considering these non-revenue uses as "loss."

DRAFT

Table 4-1 Retail Uses of Potable and Raw Water - Actual and Projected

Use Type *Drop down menu* *May select each use multiple times*	2015			2020	2025	2030	2035	2040-opt
	General Description of 2015 Uses *(if needed)*	Level of Treatment	Volume					
Single Family		Drop down with options of "Drinking water" or "Raw water"						
Multi-Family								
Commercial								
Industrial								
Institutional/Governmental								
Landscape								
Other (define)								
Total			*autosum*	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*

Table 4-2 Wholesale Uses: Potable and Raw Water- Actual and Projected

Use Type *Drop down menu* *May select each use multiple times*	2015			2020	2025	2030	2035	2040-opt
	General Description of 2015 Uses *(if needed)*	Level of Treatment	Volume					
Sales to other agencies	*Name of other agency*	Drop down with options of "Drinking water" or "Raw water"						
Transfers to other agencies	*Name of other agency*							
Exchanges to other agencies	*Name of other agency*							
Unallocated Water								
Total			*autosum*	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*

Table 4-3 Other Uses of Potable and Raw Water - Actual and Projected

Use Type *Drop down menu* *May select each use multiple times*	2015			2020	2025	2030	2035	2040-opt
	General Description of 2015 Uses *(if needed)*	Level of Treatment	Volume					
Groundwater recharge		Drop down with options of "Drinking water" or "Raw water"						
Saline water intrusion barrier								
Agricultural irrigation								
Long term system storage								
Wetlands or wildlife habitat								
Total			*autosum*	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*

Table 4-4 Losses from Potable and Raw Water Systems

Water Losses	2010	2015	2020	2025	2030	2035	2040
Potable System							
Raw System (optional)							
Total	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*

Table 4-5 Total Recycled Water Use

	2010	2015	2020	2025	2030	2035	2040
Total	*autofill fh 5*	*autofill fh 5*	*autofill fh 5*	*autofill fh 5*	*autofill fh 5*	*autofill fh 5*	*autofill fh 5*

Table 4-6 Total Water Use

	2010	2015	2020	2025	2030	2035	2040
Retail Uses							
Wholesale							
Other							
Losses							
Recycled Water Use							
Total	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*	*autosum*

Comment [g20]: From MWD Unallocated Water has a specific meaning to wholesalers – water supply allocation plan – implies a cutback.

Comment [g21R20]: For wholesale agencies that sell to their own retail operation - how to avoid double counting of volumes? Also – provide option – "All retail sales"

Comment [g22R21]: MWD Table 4-1 Add note that wholesalers who don't have any retail uses don't have to fill out this table. And/or provide drop down that says "No retail sales"

Comment [g23]: Table 4-2 MWD "Sales to other agencies" may be misconstrued as future sales commitment or obligation. Providing info this way may put wholesale agencies with no sales contract in a bad position. Suggestion: Label this row **"Projected Demand/Sales"** This would still be consistent with 10631e(1)(G) since sales info are to be provided "to the extent records are available." Since there are no future sales records available, numbers into the future will be understood to be projected demands. Wholesalers projections sales to retailers – difficult to make commitment, based on projected demand. Readers may be misled to believe this is a commitment from wholesaler. Note to reader – based on anticipated demand, and does not reflect a commitment. Note to supplier that additional commentary should be added in narrative apart from table. NOTE also the inherent inaccuracy with projections. MWD does not project by agency in UWMP. Only reports total sales to other agencies. Coordinate internally with member agencies.

Comment [g24]: Include a note that states if an agency is reporting in fiscal year, it is understood that the year displayed in the table is the end of the fiscal year.

Fiscal Years

For agencies that are reporting on a fiscal year basis, where a column in a table is labeled with a particular year, this will 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.

Recommended

- Include a narrative description of how demand projections are estimated.
- Agencies are not required to use any particular method for estimating projected water uses. Agencies may consider listing any documents used to estimate projected demands.
- Water use projections may reflect any expected decrease in demand due to conservation or passive savings (see Section 4.3)
- Provide a narrative description of water sectors that differ from the CWC~~water code~~, i.e., if the agency combines single-family and multi-family into one sector, "residential".

4.2 Distribution System Water Losses

CWC 10631(e)(1) and (2)
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

CWC 10631 (e)(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.

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

Comment [g25]: From JSC - Might want to distinguish from simple "unaccounted-for water," i.e. difference between production and billed consumption.

In the 2015 UWMPs, water agencies must report their distribution system water loss for the most recent 12-month period available. This will be reported in Table 4-7.

In 2020 and subsequent UWMP reporting cycles, agencies will be required to report losses for each of the last 5 years (2016, 2017, 2018, 2019, and 2020).

DWR, through a public process, will develop the worksheet for reporting system water loss, based on the methodology developed by the American Water Works Association. This will be a stand-alone document and will be provided when available.

Table 4-7 Water Loss Summary Most Recent 12 Period Available *(as calculated in pending DWR/AWWA worksheet) DRAFT*

Reporting Period		
Start Date (Month/Year)	**End Date**	**Loss**
		Fm AWWA Worksheet (Pending)

4.3 Water Savings from Codes, Standards, Ordinances, or Transportation and Land Use Plans *(Optional)*

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.

Water Savings from Codes, Standards, Ordinances, or Transportation and Land Use Plans are also known as "passive savings.".

When discussing projected water uses by sector, Section 4.1, water agencies must state the extent that water use projections consider passive savings. Projections that do not account for these savings shall include a statement to that effect.

Recommended

Table 4-8 Passive Savings (optional) DRAFT							
CHOOSE ONLY ONE:							
☐	Passive savings are accounted for in water use projections in Table 3-1						
☐	Passive Savings are not accounted for in water use projections in Table 3-1						
Code Standard or Ordinance	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Table will be expandable							
TOTAL							

Accounting for passive savings is not required; however, if passive savings are accounted for, agency may complete Table 4-8.

DWR will develop the methodology and final table for reporting passive savings. The document will be provided when available.

4.4 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 water agencies are required to include the projected water use for lower income households in their projected water demands.

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 general plans cities and counties applicable to the water supplier's service area.

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

Verify that the expected water use for low income housing, as estimated above, has been included in the projected water demands.

A lower income household is defined as a household with an income limit of 80 percent of area median income, adjusted for family size.

4.5 Climate Change (Optional)

Recommended

Include a narrative summary of the section "Water Demand" found in the Climate Change Vulnerability Assessment, Appendix I.

Including a discussion of potential climate change impacts on an agency's water demand is optional. However, such a discussion can provide a more comprehensive look at the potential impacts on projected demand. For example, hotter and drier weather may lead to increased demand for landscape irrigation. Water agencies are encouraged, but not required, to consider potential climate change impacts to their water demand. This may be done by completing the IRWM Climate Change Vulnerability Assessment found in Appendix I. or attaching a Vulnerability Assessment from an IRWM Plan if available.

Chapter 5
Baselines and Targets

Placeholder for text to articulate to the public reader why these calculations are important, what they mean, and how they should be interpreted.

With the adoption of the Water Conservation Act of 2009, also known as the SBX7-7, (see Appendix H), the ~~state~~ State is required to reduce urban water use by 20% 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 DWRs review of the standardized tables (SBX7-7 Verification Tables) submitted with an agency's 2015 UWMP. The SBX7-7 Verification Tables are found in Appendix E and summarized in Tables 5-1 and 5-2 in Chapter 5.

Determining baselines and targets requires several calculations; the specific methodologies for these calculations are detailed in *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use,* DWR 2009 (to be updated in 2015, though not updated as of the publication of this ~~guidebook~~Guidebook).

This section of the ~~guidebook~~ Guidebook provides an overview and clarifying information regarding the requirements of the Water Conservation Act – which is embedded in the Urban Water Management Planning Act.

This chapter includes the following sections:

5.1 Guidance for Wholesale Agencies

5.2 Updating Calculations from 2010 UWMP *(Retail agencies only)*

5.3 Baseline Periods *(Retail agencies only)*

5.4 Service Area Population *(Retail agencies only)*

5.5 Gross Water Use *(Retail agencies only)*

5.6 Baseline Daily per Capita Water Use *(Retail agencies only)*

5.7 2015 and 2020 Targets *(Retail agencies only)*

5.8 2015 Compliance Daily per Capita Water Use *(Retail agencies only)*

5.9 Regional Alliance

GPCD

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

- "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". Throughout this chapter the terms may be used interchangeably.

It may be important to distinguish this 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. http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/ws_tools/guidance_estimate_res_gpcd.pdf This is used in drought reporting to SWRCB for purposes of complying with the Governor's drought declarations and ~~Executive~~ executive ~~Order~~orders in 2014 and 2015 (as of the publication of the Guidelines.

5.1 Guidance for Wholesale Agencies

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 water suppliers are not required to establish and meet baseline and targets for daily per capita water use.

However, wholesale water suppliers are required to provide an assessment of their present and proposed future measures, programs and policies that will help the retail water suppliers in the wholesale service area achieve their SBX7-7 water use reduction targets.

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~~ Regional ~~alliance~~ Alliance and represent the urban retail water suppliers that are members of the ~~alliance~~Alliance. The retail suppliers are responsible for complying with the ~~alliance's~~ Alliance's regional target. Wholesale water agencies participate in a supportive role to assist the retail agencies in meeting their established targets.

For purposes of identifying baselines and targets, the following definitions apply:

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.

~~Wholesale water agencies that choose to participate in a regional alliance are directed to the Urban Water Agency Guidebook for guidance.~~

Comment [g26]: Reconsider this after reviewing guidance for regional alliances. This currently directs readers right back to this book

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 2010, 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 Target Method

In 2010 UWMPs, water agencies calculated a 2020 Urban Water Use Target through selection of a target method. In 2015 UWMPs, water agencies may update their 2020 target and may select another of the four target methods to use in the calculations. (See Section 5.6.1)

5.2.2 Use of 2010 U.S. Census Data

After examination of a sampling of data, 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. Therefore, if an agency did not use 2010 ~~census~~ 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 re-calculate their baseline population for the 2015 UWMPs using 2000 and 2010 ~~census~~ 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.

Comment [g27]: From JSC - Is there a memorandum or white paper that provides a basis for this finding? If so, should be included as an appendix in either the Guidebook or the Methodologies (if the latter, please reference here).

5.2.3 SBX7-7 Verification Form

All agencies, whether updating their baselines and targets or not, are required to submit the standardized tables in the SBX7-7 Verification Form (see Appendix E) with their 2015 UWMPs. These tables were not available in 2010 and are required to demonstrate compliance with the Water Conservation Act.

5.3 Baseline Periods (SBX7-7 Table 1)

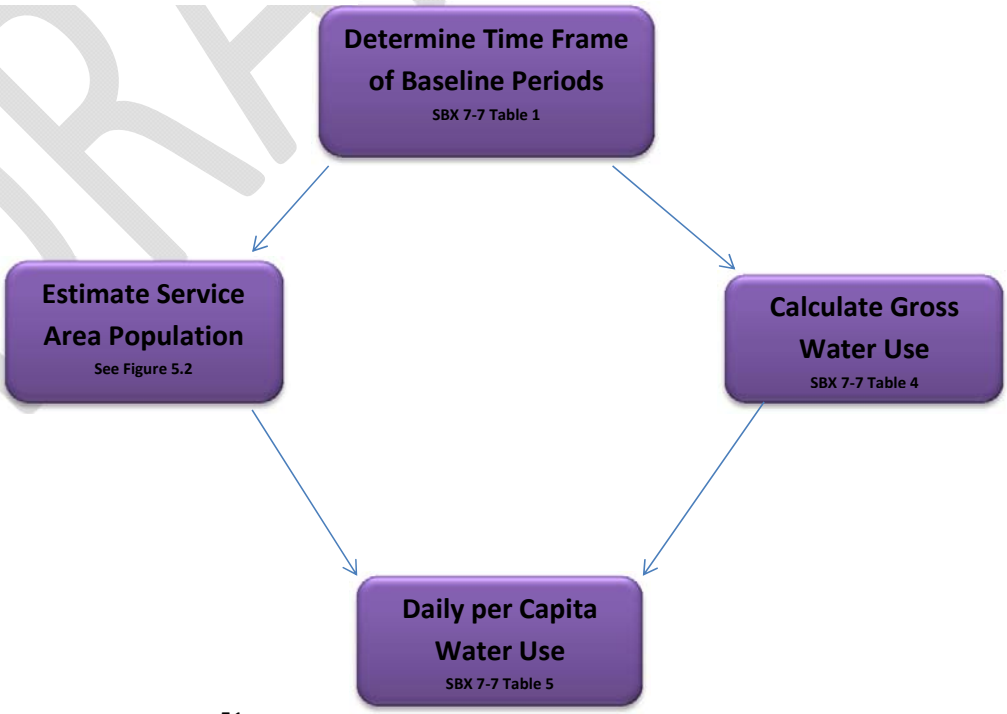
CWC 10608.20
(e) An urban retail water supplier shall include in its urban water management plan due in 2010. . . the baseline daily per capita water use…along with the bases for determining those estimates, including references to supporting data.
(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

In their 2015 UWMPs agencies may change the years they selected for their baseline periods as compared to their 2010 UWMPs. Agencies may choose or may be required to make this change based on any changes made to their population calculations (see section 5.3) and ensuing changes to baseline and target GPCD values.

Comment [g28]: From JSC

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~~Confirmation). These periods will be reported in SBX7-7 Table 1 (Appendix E).

Figure 5.1 Calculate Daily per Capita Water Use



5.3.1 ~~10 - to 15 -~~Year Baseline GPCD

Comment [g29]: From JSC

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

Comment [g30]: From JSC

> *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.*

To decide the number of years that may be used in the ~~10- to 15- year baseline~~Baseline GPCD, the water supplier must determine the percentage of recycled water to total water deliveries for the year 2008.

Comment [g31]: From JSC

Is the percentage of recycled water to total water deliveries for the year 2008 at least 10 percent?

- If yes, water agency may use up to a 15 year baseline period.
- If no, water agency must use a 10 year baseline period.

Determine the range of years to be used for calculating the ~~10 to 15 year~~ ~~B~~baseline GPCD and complete SBX7-7 Table 1 (see Appendix E).

Comment [g32]: From JSC

5.3.2 5-Year Baseline

> *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.*

Water suppliers must also calculate water use 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 5.6.2 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. Determine the range of years to be used for calculating the ~~5 year baseline GPCD~~ Target Confirmation and complete SBX7-7 Table 1 (see Appendix E).

Comment [g33]: From JSC

5.4 Service Area Population (SBX7-7 Tables 2 and 3)

Comment [g34]: Include specific guidance stating that when an area is within the agency's service area, but is not served by the agency, population must be excluded. If the agency provides water on a wholesale basis to the area, population is still excluded and wholesale water is reported as a sale to other agency.

> *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.*

In order to correctly calculate annual GPCD, agencies must determine the population that they serve for each of the baseline years and for the 2015 compliance year. DWR is developing a methodology for population estimates that consider~~s~~ the non-resident population. This will be presented in the 2015 update to the Methodologies document.

Agencies are encouraged to read Methodology 2: Service Area Population from *Methodologies* for more detailed information on estimating their population. DWR is revising the Appendix A Persons-per-Connection population methodology. This will be presented in the 2015 update to the Methodologies document.

> *Methodologies DWR 2010, 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.*

If an agency did not use 2010 U.S. Census data for its baseline population calculations in the 2010 UWMP (the full 2010 C~~c~~ensus data set was not available until 2012) the agency must re-

calculate its baseline population for the 2015 UWMPs using 2000 and 2010 Census data. This may affect the ~~baseline~~ Baseline and ~~target~~ Target GPCD values calculated in the 2010 UWMP, which must be modified accordingly in the 2015 UWMP.

5.4.1 Boundary Map(s)

In order to show the basis for an agency's method of estimating population, a map with the following information must be included with the UWMP:

- Service area boundary – This boundary includes two distribution system boundaries, to the extent that an agency has both system:
  - Potable water distribution system boundary - The boundary containing the distribution system(s) of the agency's Public Water System(s). Exclude any entity that is completely supplied by a private source or another water supplier.
  - Raw water distribution system boundary – The boundary containing the raw water distribution system, as applicable.
- Recycled Water System (Optional) – See section 6.5.3 for guidance on mapping of a recycled water system. ~~Note that this does not include any 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. For some suppliers, the jurisdictional boundary will be the same as Service Area boundary.
- Municipal boundaries - The boundary of any incorporated city or town, or Census Designated Place (see glossary) that intersects with the service area boundary. This will demonstrate the overlap of the service area with municipal boundaries, as needed for Section 5.3 Determine Service Area Population.
- Boundary Changes - If changes to any of the above boundaries occurred the baseline period, or between the baseline period and 2015, agencies must submit boundary(ies) for 1990, 2000, 2010, and/or 2015, as need to reflect these changes. See Methodology 1, Step 2 in Methodologies for details on changes to service area.

5.4.2 An electronic, geospatial shape file (such as in the ArcGIS or KML format) version of the map must be included with the following metadata:

- Map projection
- Contact information to person that created the map
- Information on boundary changes
- Revision dates
- Constraints

- Attribute table explanation
- Base (e.g. quadrangle, digitizing tablet, etc.)

For agencies that do not have GIS capability.— DWR may have population tool that provides this for agencies to use.

5.4.3 Determine Service Area Population

Retail water suppliers must determine which of the following two circumstances apply to them and include a statement in the UWMP describing their circumstance and specifying which data sources were used.

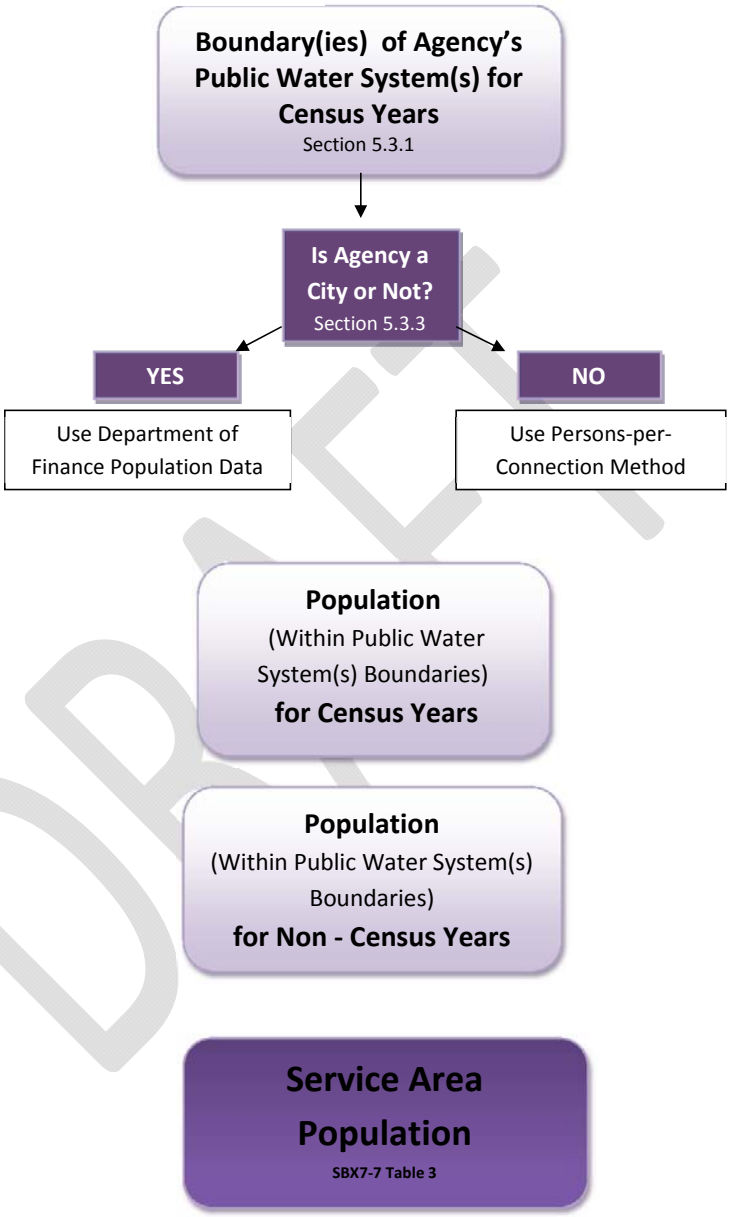
- The suppliers' service area substantially overlaps (95% overlap or more) with city or Census Designated Place (CDP) boundaries during baseline and compliance years. These agencies must use Department of Finance (DOF) data for the city or CDP. *(DOF Tables in Appendix E, SBX Form)* **OR**
- The suppliers' service area does not substantially overlap (94% or less) with city or CDP boundaries during baseline and compliance years. Include language on GIS mapping.
    - **Census years** (2000 and 2010) – U.S. Census data at the BLOCK level (the smallest unit of measure) for the service area boundary. *Possible DWR POPULATION TOOL.*
    - **Non-census years** – Use the Persons-per-Connection method by completing SBX Tables 2-A and 2-B, found in Appendix E of this Guidebook. *Possible DWR POPULATION TOOL.*

The agency may use an alternate method for estimating population. However, DWR must deem the alternate method at least as accurate as~~equivalent to~~ the Persons-per-Connection method. The agency must provide a description of the method that allows DWR to make this evaluation. DWR recommends that the agency seek a pre-review from DWR UWMP to assess the adequacy of any proposed alternate population methodologies.

Report the population methodology in SBX7-7 Table 2. (See Appendix E)

Report the service area population in SBX7-7 Table 3. (See Appendix E)

Figure 5-2 Service Area Population



5.5 Gross Water Use (SBX7-7 Table 4)

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.

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

- Recycled water delivered within the service area
- Indirect recycled water (as per Methodology 1)
- Water placed into long- term storage
- Water conveyed to another urban supplier
- Water delivered for agricultural use
- Process water

Gross water use is most accurate when measured at the point that water enters the distribution system. Measuring at this point ensures that all the water, including losses and other non-revenue water (i.e., firefighting, line flushing, etc…), is accounted for.

Gross water use must be calculated for each baseline year. It will also be calculated for the Compliance Year 2015. Complete SBX7-7 Tables 4, 4-A (and any needed sub-tables) in Appendix E of this Guidebook.

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

5.6 Baseline Daily Per Capita Water Use (GPCD) (SBX7-7 Table 5)

The final step in baseline calculations is to determine the water used per person per day (GPCD) in each of the baseline years. This step is done automatically in SBX7-7 Table 5 found Appendix E of this Guidebook.

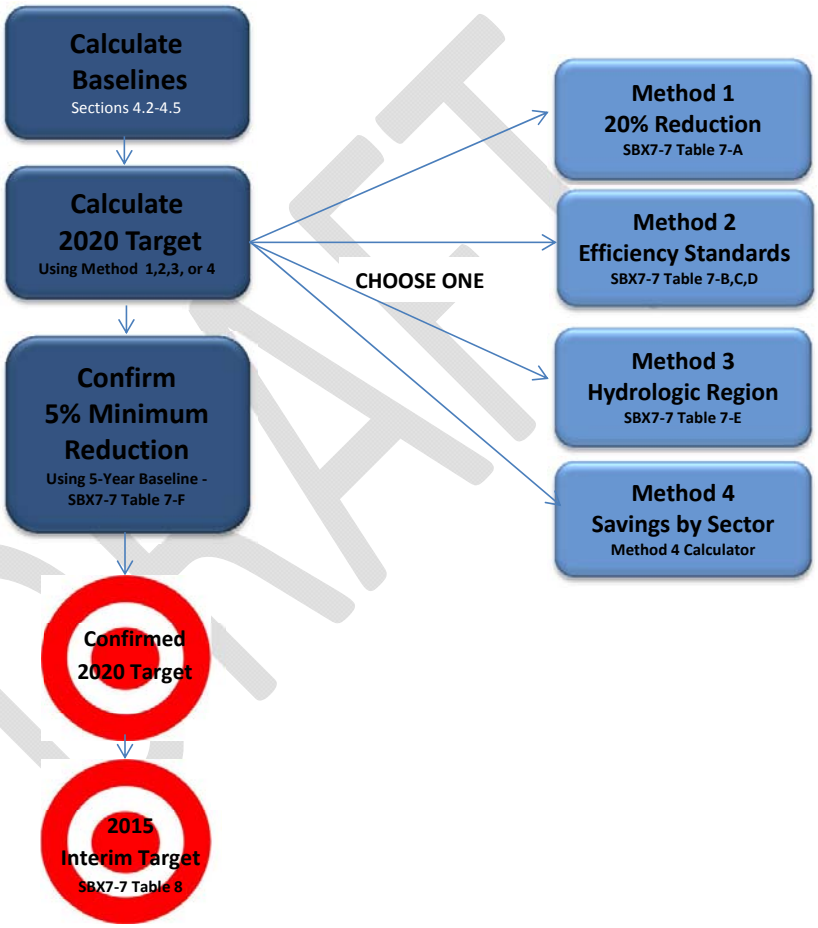
5.7 2015 and 2020 Targets (SBX Table 7 and sub-tables)

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)).

CWC 10608.20
(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan…

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

Figure 4.2 Determine Targets



5.7.1 Select and Apply a Target Method

The water supplier has four different methods to choose from when determining the 2020 ~~urban~~ Urban ~~water~~ Water ~~use~~ Use ~~target~~Target. Identify which of these four methods was used to determine the ~~urban~~ Urban ~~water~~ Water ~~use~~ Use ~~target~~Target. See CWC Section 10608.20(b) in Appendix E and *Methodologies* document for details.

Target Method 1: 80% of ~~10- or 15- Year~~ Baseline GPCD *CWC 10608.20 (b) (1)*

Comment [g35]: From JSC

- Calculate 80 percent of the base daily per capita water use.
- Agencies using Target Method 1 must complete SBX7-7 Table 6-A.

Target Method 2: Performance Standards *CWC 10608.20 (b) (2)*

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 SBX 7-7 Tables 6-B and 6-C.

Target Method 3: 95% of Hydrologic Regional Target *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 a 2020 urban water use target using the proportion that lies within each hydrologic region.
- Agencies using Target Method 3 must complete SBX7-7 Table 6-E.

Target Method 4: Savings by Water Sector *DWR Method 4*

- 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 Method 4 Calculator Appendix E of this Guidebook in their 2015 UWMPs.

5.7.2 2020 Target Confirmation – Use of 5- Year Baseline (SBX7-7 Table 7-F)

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.

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% from the 5-year baseline. This confirmation is automatically calculated in SBX7-7 Table 7.

5.7.3 Calculate the 2015 Interim Urban Water Use Target (SBX7-7 Table 8)

The 2015 Interim Target is the value halfway between the 10-to 15-year Baseline GPCD (from SBX7-7 Table 5) and the confirmed 2020 Target (SBX7-7 Table 7).

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

SBX7-7 Table 8 automatically calculates the agency's Interim 2015 Target

5.7.4 Baselines and Targets Summary

The SBX7-7 verification tables (see Appendix E) must be submitted in the 2015 UMWPs in order to determine compliance with the Water Conservation Act. DWR recommends that the SBX7-7 tables be submitted in an appendix, and Table 5-1 be included in the body of the UWMP to provide a summary of this information.

Table 5-1 Baselines and Targets Summary			
10-15 Year Baseline Period	10-15 Year Baseline GPCD	2015 Interim Target	Confirmed 2020 Target

5.8 2015 Compliance Daily per Capita Water Use (GPCD) (SBX7-7 Table 9)

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

Water suppliers will calculate their actual 2015 water use (2014-2015 fiscal or 2015 calendar year) to determine whether or not they have met their 2015 target water use and to assess their progress toward meeting their 2020 target water use.

5.8.2 2015 Adjustments to Gross Water Use

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

> *CWC 10608.24 (d)*
> *When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:*
> *Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.*
> *Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.*
> *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.*
> *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.*
>
> *Methodology Document, 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.*

Adjustment to Compliance Daily Per capita Water Use, and Methodology 4: Compliance Daily Per Capita Water Use).

Table 5- 2 (also found as SBX7-7 Table 9) will calculate whether or not the agency has met its 2015 interim target. The agency should complete both tables, include Table 5-2 in the body of the UWMP, include SBX7-7 Table 9 with the SBX7-7 Form, and discuss the agency's progress toward meeting its 2020 water use target.

Table 5-2: 2015 Compliance

2015 Interim Target GPCD	2015 Actual GPCD	Adjustments	Actual as Percent of Target	In Compliance? Y/N
SBX Table 8	*SBX Table 5*	*Fm Pending Tables*	*Auto Calculate*	*Auto Calculate*

5.9 Regional Alliance

Agencies that are choosing to comply with SBX7-7 requirements through a Regional Alliance must report the information from this chapter in the Regional Alliance Report. See Methodology 9 of *Methodologies*.

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, and any actions or projects that are anticipated to meet future water demands.

Water volumes presented in Chapter 6 shall 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 is still to be included in the water supply overview at the end of the water supply chapter.

This chapter covers the following topics:

6.1 Purchased 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 Water

Urban water suppliers may purchase water from other urban water suppliers or other entities. Agencies will make their own determination as to whether a water supply is a purchased supply, transfer, or exchange.

6.2 Groundwater

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 should report this as a purchased supply from another agency.

Groundwater management requirements are covered in detail in Section 10750, et seq. of the CWC and more information can be found at DWR Groundwater Information Center website (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. However, DWR's current efforts to identify overdrafted basins should be considered when applicable to a water supplier (see below).

The groundwater portion of an UWMP is expected to be 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 and groundwater management information to meet the UWMP requirements should be cited and included as either an appendix or a link to web location.

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

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.

The description of the agency's source groundwater basin(s) should include 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 and number as defined 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 their groundwater basin, they may contact DWR staff in the respective Regional Office (*see section 1.9*).

The basin description should 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:
A copy of any groundwater management plan adopted by the urban water supplier… or any other specific authorization for groundwater management.

…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.

The adopted groundwater management plan or final judgement for an adjudicated basin must be included in the UWMP. 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. Water agencies are encouraged also to include a brief overview of the groundwater management plan and the basin adjudication, if either of these applies to the groundwater source.

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

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 ~~the~~ 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.

Agencies that draw water from a groundwater basin that is not adjudicated are to provide in the UWMP a discussion of DWRs current assessment of overdraft conditions. As of the publication of this guidebook, DWRs most current assessment of overdrafted basins is in Bulletin 118 (DWR, 2003). DWR is currently in the process of evaluating groundwater basins for overdraft and critically overdrafted conditions and expect draft results to be released to the public for review and comment in late summer or early fall of 2015. Final determinations are expected in the fall of 2015. As a result, groundwater suppliers should be considering this revised groundwater overdraft determination with the intent of including it in their 2015 UWMP.

Agencies with groundwater supplies should refer to http://www.water.ca.gov/groundwater/ for the current status of DWR's review of overdrafted basins.

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

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.

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, dropping water table, which were encountered in obtaining groundwater during this time. This may be included as a narrative description that would accompany Table 6-1.

Table 6-1 Groundwater volume pumped						
☐	Groundwater Basin					
☐	Groundwater from Fractured Rock					
Basin	**Sub-Basin**	**2011**	**2012**	**2013**	**2014**	**2015**
Drop down lists from Bulletin 118 PLUS "Fractured Rock"						
Total		***0***	***0***	***0***	***0***	***0***

6.2.5 Groundwater Banking

Provide guidance on how to report groundwater banking

Comment [g36]: Provide guidance on how to report groundwater banking – avoid double counting of incoming replenishment water as a source, then counting the same water again when it is pulled from the basin as a(nother) source for the agency.

6.3 Surface Water

Water drawn from streams, lakes, and reservoirs are considered surface water supplies. 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 included in Table 6-8.

Surface water that is not self-supplied, such as purchases from a wholesaler, transfers or exchanges, will be reported as “Purchased Water” in Table 6-8.

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.

6.4 Stormwater

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 considered a water supply. 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.

The UWMP preparer should provide a narrative description of the stormwater recovery system (if any) and provide the volume of beneficially used stormwater in Table 6-8.

6.5 Wastewater and Recycled Water

Municipal recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again for a beneficial purpose. The term “recycled water” is defined in the Water Code more broadly than “municipal recycled water”. For purposes of the UWMPs, “recycled water” will mean only municipal recycled water, that is, water that has been treated and discharged from a 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~~ section of an UWMP and report summarized recycled water use in Chapter 4. If regulatory and operational practices for recycled water supply change over the next few years, future UWMP reporting requirements may be modified accordingly.

Each UWMP preparer is to include wastewater and recycled water discussion in its UWMP as follows:

- If recycled water is currently or planned to be used in the service area of an UWMP preparer,
  - Complete Tables 6-2 to 6-6
  - Address parts 6.5.1 through 6.5.5 (described below)
- 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)

There have not been any legislative changes to the CWC regarding recycled water since the preparation of the 2010 UWMPs.

For the 2015 UWMPs, changes to the recycled water tables have been made to improve data reporting. 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 added columns provide optional information and are marked as such. Though not required by the Water Code, 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 provides clarification on how recycled water is to be reported in 2015 UWMPs, including:

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

DWR strongly suggests that UWMP preparers 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).

In 2015, DWR and the SWRCB are cooperatively completing a statewide survey of recycled water use. For water suppliers with recycled water in their water supply portfolios, it is DWRs 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 DWR (916)651-7024 or tpezzett@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.

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.

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 considered 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 considered.
- Identify in a bullet 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.

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

- Describe how the agencies identified in section 6.5.1 interact and any joint ventures or joint operations. For example, one agency collects wastewater and delivers it to another agency that operates the treatment facility.

Table 6-2 summarizes information on collection of wastewater generated within the service area. It is to be completed for each UWMP, whether recycled water is used within the service area or not. To complete Table 6-2:

- Determine, 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.
- 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.
- If a third-party organization operates a facility under contract, DWR requests that that information (yes or no) be indicated.

Table 6-3 identifies the treated wastewater disposed of within the service area, which may include wastewater that originated from outside the water supplier's area.

Comment [g37]: Committee requests a suggested methodology for estimating wastewater generated when the treatment plant treats multiple service areas.

- Identify the specific location of the discharge, the volume annually discharged, and the level of treatment of the discharged water.
- 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.

Comment [g38]: What does "Met" mean in column title "Was volume Measured or estimated?

Table 6-2 Wastewater generated within service area in 2015						
Percentage of 2015 service area covered by wastewater collecion system						
Percentage of 2015 service area population covered by wastewater collection system						
Wastewater Collection Agency	Wastewater Treament Agency	Treatment Plant Name	Is WWTPP Located Within Service Area?	Is WWTP Operation Contracted to a Third Party? (optional)	Was Volume Measured or Estimated?	Volume of Wastewater Collected from the Service Area 2015
			Y/N	*Y/N*	*Met/Meas/Est*	
Total Wastewater Collected from Service Area						

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.

Table 6-3 Wastewater treatment and discharge within service area in 2015											
							2015 Volumes				
Name of Wastewater Treatment Plant	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID No. (optional)	Method of Disposal	Does this Include Wastewater Generated Outside the Service Area?	Treatment Level	Wastewater Treated	Discharged Treated Wastwater	Recycled Within Service Area	Recycled Outside of Service Area, in other UWMP	Recycled Outside of Service Area, not in other UMWP
				drop down menu	Yes/No	*drop down menu*					
Total Wastewater Generated in UWMP Area											

6.5.3 Recycled Water System

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.

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

- 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.
- 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…

For UWMP preparers implementing or planning recycled water use within the service area, this section discusses current and planned recycled water uses within the service area.

The definition of recycled water (see Appendix M) includes the term "direct beneficial use", which in turn is defined in the Code of California 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 more detailed discussion of how to apply these terms to recycled water.

Complete Table 6-4 by quantifying for each direct beneficial use 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. 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.

Table 6-4 Current and Projected Recycled Water Uses

Name of Agency Producing (Treating) the Recycled Water								
Name of Agency Operating (Distributing) the Recycled Water								
Beneficial Use Type	**General Description of 2015 Uses**	**Level of Treatment**	**2015**	**2020**	**2020**	**22030**	**2035**	**2040 (opt)**
Sales to other agency	*Agency name*	*drop down menu*						
Agricultural irrigation								
Landscape Irrigation (ex. Golf course)								
Golf Course Irrigation								
Commercial Use								
Industrial Use								
Geothermal or energy production								
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge								
Surface water augmentation								
Direct potable reuse								
Unallocated Water								
Other								
		TOTAL						

Comment [g39]: Simon Hsu from LADWP - 6-4: Currently, our recycled water use is not separated into the use types as listed in the table. I will need to investigate if our billing system is capable of classifying recycled water into the desired use types. Otherwise, I may report recycled water as unallocated water. The projection of recycled water under different use types can be even more challenging since it's not a simple function of population and economic growth. Specific types of industry and land use, and the proximity of recycled water source will determine the recycled water use potential.

Comment [g40]: Is it necessary to divide landscape from golf course irrigation – agencies may simply want to report irrigations. ALSO – "ex, generally means example, not exclusion.

Text accompanying Table 6-4 should:

- Provide a narrative overview of the level of treatment (there may be more than one) of recycled water used and the types of uses. 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 quality of water (i.e., level of treatment) provided and the specific types of recycled water uses, including such information as crops irrigated or type of landscapes irrigated.
- Provide a summary of planned future projects, including technical and economic feasibility.

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.

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.

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

Use Type	2010 Projection for 2015	2015 Actual Use
Sales to other agencies		
Agricultural irrigation		
Landscape irrigation (ex golf courses)		
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal / energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge		
Other (define)		
Total	***0***	***0***

Comment [g41]: From Simon Hsu of LADWP - 6-5: Recycled water of different use types for 2015 was not projected in 2010 UWMP. Comparison will be at aggregated level.

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.

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.

CWC 10633(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.

Each UWMP preparer is to complete this section, whether recycled water is used, planned, or not planned to be used.

- Assess potential uses of recycled water, whether or not it is currently being used in the service area.
- Discuss the issues constraining recycled water implementation and expansion and what could be done to address those limitations.
- 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 them 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.
- 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).

Table 6-6 Methods to Expand Future Recycled Water Use			
Actions	**Description**	**Planned Implementation Year**	**Expected increase in recycled water supply (AFY)**
Name of Action			
Name of Action			
Name of Action			
		Total	***0***

The water supplier may not be the organization responsible for the treatment or distribution of recycled water in the service area. However, water agencies will need to coordinate with the local wastewater treatment operator and recycled water purveyor in order to address opportunities to expand recycled water use, assess revenue impacts to both agencies, and identify 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.

6.6 Desalinated Water Opportunities

CWC 10631(~~i~~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.

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 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. The source of the water and the measurement of total dissolved solids (TDS) may be included in the “Detail” column of Table 6-8, or as a narrative.

If the water supplier deems 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.

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.

Describe any planned or potential future water exchanges or transfers. The narrative description may include the name(s) of other agencies participating in the transfer or exchange, the volume of water expected to be transferred or exchanged, and 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.

For purposes of the UWMP, water agencies will make their own determination as to whether a water demand is an exchange, transfer, or a sale.

Enter exchange and transfer information into Table 6-8.

6.7.1 Transfers

The California Water Code (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.

6.7.2 Exchanges

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).

6.7.3 Emergency Interties

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

6.8 Future Water Projects

CWC 10631(~~h~~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.

Identify and describe expected future projects and programs that the supplier may implement to increase their water supply. Include a description of the expected increase in water supply and an estimated timeline for implementation.

Capital improvement projects that do not increase the water supply to the water agency should not be included in Table 6-7.

Table 6-7 Future Water Supply Projects

Actions	Description	Planned Implementation Year	Expected increase in water supply (AFY)
Name of Action			
Name of Action			
Name of Action			
		Total	***0***

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.

Table 6-8 Provide the volume of water, by source, in two formats. The first is the volume that is reasonably expected, based on historical deliveries for average years. The table also provides 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. State Water Project (SWP) reliability projections are an excellent source of reasonably expected water volumes for agencies that are contractors to the SWP. Water supply projections from wholesale agencies are also a source for reasonably expected supplies for retail agencies that receive water from wholesalers.

Table 6-8 Water supplies — current and projected

		2015			2020		2025		2030		2035		2040 (opt)	
Drop down menu - May use each category multiple times.	**Detail**	Actual Volume	Level of Treatment of Source Water	Total Right or Capacity (optional)	Reasonably Expected Volume	Total Right or Capacity (optional)	Reasonably Expected Volume	Total Right or Capacity (optional)	Reasonably Expected Volume	Total Right or Capacity (optional)	Reasonably Expected Volume	Total Right or Capacity (optional)	Reasonably Expected Volume	Total Right or Capacity (optional)
Purchased Water	*Name of Supplying Agency*		Drop Down											
Groundwater	*Name of Basin or Area*		Raw or Potable											
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*

Comment [g42]: Mike Swan – does DWR have any guidance on protocols for projecting future demand?

Comment [g43]: Conjunctive use and groundwater recharge, could create a double counting In "Supplies", Double count source and use twice.

Comment [g44]: "Capacity" may not be best word – maybe "Safe Yield"

Comment [g45]: "Reasonably Expected" better to use code language – "Available" can recommend that Available = Reasonably expected.

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.

6.10 Climate Change Impacts to Supply (Optional)

Include a narrative summary of the section "II Water Supply" found in the IRWM Climate Change Vulnerability Assessment (Appendix I)

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 should consider in preparing this part of a UWMP includes:

- DWR's Draft State Water Project Delivery ~~Reliability~~ Capability Report 2015~~3 (2015~~ update ~~if available)~~
- 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 Supplementing Inconsistent Sources

7.2 Water Quality

7.3 Reliability by Type of Year

7.4 Supply and Demand Assessment

7.5 Regional Supply Reliability

7.1 Supplementing Inconsistent 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.

Identify and describe known inconsistent water sources and the agency's plans to supplement any inconsistent sources. 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.

Table 7-1. Identify the water sources and potential factors that may result in a reduction of water supply using Table 7-1. and provide a narrative description.

Narrative Provide a narrative description of any inconsistencies in water supplies noted in Table 7-1. This narrative description is critical to explaining the degree and probability of any inconsistencies.

- The narrative may describe any particular circumstances that would make a source inconsistent, for example, source A may be consistent in a normal year, but inconsistent in multiple dry years.
- In this section water suppliers should address possible future constraints on water supplies, such as declining groundwater levels, sea level rise, or diminishing snow pack.
- Also include 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. Simply refer the reader to the other sections within the UWMP that provide these details.

7.2 Water Quality

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

Identify the quality of source water and describe how the water quality may affect water management strategies and/or supply reliability for the water agency.

The estimation that water quality may impact management strategies or water supply 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.

Complete Table 7-1 and provide a narrative description.

- **Table**. Table 7-1. Identify source water quality for each existing water supply.
- **Narrative**. For any existing water sources that have a water quality issue, it is critical to include a narrative that describes any impacts to water management strategies and supply reliability.

If it is anticipated that water quality may be impacted for an existing supply, such as a contamination plume in the groundwater moving toward the agency's wells, or saltwater intrusion, discuss water management strategies that are anticipated and any expected impacts to supply reliability.

Table 7-1: Supply constraints

Source type	Name of source (optional)	Type of Constraint	Note on Constraint	Affects water management strategies	Affects supply reliability
Drop Down		Drop down		y/n	y/n
		Legal			
		Environmental			
		Water Quality			
		Climatic			
		Other			

Comment [g46]: From MWD This Y or N table may unnecessarily highlight issues without providing relative scale of the risks. Most water sources have one or all of these constraints. If we are providing thorough narrative already, what purpose does this table serve?
Also the constraint categories are not in the Act. Suggestion: May keep table in guidebook for agencies who would volunteer info but NOT include as part of the standardized tables.

Recommended

Agencies may choose to include the most recent Consumer Confidence Report for their 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.

Discuss any planned actions to address noted vulnerabilities.

7.3 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.

Describe the historic reliability of the water supply and any vulnerability to seasonal or climatic shortage, to the extent practicable. ~~This description can be reported in two formats:~~

Table. Table 7-2 – In the "Base Year" column, identify the years that represent each type of year and 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 if the dry year hydrology were repeated.

- **Narrative.** Provide a narrative description of the method used to determine the basis for which years represent an agency's average, single-dry and multiple-dry years.

Types of years may be based on different factors for each particular water source. Historic hydrologic data are commonly used to establish water year types and may be based on the annual run off in a particular watershed or annual precipitation. Other water sources' water year types may be based on other historical factors. Water agencies are encouraged to use the most accurate data available for as long a time period as is available.

7.3.1 Types of Years

Table 7-2: Bases of water year data			
Year Type	Base Year	Available supplies if year type repeats	
		Agency may complete these columns for volume only, percent only, or both	
		Volume available	% of avg supply
Average Year			100%
Single-Dry Year			
Multiple-Dry Years 1st Year			
Multiple-Dry Years 2nd Year			
Multiple-Dry Years 3rd Year			

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

Single-dry year —the year with the lowest water supply availability to the agency. Generally considered to be the lowest annual runoff for a watershed since the water-year beginning in 1903.

Multiple-dry year period —the lowest average water supply availability to the agency for a consecutive multiple year period (three years or more). Generally considered to be the lowest average runoff for a consecutive multiple year period (three years or more) for a watershed since 1903.

For State Water Project contractors, information on the water supply available in these water year categories is contained in the SWP Delivery ~~Reliability~~ Capability Report.

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 are 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/

7.3.2 Agencies with Multiple Sources of Water

RECOMMENDED

Agencies with multiple water sources may have experienced differing reliability for each source.

Table 7.2 Agencies may report the basis of water year data (Table 7-2) as an estimated aggregation of all their water sources.

Tables 7-4 and 7-5 Agencies must report total projected water supplies for single and multiple dry years in Tables 7-4 and 7-5. If an agency chooses to report projections by individual water source for single dry and multi dry years, additional tables may be included.

7.4 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.

Assess the water agency's supply reliability for normal (average), single-dry year, and multiple-dry years for 2015, 2020, 2025, 2030 and 2035. Reporting for the year 2040 is optional. Provide the water supply reliability assessment in two formats:

- **Tables**. Quantify supply and demand for the various types of years using Tables 7-3, 7-4, and 7-5

- **Narrative.** Provide a narrative that summarizes the information found in the Tables.

When discussing water supply reliability, consider including a discussion of management actions to be taken if a supply shortage is shown on any of the tables; this may be taken from the Water Shortage Contingency Plan (WSCP) section or the agency may simply refer to the WSCP chapter.

Table 7-3: Supply and demand comparison — normal year						
	2015	2020	2025	2030	2035	2040 -Opt
Supply totals (autofill)						
Demand totals (autofill)						
Difference	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)

Table 7-3 Values will be entered automatically from Table 6-8 (Water Supplies Current and Projected) and Table 4-6 (Total Water Use).

For Table 7-4 and 7-5, enter the estimated dry and multiple dry water year supplies and demands for the 20 year planning horizon. The tables will display a negative value for years where demands are higher than supplies.

Supply

Generally, supply projections for a single dry year are the normal/average expected supply (from Table 7-3) multiplied by the percentage for a single dry or multiple dry year(s) (from Table 7-2). If another method is used to assess projected supply, include a description of the method.

Demand

Include a narrative description of the methodology used to assess the projected demand totals for single dry and multi-dry years. Some factors to consider include, potential for supplemental water supplies, potential for increased irrigation demand because of low rainfall, and expected demand reduction due to increased implementation of demand management measures, implementation of drought stages, savings from codes and standards, and increased drought messaging.

Table 7-4: Supply and demand comparison — single dry year						
	2015	2020	2025	2030	2035	2040 -Opt
Supply totals						
Demand totals						
Difference	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)

Table 7-5: Supply and demand comparison — multiple dry-years							
		2015	2020	2025	2030	2035	2040 Opt
First year	Supply totals						
	Demand totals						
	Difference	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)
Second year	Supply totals						
	Demand totals						
	Difference	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)
Third year	Supply totals						
	Demand totals						
	Difference	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)	(auto-calculate)

7.5 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.

Briefly summarize how the water management actions described in this UWMP update will lead to greater regional and local water supply reliability and decrease the reliance on water imported from other regions.

Provide a narrative description of the water management tools and options that are being implemented, or are planned for implementation, that maximize 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, among other actions.

Recommended

Water suppliers may quantify increased regional water supply reliability by completing Table 7-6. Local and regional agencies with increasing regional supply reliability will show an increase, over time, of the percentage of local supply and a decrease of the percentage of imported supply.

Conservation as Water Supply

For the purposes of this table only, conservation is included as a water supply. Table 6-8 in Chapter 6 does not allow for the inclusion of “conservation” as a supply. Rather, it is reflected as a reduction in demand, as reported in Table 4-6.

To calculate conservation savings as a water supply volume, DWR recommends determining the Gallons per Capita per Day (GPCD - see Chapter 5) savings for each year in the table, multiplying the per Capita savings by the agency's population, and then converting the agency's savings from gallons/day to Acre Feet per Year.

1. Calculate the 2010 Conservation Savings in GPCD
   (Baseline Water Use $_{GPCD)}$ – (2010 Water Use $_{GPCD}$) = 2010 Conservation Savings $_{GPCD}$
2. Convert Per Capita per Day Savings to Agency per Day Savings
   (2010 Conservation Savings $_{GPCD}$) X (2010 Population $_{Agency}$) = 2010 Conservation Savings $_{Gallons/Agency/Day}$
3. Convert Agency Savings from Gallons per Day to Acre Feet per Year
   (2010 Conservation Savings $_{Gallons/Agency/Day}$) X (365 $_{days/year}$) = 2010 Conservation Savings $_{AF/Year}$
   325,850 $_{gallons/acrefoot}$

Calculating Conservation Savings *(will be as appendix, not a numbered data table)*			
Year	GPCD	Agency Population	Conservation Savings (AF/Year)
2000	200		
2005	190	26000	291
2010	180	27000	302
2015	170	28000	314
2020	160	29000	325
2025	150	30000	336
2030	140	31000	347
2035	130	32000	358

Comment [g47]: Awaiting guidance from DWR management

Table 7-7: Increasing reliance on local water supplies (Optional)

	2000 (Actual)		2005 (Actual)		2010 (Actual)		2015 (Actual)		2020 (Projected)		2025 (Projected)		2030 (Projected)		2035 (Projected)	
Water Supply Sources (Drop Down Menu)	Volume	% of Supply	Volume	% of Supply	Volume	% of Supply	Volume	% of Supply	Volume	% of Supply	Volume	% of Supply	Volume	% of Supply	Volume	% of Supply
Local Sources																
Local groundwater																
Local surface water																
Recycled water																
Desalination																
Storm water capture																
Conservation [1]																
Other																
Subtotal local water sources	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	
Imported sources																
Imported Water (By Source)																
Transfers into Service Area																
Subtotal imported water sources	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	
Total Water Supplies	*0*		*0*		*0*		*0*		*0*		*0*		*0*		*0*	

[1] Conservation is included as a source of water for this table only. It may not be considered a source for use in the tables found in Chapter 5. Conservation may be calculated by comparing current GPCD to baseline GPCD. Future conservation is calculated as future water use target minus baseline.

Chapter 8
Water Shortage Contingency Planning

Water shortage contingency planning is a strategic planning process to prepare 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. Included is guidance for reporting the staged response to a water shortage, such as a drought, that occur 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 an urban water supplier should consider in preparing this part of a UWMP includes:

- DWRs Urban Drought Guidebook 2008 Edition - provides extensive guidance for water shortage contingency planning, more detail than can be addressed in one chapter of the 2015 UWMP Guidebook. http://www.water.ca.gov/pubs/planning/urban_drought_guidebook/urban_drought_guidebook_2008.pdf
- DWRs 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

The following sections are included in this chapter:

8.1 Stages of Action

8.2 Mandatory Prohibitions – End Users

8.3 Penalties, Charges, Other Enforcement

8.4 Consumption Reduction Methods

8.5 Determining Reductions

8.6 Revenue and Expenditure Impacts

8.7 Resolution or Ordinance

8.8 Catastrophic Supply Interruption

8.9 Minimum Supply Next Three Years

DRAFT

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.

Comment [g48]: If SWRCB confers new authority, as mentioned in EO, perhaps refer to that here – especially if it ends up as change in code. Note that emergency drought orders should be separately noted because they may change during the course of the UWMP cycle.

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.

The number of stages in a WSCP is at the discretion of the water supplier. Typically, water agencies will have between 3 and 5 stages. The stages will demonstrate increasing water shortages and increasing levels of prohibitions and consumption reduction methods. Agencies must include a stage that addresses a reduction of 50 percent in water supply. Many agencies include a stage in the WSCP that is always in force.

Tables The water supply conditions that identify each stage are identified in Table 8-1. In this table, water agencies may identify the stage by either the percent supply reduction, or the water supply condition. Table 8-2 reports the prohibitions that are placed upon end-users in each stage. Table 8-3 reports consumption reduction methods that are implemented specifically by the water agency in each stage.

Narrative Include an outline of 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 condition include specific reservoir levels, levels of precipitation, groundwater availability, or water delivery estimates from other water agencies.

Recommended – OTHER TRIGGERS – Mandated by legislation, other trigger may be financial

The description of the stages should include a description of the methods that will be used to implement the stages of action. This may include a description of the methods that put a new stage into effect. Perhaps moving from one stage to another is automatically triggered ~~trigger~~ 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 another stage.

Though not required by the Water Code, DWR recommends that water agencies include a stage, or a plan of action, to address severe water shortages of over a 50% 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.

Comment [g49]: Committee requests more specific guidance.

Table 8-1: Stages of WSCP

Stage	Complete One or Both	
	Percent Supply Reduction[1]	Water Supply Condition
	numerical value as percent	*narrative description*

8.2 Mandatory Prohibitions – End Users

SECTION 8.2 AND TABLE 8-2 APPLY TO RETAIL WATER AGENCIES ONLY

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.

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

Table 8-2 provides a drop down menu of common categories of restrictions and prohibitions that may be placed upon the end users. Each of these categories is described below. 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 incorporates reporting of any penalties, charges or other enforcement (see Section 8.3) that may be associated with the listed prohibitions.

8.2.1 Landscape Irrigation

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 only allowed 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.

8.2.2 Commercial, Industrial, Institutional (CII)

Lodging establishment must offer opt out of linen service – Examples include: Lodging establishments are required to place notices in each room that informs 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 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.

8.2.3 Water Features and Swimming Pools

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.

Restrict filling of residential swimming pools – Examples include: Swimming pools may not be filled unless authorized by a permit. Only new swimming pools are allowed to be filled. Water may not be used to fill a pool or to replace water lost to evaporation and use.

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.

If an agency chooses to include a limitation or prohibition of water use in water features, this prohibition or limitation is limited to decorative water features 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 a definition that distinguishes water features from swimming pools. An example of this would be to divide the two uses as “decorative water features” and “recreational water features”.

8.2.5 Other

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 automatic shut of hoses – 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.

Recommended

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

Agency may choose to 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.

8.3 Penalties, Charges, Other Enforcement

SECTION 8.3 AND TABLE 8-2 APPLY TO RETAIL WATER AGENCIES ONLY
Wholesale water agencies will report penalties, charges, or other enforcement in Section 8.4.

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

Table 8.2 In the last column of Table 8.2, indicate whether or not the water agency has a penalty, charge, or other mechanism for enforcing the stated limitation or prohibition.

Narrative

Include a narrative description, as applicable, of how the agency will enforce prohibitions from Section 8.2 that are listed in Table 8-2. For example, in the case of most prohibitions, agencies will issue a warning 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:

Comment [g50]: Should DWR include guidance on tiered rates in light of San Juan Capistrano ruling? SWRCB may be working on some guidance for this in accordance with the executive order.

- Section 8.3 Penalties, Charges, and Other Enforcement
- Section 8.6 Impacts to Revenue and Expenditure
- Section 9.1.3 Conservation rate structures

Table 8-2: Restrictions and Prohibitions on End Users			
Stage	**Restrictions and Prohibitions to End Users** *Drop down menu with categories*	**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		
	Restrict filling of residential swimming pools		
	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		

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8.4 Consumption Reduction Methods

Consumption reduction methods are actions that are taken solely by the water agency.

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.

Comment [g51]: From MWD [What is the Water Code authority for this section? If it is Water Code Section 10632(a)(5), text box above states only applies to retail water agencies]

Comment [g52]: Add applicable text box for code section

Table 8-3 provides a drop down menu of common categories of consumption reduction methods that can be used by a water agency. An adjacent column in Table 8-3 provides a field for the UWMP preparer to include additional details about the consumption reduction methods, if needed. The categories of consumption reduction methods are listed below along with examples of specific actions that could fall into each category.

8.4.1 Categories of Consumption Reduction Methods

Expand Public Information Campaign – 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 – Increase billing frequency. Change format to report consumption in gallons per capita per day. Add information to the bill comparing the customer's use to similar customers.

Increase Frequency of Meter Reading – Change from bi-monthly to monthly meter reading. Employ AMI so that meters are read in real time.

Comment [g53]: Changing frequency of meter reading may take too much time for it to be implemented in response to a stage. May be able to be implemented if you have AMI/AMR as enforcement tool, not necessarily billing.

Offer Water Use Surveys – 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 – Implement new (toilet, clothes washer, etcetera) rebate programs. Implement new (shower head, aerator, etcetera) 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 – 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 – Decrease the length of time for each line flushing. Decrease the frequency of line flushing.

Reduce System Water Loss – 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 4.2 for audit protocols.

Increase Water Waste Patrols – 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 – The water supplier does not approve new water service connections, or the water supplier will only approve a new connection if the applicant can demonstrate a net zero demand increase for the new connection. Should we provide a definition or description of net zero demand? Hard to find this with google search.

Comment [g54]: Offset the projected water use with conservation projects inside and outside of project area. Rancho California is including this in WSCP, though still working to develop details of net zero demand. Western Municipal also working on this. This is applicant driven, though could be in partnership with water supplier. Eastern has method of applicant pays fee to implement conservation elsewhere. Could be used as water supply reliability fee. Rancho CA looked at FEE, but up against prop 218.

Implement or Modify Drought Rate Structure or Surcharge – (see Section 8.4.2) Implement a drought rate structure. Modify a drought rate structure. Implement a drought surcharge on all customers.

Other – Any other action that the agency may take to reduce water consumption.

Comment [g55]: Add rebates for turf removal.

Comment [g56]: Table 8-3 MWD–Contingency planning for regional wholesalers are higher scale water supply drought management type actions not necessarily consumption reduction actions. Wholesalers actions may not fit within this table. Suggestion: Provide option to attach agency's Supply and Drought Management and/or Allocation Plan instead of the table 8-1 and 8-3.

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

Stage	Consumption Reduction Methods by Water Supplier *Drop down menu with categories*	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	
	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	

8.4.2 Rate Structures

Water agencies should seek legal counsel when considering a change or addition to a drought or conservation rate structure. A drought rate structure or surcharge that is implemented in times of water shortage is different than 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 a conservation rate structure that contained an embedded drought rate structure.

Agencies may choose to 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:

- Section 8.4 Penalties, Charges, and Other Enforcement
- Section 8.6 Impacts to Revenue and Expenditure
- Section 9.1.3 Conservation rate structures

8.5 Determining Reductions

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

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. If the water agency is not metered, a description of the method used to measure consumption reduction must be included in the UWMP.

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 reserves and rate adjustments.

Discuss the expected change in revenue and expenditure to the water agency as a result of implementing the Water Shortage Contingency Plan. Agencies typically experience a decrease in revenue with reduced water sales. Expenditures can also be expected to increase during water shortages as a result of increased outreach to customers about water conservation,

possibly as a result of purchasing new water supplies, and possibly as a result of developing and implementing a drought rate structure.

8.6.1 Rate Structures, Surcharges (also see Section 8.4.2)

Well-designed 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.

A rate structure or surcharge that is implemented in times of water shortage is different than a conservation rate structure, which is in place at all times (See Chapter 9). Agencies may choose to embed a drought rate structure within their conservation rate structure and activate the drought rate structure when needed.

If an agency ~~will~~ includes a discussion of rate structures as part of the revenue and expenditure discussion, 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 8.4 Penalties, Charges, and Other Enforcement
- Section 8.6 Impacts to Revenue and Expenditure
- Section 9.1.3 Conservation rate structures

Drought surcharges are not tied to a rate structure but impose a surcharge on customers during a water shortage. The surcharge enables the water agency to cover the additional expenses incurred during a water shortage, such as additional public outreach on conservation and acquisition of additional or more expensive water supplies.

8.6.2 Use of Financial Reserves

Discuss the agency's planned use of financial reserves to address decreased water sales during a water shortage (if applicable). Water suppliers may maintain a dry-year contingency reserve fund to protect revenue through two or more consecutive years of supply reductions below normal demand levels.

8.6.3 Other Measures

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, a capital improvement reserve fund, or reduction in agency staff.

8.7 Resolution or Ordinance

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

Water agencies are required to develop the 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.

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 Water Code 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 suppliers in the region, participation in comprehensive regional disaster plans, or participation in the Water/Wastewater Agency Response Network (WARN), a network of agencies which supports and promotes statewide emergency preparedness, disaster response, and mutual assistance

matters for public and private water and wastewater utilities. Their ~~Web site~~website can be found at www.calwarn.org.

To address this requirement, 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).

Recommended

If an agency receives water from the delta, the Delta Plan recommends that the UWMP include a plan for possible interruption of water supplies for up to 36 months due to catastrophic events impacting the Delta.

Comment [g57]: Awaiting guidance from DWR Management

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.

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 assuming that the hydrology will be the same as the hydrology during the multiple-dry year period reported in Chapter 7, Section 7.4.

Table 8-4: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply			

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 section of the CWC was significantly modified in 2014 by Assembly Bill 2067, as recommended by the Independent Technical Panel (ITP). In its report to the Legislature, the ITP recommended that the Urban Water Management Planning 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 ~~two~~ three specific measures, an "other" category, and a narrative of asset management and wholesale supplier assistance programs.

The DMM chapter of a UWMP provides the opportunity for water suppliers to communicate their efforts to promote conservation and to reduce the demand on the water supply.

The following organization is not required. Agencies may organize by type of DMM and under each, describe past and future implementation.

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 *(Retail agencies only)*

9.4 Planned Implementation to ~~Meet~~ Achieve Water Use Targets *(Retail agencies only)*

9.5 Members of the California Urban Water Conservation Council

Comment [g58]: Wholesalers have specific DMMs they must implement and report on!

Comment [g59]: Consider renumbering so that all retail requirements are under one section

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.

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.

Wholesale agencies must provide narrative descriptions of ~~three~~ 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.

9.~~2~~1.1 Metering

Comment [CR60]: Should be 9.1.1

An 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.

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

9.~~2~~1.2 Public education and outreach

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

Examples include:

- Offering water audits to customers (residential or CII),

- Marketing of rebates and give-aways,
- School education programs,
- Fairs and public events,
- Newsletters,
- Website or online tools, and social media
- Newspaper articles
- Other activities not listed here

9.1.3 Water conservation program coordination and staffing support

Describe the activities of the water conservation program and staff duties, if any. The description may include the name and contact information of the water conservation coordinator(s), the number of staff in the program and how the program is funded.

9.~~2~~1.~~3~~ 4 Other demand management measures

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

If a wholesale agency will include a discussion of rate structures as part of the demand management measure discussion, 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 8.4 Consumption Reduction Methods
- Section 8.6 Impacts to Revenue and Expenditure
- Section 9.1.3 Other demand management measures

9.~~2~~1.~~4~~ 5 Asset management

Provide a narrative description of its Distribution System Asset Management Program, is there a reference? with relevant references. The narrative and references should include information directly applicable to pipeline components of the wholesale distribution system, including pipelines themselves, pipeline turnouts, and pipeline appurtenances, as well as other related components and equipment.

Comment [g61]: This is not a standard term with standard definition recognized by all agencies. Check ITP notes on this to determine the intention.

Sources of information available to the wholesale supplier may include record drawings, shop drawings, lay sheets, project specifications (where appropriate), prior pipeline and facility condition inspection reports and construction inspection reports. Information related to pipeline construction, inspections, reports of condition, and pipeline conversions, may also be referenced.

9.~~2~~1.~~5~~ 6 Wholesale supplier assistance programs

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 on water conservation, performing surveys for end users, 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)
(1) (B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:
(i) Water waste prevention ordinances.
(ii) Metering.
(iii) Conservation pricing.
(iv) Public education and outreach.
(v) Programs to assess and manage distribution system real loss.
(vi) Water conservation program coordination and staffing support.
(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

Describe the efforts of the water agency, both over the previous 5 years (see Section 9.~~2~~3), and planned efforts to meet water use targets (see Section 9.~~3~~4), in implementing each of the following DMM categories.

9.2.1 Water waste prevention ordinances *(Retail agencies only)*

A water waste ordinance explicitly states that the waste of water is to be prevented and 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 could 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, it should be included as an attachment in the UWMP.

9.2.2 Metering

An agency that is fully metered should state that fact in the UWMP.

If an agency is not yet fully metered (the CWC requires full metering by 2025), it should discuss its plans for becoming fully metered in accordance with LIST CODE SECTION.

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

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

Agencies should also consider including 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 agencies only)*

Comment [g62]: Will DWR include any comments reflecting the San Juan Capistrano ruling?

In this section, describe the conservation 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 that would 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 low water use is priced in a low priced tier, and higher water use is in progressively higher priced tiers. Another example is the use of water budgets, wherein each customer is given a water budget and if that budget is exceeded, they must pay a penalty or pay a higher water rate for excessive use.

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 9.1.3 Conservation Rate Structures

The UWMP preparer may choose to use the language from the agency's CUWCC report, if applicable, when describing the conservation rate structure.

9.2.4 Public education and outreach

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

This may include:

- Offering water audits to customers (residential or CII),
- Marketing of rebates and give-aways,
- Communicating water use via water bills (e.g., increased frequency of billing, an easy to understand bill format, or bills that rate a customer's water use),
- School education programs,
- Fairs and public events,
- Newsletters,
- Website or online tools, and social media
- Newspaper articles
- Other activities not listed here

9.2.5 Programs to assess and manage distribution system real loss *(Retail agencies only)*

Describe the agency's programs to detect and repair distribution system leaks. A mention of the measured losses reported in Chapter 4 may also be included here.

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

9.2.6 Water conservation program coordination and staffing support ~~*(Retail agencies only)*~~

Describe the activities of the water conservation program and staff duties, if any. The description may include the name and contact information of the water conservation coordinator(s), the number of staff in the program and how the program is funded.

9.2.7 Other demand management measures

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 *(Retail agencies only)*

Comment [g63]: Wholesalers DO need to report their implementation! If they are CUWCC members they can submit the reports to cover this! See CUWCC section below: it applies to all CUWCC members!

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.

Suppliers shall provide a narrative addressing the nature and extent of each DMM implemented over the past five years, from 2010 through 2015. Each DMM listed in section 8.1 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 activities of the particular DMM program (e.g. the dollar amount rebated for fixture replacement, the process used to inform customers of a DMM program, or the content of an education program.)
- **Extent** – Quantify the DMM implementation (e.g., the number of toilets rebated, number of large landscape accounts with budgets, or the number of school presentations).

Recommended

Agencies may choose to include an overview that describes the effectiveness of the implemented DMMs in meeting their 2015 interim water use targets.

For DMMs listed in Section 8.1 that were not implemented, agencies may choose to include a description of the rationale for not implementing the DMMs, such as the agency is focusing all resources on the most effective DMM(s), or a description of the obstacles that prevented implementation, such as funding constraints or the lack of authority.

9.4 Planned Implementation to Achieve Water Use Targets *(Retail agencies only)*

> *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.*

Using the list of DMMs in section ~~8~~9.1, describes 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

Water agencies may choose to include:

- An overview describing the effectiveness of the DMMs in meeting their 2020 water use targets.
- A description of steps necessary to implement planned measures.
- How the DMM is or will be marketed or advertised.
- A description of the methods that will be used to estimate the expected conservation savings for DMMs.

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.*

CUWCC members have the option of submitting their 2014–2015 BMP annual reports in lieu of, or in addition to, describing the DMMs in their UWMP if the supplier is in full compliance with the CUWCC's Memorandum of Understanding Regarding Urban Water Conservation in California (the CUWCC MOU). The submitted reports must include documentation from the CUWCC that supplier has met the MOU coverage requirements and is in full compliance with the MOU.

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Chapter 10
Plan Adoption, Submittal, and Implementation

This Section provides information on the requirements for a public hearing, the adoption process for the UWMP, how to submit an adopted UWMP, plan implementation, and the process for amending an adopted UWMP.~~, and plan implementation.~~

This chapter includes the following sections:

10.1 Notice of Public Hearing

10.2 Public Hearing and Adoption

10.3 Plan Submittal

10.4 Public Availability

10.5 Plan Implementation

10.6 Amending an Adopted ~~Plan~~UWMP

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10.1 Notice of Public Hearing

Water suppliers must hold a public hearing prior to adopting the Plan. There are two audiences to be noticed~~notification requirements~~ for the public hearing:

- Notice to cities and counties
  - At least 60 days prior to the public hearing, notification of UWMP review
  - A notice of the time and place of the public hearing
- Notice to the public, as specified in Government Code 6066

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10.1.1 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 water~~s~~ 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.

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60 Day Notification

The Water Code states that the notification to cities and counties must be sent AT LEAST 60 days prior to the public hearing on the plan. Also see Section- 2.4.1

Recommended

Water agencies may send this notification to cities and counties well in advance of the 60 days, in order to provide the cities and counties ample opportunity to participate in the UWMP process. This can be noted in in Tables 2-4 and 10-1.

Notice of Public Hearing

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

Recommended

Notification letters can be addressed to the City Manager or County Administrator for the cities and counties to be noticed.

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.

Table 10-1: Notification to cities and counties

Names of cities and counties	60 Day Notice *(CWC 10621 (b))*	Notice of Public Hearing *(CWC 10642)*
	☐	☐
Expandable table	☐	☐

10.1.2 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.

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.

10.2 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 AGENCIES ONLY)

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.

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.

In order to verify that this had been accomplished, the UWMP shall include either an agenda of the public hearing, or an agenda of the adoption hearing that includes the public hearing as an agenda item.

RETAIL

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.

10.2.1 Adoption

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

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.

The governing body of the water agency shall make a determination as to whether or not the UWMP shall be modified in response to public comment, or adopted as presented.

Once revisions have been made, if any, the governing board must formally adopt the UWMP.

In order to verify that the governing body has adopted the UWMP, water agencies shall include the adoption resolution.

10.3 Plan Submittal

Comment [g64]: MLC – should guidebook specify that hard copies will not be accepted?

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

CWC 10644(a)
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.

10.3.1 Submitting UWMP to DWR

The water agency shall submit an electronic copy of its adopted 2015 UWMP to the Department no later than 30 days after adoption and no later than July 1, 2016, to this address:

Department of Water Resources
Statewide Integrated Water Management
Water Use and Efficiency Branch
P.O. Box 942836
Sacramento, CA 94236-0001
Attention: Coordinator, Urban Water Management Plans

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

901 P Street

Sacramento, CA 95814

Provide a cover sheet in the plan with the contact information of the UWMP preparer, and the City Manager or General Manager of the water agency.

After a supplier submits its Plan, 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 at that time and the Department will issue a letter to the agency with the results of the review.

10.3.2 Electronic Data Submittal

PLACEHOLDER – DWR is in the process of developing an online submittal tool that will be used for the 2015 UWMPs. When the tool is ready for use, DWR will make an announcement to the Guidebook Advisory Committee, the Urban Stakeholder Committee, it's UWMP list serve, the Water Plan ENews, and the DWR Urban Water Management webpage http://www.dwr.water.ca.gov/urbanwatermanagement/

10.3.3 Submitting UWMP to the California State Library

No later than 30 days after adoption, the water agency shall submit a CD copy 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:

900 N Street
Sacramento, CA 95814

10.3.4 Submitting UWMP to the Cities and Counties

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 will also satisfy Water Code Section 10635(b).

10.4 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.

Include a statement in the UWMP that describes the availability of the adopted UWMP for public review during normal business hours. For example, a supplier may leave a copy of their plan at the front desk, or post their plan on their website for public viewing.

10.5 Plan Implementation

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

Include a discussion of the planned implementation of~~method the water agency will use to implement~~ the adopted UWMP.

Recommended

Specific sections that may be addressed include:

- Chapter 5 Baselines and Targets (RETAIL ONLY),
- Chapter 6 Sections 6.5.5 Actions to Encourage and Optimize Future Recycled Water Use and 6.8 Future Water Projects,
- Chapter 7, Section 7.1 Supplementing Inconsistent Sources,
- Chapter 8 Section 8.9 Minimum Supply Next Three Years, and
- Chapter 9 Demand Management Measures

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)
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.

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.

The only exception to this is the 60 day notification to cities and counties to whom the supplier provides water. The 60 day notification that was sent when the original plan was being developed addresses the requirement.

Comment [g65]: GH checked code – 60 day notification not required for amendments (10621(b) is not in Article 3)

Comment [g66]: MLC Not sure this is the case. I think each subsequent amendment must be provided.

DRAFT