

Chapter 2

System Description

Chapter 2 provides guidance for describing the urban water system, including a description of the service area, climate, population, and demographics. 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:

- 2.1 General Description
- 2.2 Service Area Map(s)
- 2.2 Service Area Climate
- 2.3 Service Area Population

2.1 General Description

CWC Section 10631 (a)

Describe the service area of the supplier...

Provide a description of the service area of the supplier.

Delineate any significant areas within the service area boundary that are NOT served by the water agency, for example, institutions or industries served exclusively by a private well or by other water suppliers.

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.

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.

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.

2.2 Service Area Maps

In Chapter 4, this guidebook addresses a specific mapping requirement for estimating an agency's population to comply with the Water Conservation Act of 2009 (SBX 7-7). Details about this mapping requirement are found in Chapter 4.

Recommended:

Maps can reduce the complexity of a service area into a simple visual statement. For this reason, water agencies should include map of their service area as part of their UWMP

Water suppliers should consider including the following elements as part of their service area map(s):

- transmission pipelines or canals used to move water
- water treatment plants
- storage reservoirs
- municipal boundaries of cities or towns that are included in, or overlap with, the supplier's service area.

2.3 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 (ET_o), temperature, precipitation patterns, as well as any challenges associated with providing water in a particular climate.

This information can be obtained from CIMIS stations nearest the service area.

Agencies may report climate information in a narrative format, in OPTIONAL Table 2-1, 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 2-1 or provide an average of the service areas.

Table 2-1 may be modified to reflect the table used for weather normalization for calculation of baselines and targets.

Table 2-1: 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://www.cimis.water.ca.gov/			

Climate Change

The CWC does not require that UWMPs address climate change; however, because the effects of climate change are already being seen and are introducing new 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 Section IV Sea Level Rise, Section V Flooding, Section VI Ecosystem and Habitat Vulnerability, or Section VII Hydropower of the Climate Change Vulnerability Assessment, Appendix XX.

Discuss any planned actions to address noted vulnerabilities from the Assessment.

2.4 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 population estimates for the service area in Table 2-2.

The 2015 population estimate must be consistent with the estimate provided in Chapter 4-Baselines and Targets, which was developed in accordance with a specific methodology, found in Methodologies for Calculating Baseline and Compliance Water Use, DWR 2010.

Provide the source(s) of the population projections (2020, 2025 etc...). The estimates of future population must be based upon data from the 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 or city’s general plan may be used. If the agency does not take population projections directly from a standard source, such as DOF, general plan or local council of governments but develops its own projections, the UWMP should describe how these projections were developed.

Table 2-2: Population - Current and Projected						
	2015	2020	2025	2030	2035	2040
Population Served						

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.

If there are significant non-resident populations, such as populations based on vacation, agricultural, or business economies, provide a brief narrative describing this element of the population.

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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