ATTACHMENT 3

PREPARED BY

WEST YOST

CITY OF NAPA

CITY OF NAPA

2025 URBAN WATER MANAGEMENT PLAN

PUBLIC DRAFT

MAY 2026

2025 Urban Water Management Plan

Prepared for

City of Napa

Project No. 424-60-26-28

Prepared by: Amy Kwong, PE _____ Date _____

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Fahrenheit
2020 Target	2020 Urban Water Use Target
AB	Assembly Bill
ABAG	Association of Bay Area Governments
Act	Urban Water Management Planning Act
AF	Acre-Feet
AFY	Acre-Feet Per Year
American Canyon	City of American Canyon
AMI	Advanced Metering Infrastructure
AMP	Asset Management Plan
AMR	Automatic Meter Reading
AWWA	American Water Works Association
Barwick Jamieson	Edward I. Barwick Jamieson Canyon
BiOps	Biological Opinions
BMP	Best Management Practices
CALGreen	California Green Building Standards Code
Calistoga	City of Calistoga
CalWEP	California Water Efficiency Partnership
CAP	Climate Action Plan
CFD	Community Facility District
cfs	Cubic Feet Per Second
CII	Commercial, Industrial, and Institutional
CIMIS	California Irrigation Management Information System
City	City of Napa
City Council	Napa City Council
County	Napa County
CVWD	Congress Valley Water District
CWC	California Water Code
DCP	Drought Contingency Plan
DDW	Division of Drinking Water
Delta	Sacramento-San Joaquin Delta
Division	City of Napa Water Division
DMMs	Demand Management Measures
DOF	California Department of Finance
DRA	Drought Risk Assessment
Draft 2025 DCR	Draft State Water Project Delivery Capability Report (December 2025)
DWR	California Department of Water Resources
DWR Guidebook	Urban Water Management Plan Guidebook 2025
DWR's Methodologies	DWR's *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (2016)
EIR	Environmental Impact Report

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EPA	Environmental Protection Agency
ERTs	Encoder Receiver Transmitters
ET	Evatranspiration
ETo	Evapotranspiration
FTE	Full-time Equivalents
GHG	Greenhouse Gas
GP	General Plan
GPCD	Gallons Per Capita Per Day
gpf	Gallons Per Flush
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HCD	Housing and Community Development
HECWs	High-Efficiency Clothes Washers
HETs	High-Efficiency Toilets
HEUs	High-Efficiency Urinals
HMP	Hazard Mitigation Plan
hp	Horsepower
HRL	Healthy Rivers and Landscapes
ILI	Infrastructure Leakage Index
KCWA	Kern County Water Agency
kWh	Kilowatt-Hours
LAFCO	Local Agency Formation Commission of Napa County
LCWD	Los Carneros Water District
M&I	Municipal & Industrial
MC	Municipal Code
MCL	Maximum Contaminant Levels
MG	Million Gallons
MGD	Million Gallons Per Day
MST	Milliken-Sarco-Tulocay
MTC	Metropolitan Transportation Commission
MWELO	Model Water Efficient Landscape Ordinance
NAICS	North American Industry Classification System
NapaSan	Napa Sanitary District
NBA	North Bay Aqueduct
NCFCWCD	Napa County Flood Control and Water Conservation District
NMC	Napa Municipal Code
NOD	North of Delta
NPDES	National Pollutant Discharge Elimination System
O&M	Operations & Maintenance
POU	Place of Use
psi	Pounds Per Square Inch
QWEL	Qualified Water Efficiency Landscaper

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RHNA	Regional Housing Needs Allocation
RUL	Rural Urban Limit
RUWMP	Regional Urban Water Management Plan
SB	Senate Bill
SB X7-7	Water Conservation Act of 2009
SCADA	Supervisory Control and Data Acquisition
SGMA	Sustainable Groundwater Management Act
SOD	South of Delta
SOI	Sphere of Influence
St. Helena	City of St. Helena
State Water Board	State Water Resources Control Board
SWP	State Water Project
TDS	Total Dissolved Solids
ULFTs	Ultra-Low-Flush Toilets
USBR	United States Bureau of Reclamation
USEPA	U.S. Environmental Protection Agency
UWMP	Urban Water Management Plan
UWUO	Urban Water Use Objectives
Valley Water	Santa Clara Valley Water District
WET	Water Education for Teachers
WRF	Water Recycling Facility
WSA	Water Supply Agreement
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant
WUE	Water Use Efficiency
Yountville	Town of Yountville

Executive Summary

INTRODUCTION

An Urban Water Management Plan (UWMP, plan) helps water suppliers assess the availability of their water supplies with current and projected water use to help ensure reliable water service under different conditions. This water supply planning is especially critical for California as climate change alters rainfall and snowfall patterns (impacting water supply availability) and development continues to occur statewide (increasing the need for reliable water supplies). The Urban Water Management Planning Act (Act) requires larger water suppliers that provide water to urban users (whether directly or indirectly) to develop UWMPs every five years. UWMPs evaluate conditions for the next 20 to 25 years, so these regular updates ensure continued, long-term water supply planning.

The City of Napa (City) sells and distributes treated water to individual water users (e.g., residences and businesses). Because the City provides water to more than 3,000 customers, it is required to prepare an UWMP.

This Executive Summary serves as a Lay Description of the City of Napa's 2025 UWMP, as required by California Water Code § 10630.5.

CALIFORNIA WATER CODE REQUIREMENTS

The California Water Code (CWC) documents specific requirements for California water suppliers. The Act is included in the CWC and specifies the required elements of an UWMP, including discussing an agency's water system and facilities, calculating how much water its customers use (i.e., water demand) and how much it can supply, and detailing how it would respond during a drought or other water supply shortage. Also, an UWMP must describe what specific coordination steps were taken to prepare, review, and adopt the plan.

The Act has been revised over the years. The Water Conservation Act of 2009 (also known as SB X7-7) required retail water agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. In their 2025 UWMPs, retail water agencies are required to report on their compliance with SB X7-7 2020 water use targets.

The 2012 to 2016 drought led to further revisions to the Act to improve water supply planning for long-term reliability and resilience to drought and climate change. These revisions were formalized in the 2018 Water Conservation Legislation and include:

- **Five Consecutive Dry-Year Water Reliability Assessment:** Analyze water supply reliability for five consecutive dry years over the planning period of this plan (see Chapter 7).
- **Drought Risk Assessment:** Assess water supply reliability for the next five years assuming they are dry years (see Chapter 7).
- **Seismic Risk:** Identify the seismic risk to the agency's water facilities and have a plan to address identified risks (see Chapter 8).
- **Energy Use Information:** If data are available, include reporting on the amount of electricity used to obtain, treat, and distribute water (see Chapter 6).

- **Water Shortage Contingency Plan (WSCP):** Update the agency's plan to include an annual process for assessing potential gaps between planned water supply and demands; conform with the State's standard water shortage levels (including a shortage level greater than 50 percent) for consistent messaging and reporting; and provide water shortage responses that are locally appropriate (see Chapter 8).
- **Lay Description:** Provide a lay description of the findings of the UWMP; this Executive Summary serves as the "Lay Description" for this plan.

Major components and findings of the City's 2025 UWMP are summarized below.

CITY WATER SYSTEM

The City serves drinking water to an area encompassing much of the lower Napa Valley and extending up to the foothills on the east and west sides of the valley as shown on Figure ES-1. In addition, the City exports water to the City of American Canyon, the City of St. Helena, the City of Calistoga, the Town of Yountville, and the Veterans Home of California. Because deliveries to the City of American Canyon and City of Calistoga do not directly impact the City's water supply, they are fully excluded from the water service reliability (supply vs. demand) analyses of this plan.

The Water Division of the City Utilities Department is responsible for the operation, maintenance, and improvement of the municipal drinking water system owned by the City. The City's municipal drinking water system consists of 3 water treatment plants, 15 storage tanks, 10 pump stations, and approximately 360 miles of pipelines (including hydrant laterals).

WATER USE BY CITY CUSTOMERS

The City anticipates moderate growth in the next 25 years, which would increase its demand for water. Thorough and accurate accounting of current and future water demands is critical for the City's planning efforts. To continue delivering reliable drinking water, the City must know how much water its customers currently use and how much they expect to use in the future.

The City reviewed development and planning documents to estimate water demands through the year 2050. Overall, the City's water demand could potentially increase by approximately 20 percent (from 2025 levels) by 2050.

Some of the potential growth in water demand is offset by increased recycled water use and improved overall water use efficiency. Recycled water is municipal wastewater that has been treated to a specified quality that allows for reuse. Napa Sanitation District provides recycled water within the City's water service area, mainly for irrigation. Although recycled water use within the City's service area was less than 4 percent of the City's total water use in 2025, the City expects the volume of recycled water use to nearly double by 2050.

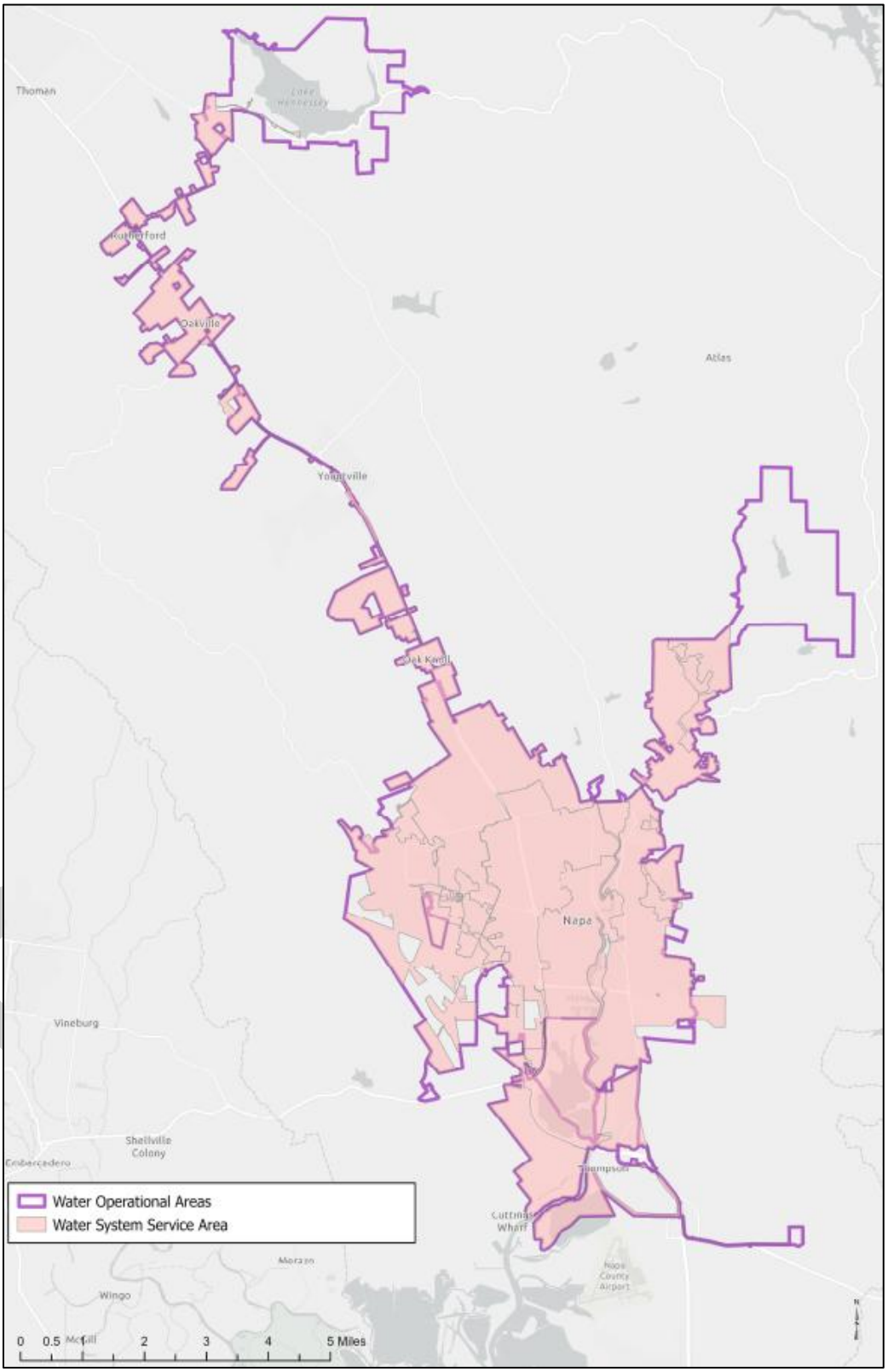


Figure ES-1. City of Napa Water System Boundaries

CITY WATER SUPPLIES

The City's water supplies consist of local surface water (Lake Hennessey and Milliken Reservoir) and imported water from the State Water Project (SWP), which diverts water from the Sacramento-San Joaquin Delta and conveys it to Napa and Solano counties via the North Bay Aqueduct. In 2025, approximately 73 percent of the City's drinking water supplies came from local sources (which include Lake Hennessey and Milliken Reservoir), with the remainder coming from the SWP.

The City's potential future water supply projects include treatment plant improvements, increasing storage through projects such as the Lake Hennessey spillway improvements and potential participation in regional storage (e.g., Sites Reservoir), and investigating the use of highly treated wastewater as drinking water (i.e., direct potable reuse). These projects are preliminary, so this plan does not quantify their potential impact. Therefore, the City's projected future water supply sources remain the same: local supply from Lake Hennessey and Milliken Reservoir and imported water from the SWP. Beginning in 2045, this plan assumes an 11 percent reduction in average supplies from its local water supply sources to match the future reductions projected for the SWP due to climate change.

The State Water Resources Control Board is updating the Bay-Delta Plan, with early analyses showing potential reductions in SWP allocations under the Unimpaired Flow approach, especially in critically dry years. Napa County cities, Napa County Flood Control and Water Conservation District, and the State Water Contractors support the alternative Healthy Rivers and Landscapes (HRL) approach, which balances environmental and water supply needs. Because the HRL approach is expected to be adopted in 2026, this UWMP does not include Unimpaired Flow-related curtailments; future UWMP updates will address any finalized Bay-Delta Plan impacts.

CONSERVATION TARGET COMPLIANCE

In its 2015 UWMP, the City documented meeting its interim water use target and confirmed its 2020 water use target based on 2010 Census data. In 2020, the City was on track to meet its 2020 water use target, but the COVID-19 pandemic and dry conditions increased water use slightly above the target. In 2025, the City's per capita water use easily met the City's 2020 water use target.

CITY WATER SERVICE RELIABILITY

Under normal hydrological conditions, the City's existing water supplies are sufficient to meet future projected demands. The CWC also asks agencies to evaluate their water service reliability by examining the impact of drought on their water supplies and comparing those reduced supplies to water demands. Specifically, agencies should calculate their water supplies during a single dry year and five consecutive dry years using historical records. For example, the City can estimate its supply during a single dry year by looking at how much local surface water was available during the driest year on record. If the historical "dry year" supply was reduced by 10 percent, then the City can conservatively assume a similar 10 percent reduction in its supplies during a future dry year.

The City is positioned to withstand the effects of a single dry year and a five-year drought. No supply shortfalls are projected for single dry years through 2050. The City is projected to experience supply shortfalls of up to 16 to 18 percent in multiple dry years starting in 2045 and 2050, respectively; however, these shortfalls could be managed via demand reduction measures in Stage 2 of the City's WSCP and/or dry year water supply purchases.

Drought risk was also specifically assessed assuming 2026 through 2030 would be dry years; however, no supply shortfalls are projected.

WATER SHORTAGE CONTINGENCY PLAN

A WSCP describes an agency's plan for preparing for and responding to water shortages. The WSCP includes a process for assessing potential gaps between planned water supply and demands for the current year and the following (assumed dry) year. The City's water shortage levels are aligned with the State's standard stages for consistent messaging and includes locally appropriate water shortage responses. The WSCP may be used for foreseeable and unforeseeable events and is adopted concurrently with this plan by separate resolution to allow for updates as conditions change. Only minor refinements were made to the WSCP as part of this plan.

UWMP PREPARATION, REVIEW, AND ADOPTION

The City prepared this 2025 UWMP and WSCP in coordination with the public. While preparing this plan, the City also notified other stakeholders (e.g., Napa County, City of American Canyon, Napa Sanitation District, etc.) of its preparation, its availability for review, and the public hearing prior to adoption. The City encouraged community participation in the review of the 2025 UWMP and WSCP using newspaper notices, the City's weekly e-newsletter, social media posts, and the City's website. These public notices included the time and place of the public hearing, as well as where the plan would be available for public inspection.

The public hearing provided an opportunity for the City's water users and the general public to become familiar with the 2025 UWMP and WSCP and ask questions about the City's plans for continuing to provide a reliable, high-quality, essential drinking water supply and mitigating potential water shortages. Following the public hearing, the Napa City Council adopted this 2025 UWMP and WSCP on June 16, 2026. A copy of the adopted UWMP was submitted to the Department of Water Resources and is available on the City's website: cityofnapa.org/water.

CHAPTER 1
Introduction

This chapter provides an introduction and overview of the City of Napa's (City) 2025 Urban Water Management Plan (UWMP, plan), including the importance and extent of the City's water management planning efforts, changes since the preparation of the 2020 UWMP, and the organization of this 2025 UWMP. This plan has been prepared jointly by City staff and West Yost.

1.1 INTRODUCTION

The Urban Water Management Planning Act (Act) was originally established by Assembly Bill (AB) 797 on September 21, 1983. In passing the Act, state legislators recognized that water is a limited resource and declared that efficient water use and conservation would be actively pursued throughout the State. The primary objective of the Act is to direct "urban water suppliers" to develop an UWMP that provides a framework for long-term water supply planning and documents how urban water suppliers are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future water demands. A copy of the current version of the Act, as incorporated in Section 10608 and Sections 10610 through 10656 of the California Water Code (CWC), is provided in Appendix A of this plan.

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

The purpose of the UWMP is to provide a planning tool for the City to develop, manage, and deliver municipal water supplies to its water service area. The Water Shortage Contingency Plan (WSCP) is part of this UWMP and provides a plan for response to various water supply shortage conditions.

To continue to meet the water needs of the community, the City carefully manages their available water resources. This plan provides the City with a comprehensive water management action plan for guidance as water supply and demand conditions change.

1.3 CHANGES FROM 2020 UWMP

The Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as Senate Bill Seven of the Senate's Seventh Extraordinary Session of 2009 (SB X7-7). The Water Conservation Act of 2009 required agencies to establish water use targets for 2020 that would result in statewide water savings of 20 percent by 2020. The City is required to report compliance with its 2020 water use target in its 2025 UWMP.

The 2012 to 2016 drought led to further amendments to the CWC to improve water supply planning for long-term reliability and resilience to drought and climate change. The 2018 Water Conservation Regulation for Making Conservation a California Way of Life (AB 1668 [Friedman] and SB 606 [Hertzberg]) required major additions and changes to the CWC. These changes are associated with managing drought preparedness and water shortage contingency planning for urban water suppliers.

No substantive changes to the requirements have been adopted since the completion of the City's 2020 UWMP. This 2025 UWMP builds on the planning and reporting provided in the City's 2020 UWMP. Key updates include:

- **Water Supply Reliability Assessment** – a water supply and demand assessment which compares the total water supply sources available to the City with the long-term total projected water use over the next 25 years (to 2050), in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years (CWC §10635(a))
- **Drought Risk Assessment** – an assessment of the City's water supply reliability assuming that the Years 2026 to 2030 will be the five consecutive dry years (CWC §10635(b))
- **Water Use Target Compliance** – compliance with the City's previously adopted 2020 per capita water use targets in accordance with SB X7-7 (Water Conservation Act of 2009, SB X7-7; CWC §10608.20)
- **Water Loss Quantification** – a summary report quantifying the City's system water loss for Years 2020 to 2024, and progress toward compliance with the City's Water Loss Standard as established by the State Water Resources Control Board (State Water Board) (CWC §10631(d)(3)(c))

Since the completion of the City's 2020 UWMP, the State experienced another multi-year (2021 – 2023) drought event during which the City implemented its WSCP. This UWMP includes minor updates to the City's WSCP to incorporate lessons learned from that event, as discussed in Chapter 8.

1.4 DEMONSTRATION OF CONSISTENCY WITH THE DELTA PLAN FOR PARTICIPANTS IN COVERED ACTIONS

Urban water suppliers that anticipate participating in or receiving water from a proposed project (i.e., "covered action"), such as a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Sacramento-San Joaquin Delta (Delta) should provide information in their UWMP that can then be used in the certification of consistency process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code of Regulations, Title 23, Section 5003).

To demonstrate reduced reliance on the Delta and improved regional self-reliance, urban water suppliers are to:

1. Complete an UWMP.
2. Identify, evaluate, and commence implementation of programs and projects included in the UWMP that are locally cost effective and technically feasible in reducing reliance on the Delta.
3. Include expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance in their UWMPs, commencing in their 2015 UWMPs and continuing in their subsequent UWMPs. Programs and projects identified above should reduce the amount or percentage of water used from the Delta watershed. For the purposes of reporting, water use efficiency is considered a new source of water supply.

Since the City is a subcontractor of the State Water Project (SWP), it anticipates participating in covered actions and is therefore required to demonstrate reduced Delta reliance. Appendix B of this plan demonstrates the City's consistency with Delta Plan Policy WR P1.

Chapter 6 of this UWMP describes and evaluates existing and future projects whose implementation improves regional self-reliance. Chapter 9 of this UWMP describes Demand Management Measures that the City has implemented as part of its water use efficiency and conservation programs.

1.5 PLAN ORGANIZATION

This plan contains the appropriate sections and tables required per CWC Division 6, Part 2.6 (Act), included in Appendix A of this plan, and has been prepared based on guidance provided by DWR in their "Urban Water Management Plan Guidebook 2025" (DWR Guidebook).

This plan is organized into the following chapters:

- Chapter 1: Introduction
- Chapter 2: Plan Preparation
- Chapter 3: Service Area Description
- Chapter 4: Water Use Characterization
- Chapter 5: SB X7-7 Baselines, 2020 Targets, and 2025 Reporting
- Chapter 6: Normal-Year Water Supply Characterization
- Chapter 7: Water Service Reliability and Drought Risk Assessment
- Chapter 8: Water Shortage Contingency Plan
- Chapter 9: Demand Management Measures
- Chapter 10: Plan Adoption, Submittal, and Implementation

This plan also contains the following appendices of supplemental information and data:

- Appendix A: Legislative Requirements
- Appendix B: Demonstration of Reduced Delta Reliance
- Appendix C: DWR 2025 Urban Water Management Plan Tables
- Appendix D: DWR 2025 Urban Water Management Plan Checklist
- Appendix E: Agency and Public Notices
- Appendix F: Distribution System Water Loss Audits
- Appendix G: SB X7-7 Compliance Tables
- Appendix H: Recycled Water Sales Agreement
- Appendix I: Napa Sanitation District Recycled Water Policy (Resolution No. 22-020)
- Appendix J: Water Shortage Contingency Plan
- Appendix K: UWMP and WSCP Adoption Resolutions

Furthermore, this plan contains all the tables recommended in the DWR Guidebook, both embedded into each chapter where appropriate and included in Appendix C.

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

CHAPTER 2
Plan Preparation

This chapter describes the preparation of the City's 2025 UWMP and WSCP, including the basis for preparing the plan, individual or regional planning, fiscal or calendar year reporting, units of measure, and plan coordination and outreach.

2.1 BASIS FOR PREPARING A PLAN

The Act requires every "urban water supplier" to prepare and adopt an UWMP and review its plan at least once every five years to make any amendments or changes that are identified by the review. The Act also requires every "urban water supplier" to prepare and periodically update its WSCP. While the WSCP is part of the UWMP, it may be adopted and amended separately from the UWMP. An urban water supplier is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water per year (AFY).

The City manages Public Water System CA2810003. As shown in Table 2-1, the City provided water to 25,500 customer connections and supplied 12,211 acre-feet (AF) of water in 2025. Therefore, the City is required to prepare an UWMP, as it meets the definition of an urban water supplier.

While the City treats and wheels water to the cities of American Canyon and Calistoga, it is not considered a wholesale supplier for UWMP purposes since the City provides less than 3,000 AFY of potable water at wholesale for municipal use. The City's last UWMP, the 2020 UWMP, was adopted by the City Council on December 21, 2021.

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

Public Water System Number	Public Water System Name	Number of Municipal Connections 2025	Volume of Water Supplied 2025 (AF)
CA2810003	City of Napa	25,500	12,211
	Total	25,500	12,211
NOTES: Volumes are in acre-feet (AF). Excludes 799 AF treated & wheeled to the cities of American Canyon and Calistoga, as those agencies provide the source of supply.			

2.2 REGIONAL PLANNING

As described in Section 2.3 below, the City has prepared this plan on an individual reporting basis, not part of a regional planning process.

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

As shown in Table 2-2, this plan has been prepared on an individual reporting basis covering only the City's water service area. The City does not participate in a regional alliance, and it has not prepared a Regional Urban Water Management Plan. As described in Section 2.5, the City has notified and coordinated planning and compliance with appropriate regional agencies and constituents.

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

Select One	Type of Plan	Name of Regional Alliance or RUWMP (Drop Down List)
☑	**Individual UWMP**	
	If Water Supplier is also a member of a SB X7-7 Regional Alliance, select name from the drop-down.	
☐	**Regional Urban Water Management Plan (RUWMP)**	
	If Supplier selected RUWMP, select name from the drop-down.	

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

The City is a water retailer and has prepared its 2025 UWMP on a calendar year basis, with the calendar year starting on January 1 and ending on December 31. Water use and planning data for the entire 2025 calendar year have been included. Water volumes in this plan are reported in units of AF.

The City's reporting methods for this plan are summarized in Table 2-3.

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

Type of Supplier (select one or both)	
☐	Supplier is a wholesale supplier
☑	Supplier is a retail supplier
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP (Select from the drop down list).	
Unit	AF

2.5 COORDINATION AND OUTREACH

This section discusses the City's inter-agency coordination and coordination with the public. The Act requires the City to coordinate the preparation of its UWMP and WSCP with other appropriate agencies and departments within the City, including other water suppliers that share a common source, water management agencies, and relevant public agencies. These agencies, as well as the public, participated in the coordination and preparation of the City's 2025 UWMP and WSCP and are summarized below.

2.5.1 Wholesale and Retail Coordination

The Napa County Flood Control and Water Conservation District (NCFCWCD) contracts directly with DWR for SWP supplies. The City receives its annual SWP entitlement through this contract as a SWP subcontractor. In this way, NCFCWCD is a "wholesaler" for the City, as shown in Table 2-4.

In accordance with CWC Section 10631, the City has informed NCFCWCD of its projected SWP use and overall water use in five year increments through 2050. As part of its management of the SWP contract, NCFCWCD provides continual updates to the City regarding SWP supply outlook based on current and future hydrological conditions and the anticipated impact of State Water Board actions.

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

The retail Supplier has informed the following wholesale supplier(s) of projected water use.
Wholesale Water Supplier Name
Napa County Flood Control and Water Conservation District (NCFCWCD)
NOTES: NCFCWCD is the direct local contractor with DWR for State Water Project (SWP) supplies. In this way it acts as a wholesaler to the City, a SWP subcontractor.

2.5.2 Coordination with Other Agencies and the Community

The City coordinated the preparation of this plan with other departments within the City as well as other local agencies, including relevant public agencies that utilize the same water supplies. These agencies included:

- City of American Canyon
- Town of Yountville
- Veterans Home of California
- City of St. Helena
- City of Calistoga
- Napa Sanitation District
- Napa County

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

As part of the 2025 UWMP and WSCP development, the City facilitated a public review period. Public noticing, pursuant to Section 6066 of the Government Code, was conducted prior to commencement of a public comment period. Public hearing notices are included in Appendix E of this plan. During the public comment period, the Draft UWMP and WSCP were made available on the City's website (cityofnapa.org/water) and at the Utilities Department, City Hall, and the Napa County Library.

The public hearing provided an opportunity for City water users and the general public to become familiar with the 2025 UWMP and WSCP and ask questions about the City's water supply and demand and its continuing plans for providing reliable, high-quality, essential drinking water to ensure quality of life for the community.

2.5.3 Notice to Cities and Counties

CWC Section 10621(b) requires agencies to notify the cities and counties to which they serve water at least 60 days in advance of the public hearing that the UWMP and WSCP are being updated and reviewed. In March 2026, notices of preparation were sent to these cities, Napa County (County), and other stakeholders to inform them of the UWMP and WSCP update process and schedule, and to solicit input for the 2025 UWMP and WSCP. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10 of this plan.

CHAPTER 3
Service Area Description

This chapter describes the City's water service area, system facilities, and staff. In addition, this chapter discusses the climate, population, demographics, and land use within the City's service area.

3.1 GENERAL DESCRIPTION

The City is located at the northern end of San Pablo Bay, approximately 40 miles northeast of San Francisco, as shown on Figure 3-1. Incorporated in 1872, the City is the county seat for Napa County and the dynamic, vibrant hub of the idyllic Napa Valley. Famous for its wineries, Napa offers an incredible combination of suburban amenities, rural beauty, and the urban benefits of being only one hour from San Francisco and the Pacific Ocean. The City's historic character, natural beauty, and unique attractions have enabled it to become a quality residential community, as well as one of the nation's premier tourist destinations.

Figure 3-1. City of Napa Vicinity

3.2 SERVICE AREA DESCRIPTION

The City serves drinking water to an area encompassing much of the lower Napa Valley and extending up to the foothills on the east and west sides of the valley. As shown on Figure 3-2, the City's water system contains two boundaries of importance: Water Operational Areas and Water System Service Area.

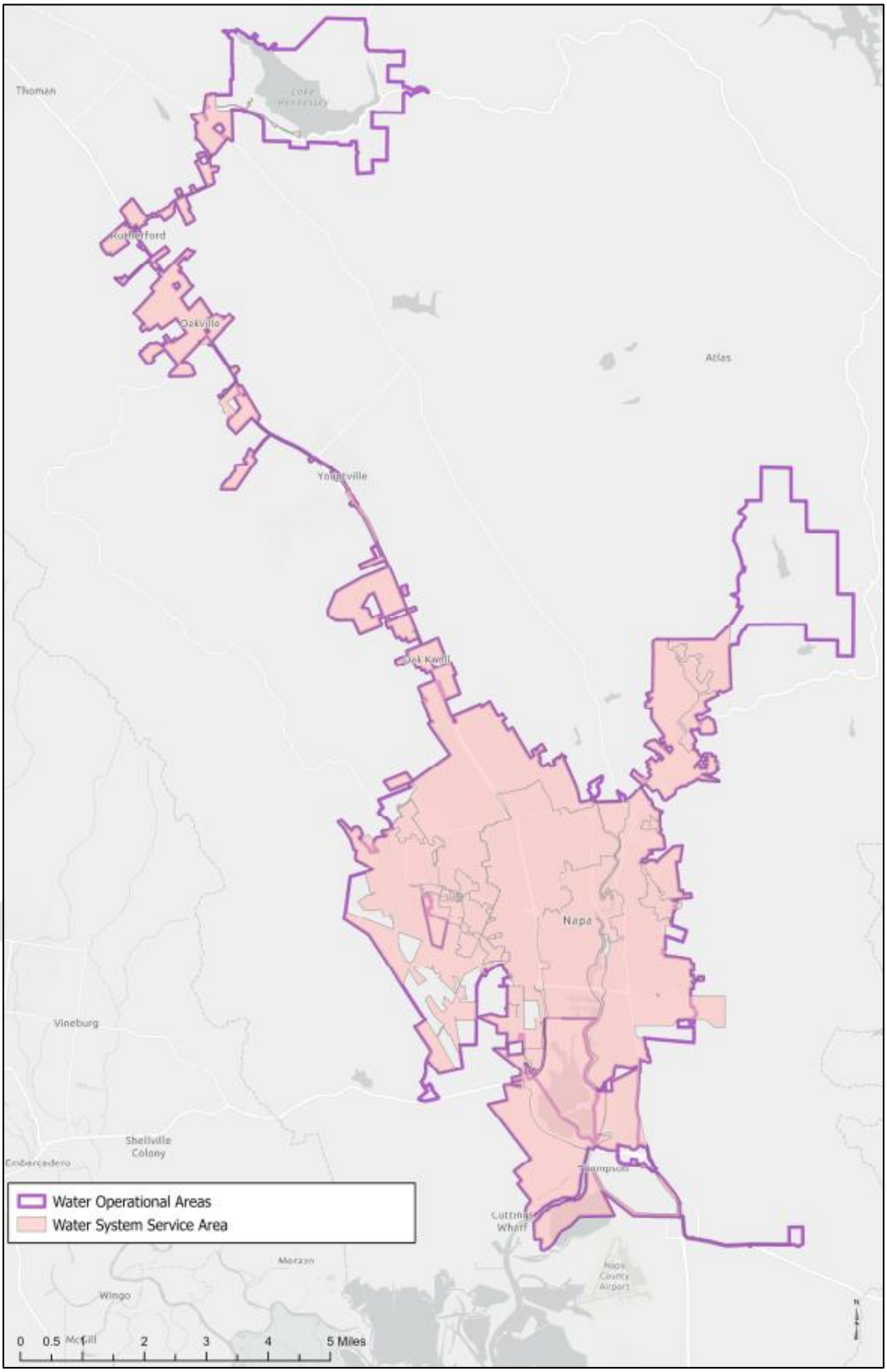


Figure 3-2. City of Napa Water System Boundaries

The Water Operational Areas encompass the City's Water System Service Area in addition to its reservoirs and watersheds (Lake Hennessey, Milliken Reservoir), Water Treatment Plants (WTPs) (Hennessey, Milliken, and Edward I. Barwick Jamieson Canyon [Barwick Jamieson]), and transmission mains originating from the WTPs.

While most of the City's water supply is delivered to customers within the City limits, the City also serves water outside City limits and even outside the Sphere of Influence (SOI), including customers in the Monticello Road/Silverado Resort community, the geographical areas that comprise the Congress Valley Water District (CVWD), the Carneros Mutual Water Company, and along the Conn Transmission Main. CVWD was originally scheduled to be dissolved in 2017, with its water system infrastructure wholly maintained by and transferred to the City; however, after four amendments to the original agreement, it was replaced in 2023 with a 20-year agreement that clarifies terms and responsibilities of each party through January 31, 2043. The City also serves approximately 1,175 residents of Napa State Hospital located outside the City limits.

No significant changes impacting the City's service area have occurred since the 2020 UWMP. The last significant change occurred in 2014, when the City Council approved the annexation of the 151-acre parcel known as the "Napa Pipe Property," located at the south end of the City on the eastern bank of the Napa River.

The City also exports water to the City of American Canyon (American Canyon), the City of St. Helena (St. Helena), the City of Calistoga (Calistoga), the Town of Yountville (Yountville), and the Veterans Home of California in Yountville. Calistoga has contractual entitlements to SWP water from the North Bay Aqueduct (NBA), and the City treats their water at its Barwick Jamieson WTP and wheels it to them. American Canyon also receives treat and wheel services for their SWP entitlements at times, for example each spring when the NBA is offline for routine annual maintenance. Because deliveries to Calistoga and American Canyon do not directly impact the City's supply, they are fully excluded from the water service reliability (supply vs. demand) analyses in Chapter 7 of this plan. St. Helena and Yountville are also "wholesale" customers of the City, as any City water they purchase is then sold to their own retail customers (i.e., end users). St. Helena is contractually obligated to purchase 600 AF of water each year from the City and has the option to request an additional 200 AF of supply. Yountville and the Veterans Home of California rarely purchase water from the City due to their own sufficient local water supply sources. By agreement, the City provides water to Yountville in emergencies to address infrastructure failure or for temporary planned maintenance, but not drought needs.

3.3 WATER SYSTEM DESCRIPTION

Figure 3-3 shows the major components of the City's potable water system, including the Conn Transmission Main and the Hennessey, Milliken, and Barwick Jamieson WTPs.

Hennessey WTP began operation in 1981 and has a nominal treatment capacity of 20 million gallons per day (MGD). Treating water from Lake Hennessey, the Hennessey WTP provides complete conventional treatment, including flash mixing, coagulation, flocculation, sedimentation, filtration, and disinfection. Treated water from the Hennessey WTP is stored on-site in a buried, 5.0 million gallon (MG) concrete clearwell before delivery to the City's distribution system through the 20-mile long, 36-inch diameter Conn Transmission Main. The Conn Transmission Main runs parallel to Conn Creek, Highway 128, and Highway 29, traveling along easements and rights-of-way before connecting to the City's main water distribution system in northwest Napa and extending to East Avenue.

Milliken WTP was constructed in 1976 and has a rated treatment capacity of 4 MGD, but can only produce up to 3.3 MGD of treated water. Raw water from Milliken Reservoir is released into Milliken Creek below the dam and then diverted through a 16-in diameter steel transmission pipeline to the Milliken WTP, a direct filtration plant (typically operated seasonally from the end of June to the middle of October depending on raw water turbidity and seasonal yield) with a contact/reaction tank and four horizontal, dual-media pressure filters operated in parallel. Treated water is stored in a 2.0 MG clearwell tank located above the WTP site before delivery to the City's water distribution system through the 1.5-mile long Milliken Transmission Main. The Milliken Transmission Main, constructed in 1966, predominantly serves customers in the Silverado Resort area before connecting to the City's main water distribution system at the intersection of Silverado Trail and Monticello Road.

All SWP raw water is delivered to the Barwick Jamieson WTP, which was originally constructed in 1968 and upgraded in 1988 and 2011 to increase its treatment capacity to 20 MGD. With the increased treatment capacity, the City can now treat 100 percent of the City's water allocation from the SWP in a typical year. Barwick Jamieson WTP includes pre-ozonation, with conventional surface water treatment processes: rapid mixing, flocculation, sedimentation with tube settlers, gravity filtration, and disinfection. Treated water is stored in a 5.0 MG clearwell located onsite before delivery to the City's water distribution system through the 42-inch diameter Jamieson Transmission Main. The Jamieson Transmission Main runs parallel to Jamieson Canyon Road/Highway 12 to Highway 29, then splits into 36-inch and 24-inch diameter pipelines near the intersection of Highway 29 and Highway 221 and feeds the City's main water distribution system.

The City's main water distribution system includes 15 storage tanks, 10 pump stations, and approximately 360 miles of pipelines (including hydrant laterals).

3.4 WATER DIVISION

The Water Division (Division) of the City Utilities Department is responsible for the operation, maintenance, and improvement of the municipal drinking water system owned by the City. The City operates under a Council-Manager form of government by which the five-member City Council sets City policy and directly hires the City Manager to implement City policy. The City Manager directly hires all department heads, including the Utilities Director, and the Utilities Director hires and manages a Deputy Utilities Director to lead the Division. The mission of the Division is to provide an uninterrupted supply of high-quality and reasonably priced water to the community for consumption and fire protection.

Operating three WTPs, the Division delivers water meeting Federal and State drinking water regulations, invests in capital improvements, plans for future water supply needs, responds to emergency repairs, and maintains a proactive water conservation program. The Division operates financially as an enterprise fund, with costs paid by water rates, capacity fees, service charges, and related revenues.

As shown on Figure 3-4, the Division is organized into four sections: Administration, Water Treatment, Water Distribution, and Engineering. In 2025, there were 62 full-time employees working to meet the Division's mission.

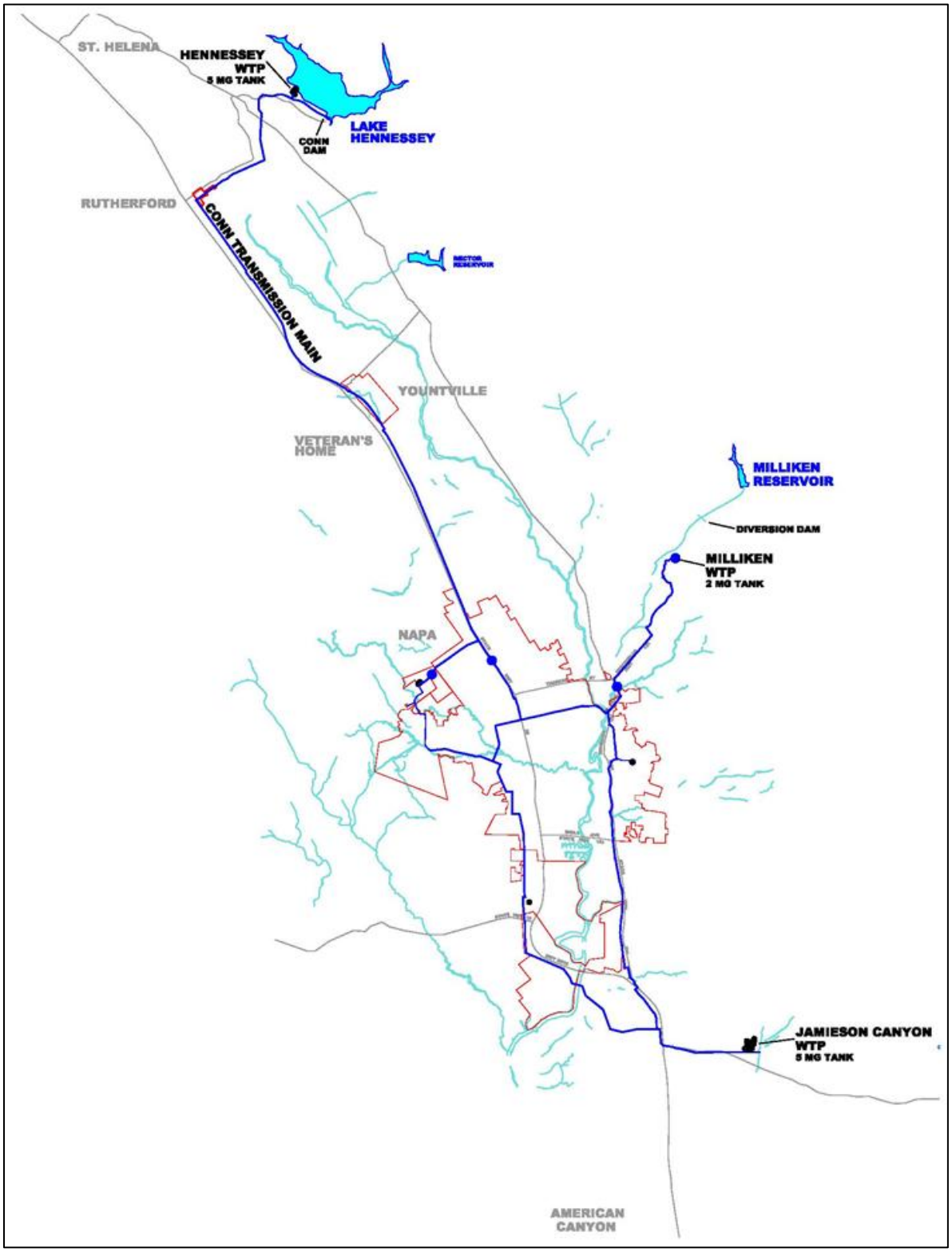


Figure 3-3. City of Napa Water Treatment and Distribution System

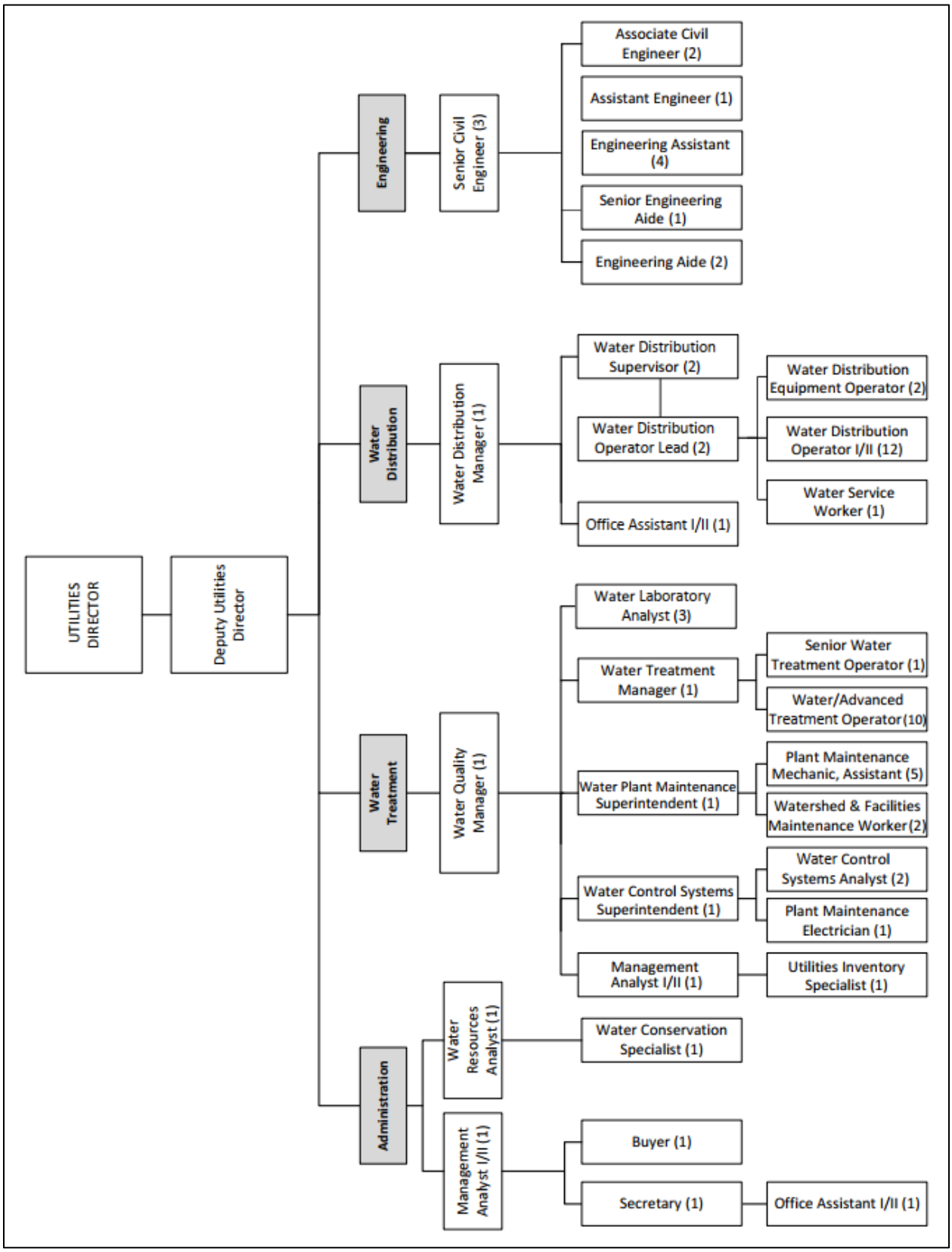


Figure 3-4. City of Napa Water Division Organization

3.5 SERVICE AREA CLIMATE

The climate of the City's service area is best described as Mediterranean, characterized by hot, dry summers and cool winters. This section describes the historical climate and potential effects of climate change.

3.5.1 Historical Climate

Water use is dependent on various climate factors such as temperature, precipitation, and evapotranspiration. Relevant climate data for the City are presented in Table 3-1, including reference evapotranspiration (ETo) and average rainfall and temperatures.

ETo includes plant transpiration and water lost through evaporation from the soil and surface-water bodies. The monthly ETo totals roughly represent the irrigation needs of standard cool-season turfgrass in the City's water service area. Approximately 66 percent of annual ETo occurs between May and September. Since these months have the lowest rainfall totals, the higher ETo drives the demand for supplemental irrigation.

Table 3-1. Monthly Average Climate Data Summary

Month	Standard Monthly Average ETo[(a)], inches	Average Total Rainfall[(b)], inches	Average Temperature[(b)], degrees Fahrenheit	
			Maximum	Minimum
January	2.08	5.14	57.0	38.3
February	1.86	4.38	61.5	40.8
March	3.17	3.35	65.0	42.0
April	4.71	1.65	69.6	43.7
May	7.21	0.68	74.6	47.6
June	7.21	0.21	79.8	51.3
July	7.16	0.02	81.9	53.4
August	6.93	0.06	81.7	53.2
September	4.70	0.31	82.1	51.5
October	2.82	1.36	76.5	47.9
November	1.38	2.98	65.9	42.6
December	0.87	4.50	57.6	38.8
Annual	**50.1**	**24.7**	**71.1**	**45.9**

(a) Source: 2025 California Irrigation Management Information System (CIMIS) data for Station #77: Oakville (downloaded January 22, 2026).
(b) Source: Western Regional Climate Center data for DWR for Napa State Hospital (period of record: 1893 to 2016).

There is considerable variation in precipitation from year to year. An annual total of less than 13 inches can be anticipated one year in twenty, while more than 36 inches can be expected with about the same frequency. Annual precipitation averages nearly 25 inches, but more than 80 percent of that total falls in the months of November through March, when ETo is lowest. Therefore, summer landscape irrigation is a significant component of the City's overall water demand and has influenced the City's water conservation efforts, which are described in Chapter 9 of this plan.

Mild temperatures predominate in Napa, but highs above 100 degrees Fahrenheit (°F) have been observed in every month from May through October. Nights cool off quickly with the average minimum temperature during the summer months in the low 50s. Winter brings sub-freezing temperatures nearly every year. Historically, temperatures below 32°F have been recorded during each month from October through May.

3.5.2 Potential Effects of Climate Change

The CWC requires urban water suppliers to account for the impacts of climate change on water supplies and supply reliability. A discussion of the effects of climate change on water demands, supplies, and reliability can be found in Chapter 4 (Water Use Characterization), Chapter 6 (Normal-Year Water Supply Characterization), and Chapter 7 (Water Service Reliability and Drought Risk Assessment) of this plan. This section summarizes those discussions.

In general, climate change is expected to increase water demand for irrigation and the year-to-year variability of demands. This is the result of increased temperatures (which increases ETo) and more variability in precipitation (which impacts supply availability and reliability). Also, natural disasters such as wildfires, droughts, and floods are expected to increase in both frequency and intensity.

Responding to climate change generally takes two forms: mitigation and adaptation. Mitigation is taking steps to reduce the contribution to the causes of climate change by reducing greenhouse gas (GHG) emissions. Adaptation is the process of responding to the effects of climate change by modifying systems and behaviors to function in a warmer climate.

In the water sector, climate change mitigation is generally achieved by reducing energy use, increasing energy efficiency, and/or replacing fossil fuel-based energy sources with renewable energy sources where feasible. Because water requires energy to move, treat, use, and discharge, water conservation also results in energy conservation. Adaptation initiatives may include diversification of the City's water supply portfolio, expansion of recycled water use, and enhanced water use efficiency and conservation to better withstand drought. A comprehensive set of water-related mitigation and adaptation measures is included in the Napa County Regional Climate Action and Adaptation Plan (RCAAP), which is slated for adoption and implementation by local jurisdictions beginning in 2026.

3.6 SERVICE AREA POPULATION AND DEMOGRAPHICS

3.6.1 Service Area Population

As shown in Table 3-2, the City's 2025 service area population is estimated to be 85,366. For its 2025 population, the City used the California Department of Finance (DOF) estimate for the population within City limits and a persons-per-connection estimate for the population served outside City limits. Population projections for 2030 through 2050 are based on the City's 2040 General Plan, which projects 17,900 additional residents and 7,800 new housing units by 2040. As long-range demographic and economic trends are difficult to predict and there has been a slight decrease in service area population since 2020, the full 17,900 increase has been extended out to 2050 for this plan.

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

Population Served	2025	2030	2035	2040	2045	2050(opt)
	85,366	88,946	92,526	96,106	99,686	103,266
NOTES: 2025 calculated using California Department of Finance E-5 Estimates (May 2025) and persons-per-connection estimates. 2030-2050 projections use incremental 5-year increases derived from the current City of Napa General Plan.						

3.6.2 Other Social, Economic, and Demographic Factors

The State requires the inclusion of service area socioeconomic information as part of the system description in UWMPs. However, differences in household water use across sociodemographic groups in the City have not been studied, nor does the City differentiate water management based on sociodemographic factors. Therefore, the following social, economic, and demographic information is being provided to comply with the regulation. The information was derived from the US Census Bureau's profile of Napa for 2020-2024[1].

- The average number of people per household in the five-year period analyzed was 2.57.
- The median household income (2024 dollars) was $105,963, while 8.5 percent of all individuals lived in poverty.
- The owner-occupied housing unit rate was 58.7 percent, with a median home value of $856,400.
- The median gross rent was $2,282 per month.
- Of people 25 years or older, 84.2 percent had earned at least a high school diploma or equivalent, and 38.2 percent had earned a bachelor's degree or higher.
- Of people under 65 years of age, 8.4 percent had a disability, and 7.7 percent did not have health insurance.
- Almost 97.5 percent of households had a computer, and 93.3 percent had a broadband internet subscription.
- By race/ethnicity, 58.2 percent of people were White, 1.3 percent were Black, 1.2 percent were American Indian or Alaska Native, 3.0 percent were Asian, 0.1 percent were Native Hawaiian or Pacific Islander, and 18.5 percent were two or more races.
- Of the total City population, approximately 41.2 percent were Hispanic or Latino, and 58.8 percent were not Hispanic or Latino.
- Approximately 20.9 percent of residents were foreign born, and 34.7 percent of people five years and older spoke a language other than English at home.

[1] United States Census Bureau, QuickFacts Data Profile for Napa, California (https://www.census.gov/quickfacts/fact/table/napacitycalifornia/PST045224).

3.7 LAND USES WITHIN SERVICE AREA

Existing and future land uses within the City's water service area are specified in its 2040 General Plan[2], which the City Council adopted in 2022.

3.7.1 Current and Projected Land Uses

The City's existing land use generally consists of a Downtown core area surrounded by residential neighborhoods. Within the City's Planning Area (i.e., the contiguous land within City limits and the surrounding SOI), residential uses comprise approximately 49 percent of the land area. Commercial uses are concentrated along major corridors and within Downtown Napa and occupy about 8 percent of the Planning Area. Parks/open space and public facilities comprise 15 and 10 percent of the Planning Area, respectively, with agricultural (e.g., vineyards and wineries) and industrial uses making up the rest of the occupied land use. Approximately 9 percent of the land in the Planning Area is vacant.

The City also serves 47 agricultural accounts, 29 of which are interruptible services located outside City limits, primarily along the Conn Transmission Main. By agreement, these 29 services can be cut off during extreme water supply shortages.

According to the City's 2040 General Plan, the City seeks to build upon its small-town character and historic neighborhoods while balancing the needs of residents, local businesses, and tourists. The 2040 General Plan is structured around ten Guiding Principles. The Guiding Principles most relevant to water system planning include:

- Foster Napa as a community of connected neighborhoods, with vibrant, walkable districts, and revitalized corridors.
- Promote housing and support a diverse array of housing types to meet the needs of all segments of the population.
- Promote continued Downtown revitalization.

For the City's 2025 Water System 30-Year Capital Improvement Master Plan, City staff provided a list of developments that could be potentially completed within the 30-year planning horizon (i.e., by 2055) to develop water demand projections. Potential developments include single- and multi-family residences, hotels/resorts, and commercial/industrial space.

3.7.2 Long-Range Land Use Planning

This section discusses long-range land use planning that may affect water management. Long-range planning includes years beyond the time horizon of this plan but should be noted for consideration in future UWMP updates.

The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) completed the Plan Bay Area 2050 in October 2021[3], which provides long-range plans to guide the growth of the nine-county region. Plan Bay Area 2050 integrates strategies for transportation, housing, the

[2] Source: https://www.cityofnapa.org/259/General-Plan.

[3] An amendment was approved in November 2024 to include the Sonoma-Marin Rail Transit (SMART) passenger rail extension to Healdsburg.

environment, and the economy. Following completion of the City's 2040 General Plan, the City updated the Housing Element of the General Plan to plan for future housing development in the City and address the Regional Housing Needs Allocation (RHNA) by ABAG.[4]

Both Plan Bay Area and RHNA address the amount and location of new housing development in the region, but they are different types of planning processes. Plan Bay Area is a policy-driven land use and transportation framework that results in various projections of growth for different areas (i.e., a "ground up" model). RHNA, on the other hand, is a process whereby a pre-determined number of housing units is distributed among local jurisdictions based on factors intended to result in an equitable distribution of those units. Another key difference is that Plan Bay Area covers an approximately 30-year planning horizon (2020-2050), whereas RHNA covers an 8-year period from 2023-2031. Despite these differences, by law, RHNA must be "consistent" with Plan Bay Area. ABAG has determined RHNA and Plan Bay Area to be consistent because the amount of housing growth from the 8-year RHNA would not exceed the 30-year growth level at the county and sub-county geographies used in Plan Bay Area.

The RHNA Plan was adopted in December 2021 and updated in June 2025. The proposed allocation for the City, which may be subject to revision and refinement, is 2,669 housing units (including transfers from the County).[5] Although the City's RHNA allocation may not affect its long-term water demand projections, it may accelerate the rate at which demand increases in the near term.

[4] ABAG receives its regional housing needs determination from the California State Department of Housing and Community Development (HCD). The nine-county San Francisco Bay Area has been allocated a total of 441,176 units, which reflects a 2.3-fold increase over the previous Housing Element cycle.

[5] Association of Bay Area Governments, June 2025, *Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031 - Updated June 2025*.

CHAPTER 4
Water Use Characterization

This chapter describes and quantifies the City's past, current, and projected water use. Water demand projections are based on the projected growth from new development within the City's water service area, along with anticipated water use efficiency improvements. Accurately tracking and reporting current water demands allows the City to properly analyze water use and better forecast future demands.

4.1 NON-POTABLE VERSUS POTABLE WATER USE

Potable water is water that is safe to drink and typically has had various levels of treatment and disinfection. The City produces potable water from local surface water supplies and water imported from the SWP via the NBA.

Non-potable water is not safe to drink and includes both recycled water and raw water. Recycled water is municipal wastewater that has been treated to a specified quality that allows for reuse. The City does not deliver recycled water to its customers; Napa Sanitation District (NapaSan) provides recycled water within the City's water service area. Therefore, recycled water use volumes are not included in this chapter.

Raw water is untreated water that is used in its natural state or with minimal treatment. The City does not deliver raw water to any customers in its service area.

4.2 WATER USE BY SECTOR

This section describes the City's past, current, and projected water use by sector through the year 2050. The following classifications were used to analyze current consumption patterns among various types of customers. The City uses the same definitions for each sector as outlined in the DWR Guidebook:

- **Single-family residential**: A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.
- **Multi-family residential**: Multiple dwelling units contained within one building or several buildings within one complex.
- **Commercial**: A water user that provides or distributes a product or service (CWC §10608.12(d)).
- **Industrial**: A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) Code Sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development (CWC §10608.12(h)).
- **Institutional (and Governmental)**: A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions (CWC §10608.12(i)).
- **Landscape**: Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites but are considered a separate water use sector if the connection is solely for landscape irrigation.
- **Sales to other agencies**: Water sales made to another agency. Projected sales may be based on projected water demand provided by the receiving agency. Since there is inherent uncertainty in future demand projections, any projected sales reported in this plan are for planning purposes only and are not considered a commitment on the part of the seller.

- **Agricultural**: Water used for commercial agricultural irrigation.
- **Other**: Any other water demand that is not adequately described by the water sectors defined above.
- **Distribution System Losses**: The difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption.

There are no existing water uses for saline barriers or groundwater recharge within the City's water service area.

4.2.1 Historical Water Use

The City's past water use by water use sector is reported in Table 4-1. These are the same values reported in the City's 2010, 2015, and 2020 UWMPs.

Table 4-1. Historical Water Use by Sector

Water Use Sector	Actual Volume, AFY		
	2010	2015	2020
Single Family Residential	6,626	5,462	6,654
Multi-Family Residential	1,961	1,600	1,794
Commercial[(a)]	2,640	2,518	2,792
Institutional/Governmental	193	151	266
Landscape	643	739	985
Agricultural Irrigation[(b)]	155	195	172
Sales/Transfers/Exchanges to other agencies[(c)]	280	582	588
Other[(d)]	79	29	32
Losses[(e)]	1,300	758	809
Total	**13,877**	**12,034**	**14,092**

(a) Includes commercial, industrial, and non-City institutional uses, such as schools.
(b) Interruptible-Surplus Agricultural Water Agreements with customers located outside the City limits. Annual use from these customers fluctuates based on weather conditions and the vineyards' use of private wells and other alternative supply sources.
(c) Sales to the City of St. Helena, the Town of Yountville, and the Veterans Home of California. Sales are driven primarily by Agreement No. 9381 between the City and St. Helena requiring St. Helena to purchase a minimum of 600 AFY at agreed-upon rates. Sales to Yountville and the Veterans Home of California are rare and generally limited to emergencies.
(d) Includes authorized unmetered uses (e.g., water main flushing, fire protection).
(e) Includes apparent and real losses.

4.2.2 Current Water Use

The City's actual potable water demands for the 2025 calendar year are reported in Table 4-2. Losses are estimated based on production and billing data. SWP water treated and wheeled to American Canyon and Calistoga is not included, as these supplies are owned by these agencies and do not impact the City's supplies. The City's use types are defined slightly differently than historical, now better matching the State Water Board's Urban Drought & Conservation Reporting categories and more applicable for developing future projections.

Table 4-2. Total Uses for Potable and Non-Potable Water – Actual (DWR Table 4-1 Retail)

Use Type	Additional Description (as needed)	2025 Actual Water Use	
Drop down list May select each use multiple times These are the only use types that will be recognized by the WUEdata online submittal tool		**Potable or Non-Potable** (OPTIONAL) Drop down list	Volume (AF)
Add additional rows as needed			
Single Family		Potable	5,542
Multi-Family		Potable	2,057
Commercial	Commercial, non-City Institutional	Potable	2,548
Industrial		Potable	109
Institutional/Governmental	City of Napa municipal only, excluding dedicated irrigation accounts	Potable	29
Landscape	Commercial, Industrial, Institutional Dedicated Irrigation Meters (DIMs)	Potable	455
Agricultural		Potable	77
Sales/Transfers/Exchanges to other Suppliers	City of St. Helena, Town of Yountville, Veterans Home of California	Potable	731
Other (optional)	Hydrant flushing, firefighting, street cleaning (estimate)	Potable	28
Distribution System Water Loss	Real and Apparent Losses (estimate)	Potable	635
		Subtotal Potable	12,211
		Subtotal Non-Potable	0
		Total	12,211
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES: The City is a drinking water provider only and does not distribute non-potable water to customers.			

4.2.3 Projected Water Use

This section presents potable water demand projections for the City's water service area in five-year increments through 2050 (i.e., a 25-year planning horizon) and annually from 2026 through 2030. Water demand projections in this plan are based on population growth within the City's water service area and incorporate new development projects described in the City's General Plan and 2025 Water System 30-Year Capital Improvement Master Plan. The projections also account for water use efficiency improvements driven by behavioral trends and increasingly stringent regulations.

4.2.3.1 25-Year Planning Horizon

Table 4-3 reports the City's projected potable water demands through the year 2050. For the residential sector, projected use starts from the post-drought 2025 baseline, accounts for population growth of 17,900 by 2050, and assumes the City's overall per capita water use declines from a baseline 125 gallons per capita per day (GPCD) to 120 GPCD by 2040 due to water use efficiency trends and Making Conservation a California Way of Life (SB 606/AB 1668) targets. The combined projections for commercial, industrial, and institutional/governmental (City facilities) are similar to the 2020 UWMP, while Landscape and Agricultural Irrigation are significantly lower due to post-drought trends, an evolving Water Efficient Landscape Ordinance (WELO), SB 606/AB 1668 targets, non-functional turf irrigation bans (AB 1572), and NapaSan recycled water conversions. Sales/Transfers/Exchanges to Other Suppliers increases to 800 AF based on the City of St. Helena's interest in a renegotiated supply agreement. Distribution System Water Loss projections assume the City meets its State Water Board Water Loss Standard and gradually improves due to main replacement projects in the 2025 Water System 30-Year Capital Improvement Master Plan.

Table 4-3. Total Uses for Potable and Non-Potable Water – Projected
(DWR Table 4-2 Retail)

Use Type	Additional Description (as needed)	Projected Water Use (Report To the Extent that Records are Available)					
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		**Potable or Non-Potable** (OPTIONAL) Drop down list	**2030 (AF)**	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 opt (AF)**
Add additional rows as needed.							
Single Family		Potable	5,800	6,000	6,000	6,200	6,450
Multi-Family		Potable	2,150	2,250	2,250	2,300	2,400
Commercial	Commercial, non-City Institutional	Potable	3,050	3,225	3,300	3,500	3,500
Industrial		Potable	150	175	200	200	200
Institutional/Governmental	City of Napa municipal only, excluding dedicated irrigation accounts	Potable	30	30	30	30	30
Landscape	Commercial, Industrial, Institutional Dedicated Irrigation Meters (DIMs)	Potable	400	400	400	400	400
Agricultural		Potable	150	175	200	200	200
Sales/Transfers/Exchanges to other Suppliers	City of St. Helena, Town of Yountville, California Veterans Home	Potable	800	800	800	800	800
Other (optional)	Hydrant flushing, firefighting, street cleaning	Potable	30	30	30	30	30
Distribution System Water Loss	Real and Apparent Losses	Potable	1,000	950	900	850	800
		Subtotal Potable	13,560	14,035	14,110	14,510	14,810
		Subtotal Non-Potable	0	0	0	0	0
		Total	13,560	14,035	14,110	14,510	14,810
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.							
NOTES: The City is a drinking water provider only and does not distribute non-potable water to customers.							

4.2.3.2 Characteristic Five-Year Water Use

CWC §10635(b) requires urban suppliers to include a five-year Drought Risk Assessment (DRA) in their UWMPs. A key component of the DRA is estimating demands for the next five years (2026–2030) without drought conditions (i.e., unconstrained demand). Chapter 7 details the DRA, but the five-year demand projections are summarized in Table 4-4. These projections were developed by linearly interpolating between actual 2025 demands presented in Table 4-2 and 2030 demand projections presented in Table 4-3.

Table 4-4. Projected Potable Water Demands for Drought Risk Assessment, AFY[(a)]

2026	2027	2028	2029	2030
12,481	12,751	13,020	13,290	13,560

(a) Demand projections for 2026–2029 are based on linear interpolation of actual 2025 demands presented in Table 4-2 and the 2030 demand projection presented in Table 4-3.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

System losses are the difference between the actual volume of water delivered into the distribution system and the actual metered consumption. Such apparent and real losses are always present in a water system due to pipe leaks, unauthorized use, faulty meters, unmetered services (e.g., fire protection and street cleaning), and system flushing.

The City uses the American Water Works Association (AWWA) Water Audits and Loss Control Programs method to annually evaluate its distribution system losses. Regulations require retail water suppliers to include potable distribution system water losses for the preceding five years in their UWMPs (to the extent records are available). Table 4-5 summarizes the City's status in submitting its AWWA water audits for the previous five calendar years (2020 through 2024). Copies of the City's Water Loss Audit worksheets for the last five years are provided in Appendix F.[1]

[1] Water Loss Audit Reports are also available online at https://wuedata.water.ca.gov/awwa_plans.

Table 4-5. Last Five Years of Water Loss Audit Reporting
(DWR Table 4-5 Retail)

Public Water System ID #Reported in Table 2-1 R	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)
Report submittal status for all five years for each Public Water System as available. Add rows as needed		
CA2810003	**2020**	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
DWR NOTES: Suppliers will provide a link to the WUEdata submittals of their Water Loss Audit Reports.		

In November 2022, DWR and the State Water Board adopted water loss standards for urban retail water suppliers. The new regulation provides suppliers with volumetric standards that establish cost-effective levels of achievable water loss based on each supplier's water system characteristics and budgets. Beginning in January 2028, suppliers must meet their individual volumetric real loss standards based on a three-year compliance period of the Years 2025, 2026, and 2027. Individual apparent water loss standards must also be met at the same 2028 compliance date. Table 4-6 summarizes the real and apparent water losses for 2024 compared to the City's 2028 water loss standard. The City anticipates reductions in apparent water loss with an accelerated meter replacement program in the coming years.

The City's programs to assess and manage water loss are discussed further in Chapter 9.

Table 4-6. Progress Towards 2028 Water Loss Standard (DWR Table 4-6 Retail)

Public Water System ID # Reported in Submittal Table 2-1 R	Did the Water Board Calculate a Water Loss Standard for this Public Water System? (y/n) If no, Supplier will not complete this row.	Real Water Loss					Apparent Water Loss				
		State Water Board Standard		Most Recent AWWA Water Loss Audit			State Water Board Standard		Most Recent AWWA Water Loss Audit		
		2028 Real Water Loss Standard per Unit per day	Units for Real Water Loss Drop down list	Number of Units (Connections or Miles corresponding with units selected)	Volume of Total Real Loss (from AWWA Water Loss Audit) (AF)	Real Water Loss Per Unit per Day	2028 Apparent Water Loss Standard per Unit per Day	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss (from AWWA Water Loss Audit) (AF)	Apparent Water Loss Per Unit per Day
Add additional rows as needed.											
CA2810003	Yes	26.8	Gallons per Service Connection per Day (GPSCD)	26362	660	22.4	6.3	Gallons per Service Connection per Day (GPSCD)	26362	353	12.0

4.4 ESTIMATING FUTURE WATER SAVINGS

Water savings from codes, standards, ordinances, or transportation and land use plans can decrease the water use for new and future customers. The City will benefit from some "passive savings" associated with an enhanced building code, the State Model Water Efficient Landscape Ordinance (MWELO), and expanded use of recycled water (detailed in Chapter 6 of this plan). The enhanced building code and MWELO are described further below.

To ensure that new construction is extremely water-efficient, the City has adopted local High-Performance Building Regulations that are more stringent than the California Green Building Standards Code (CALGreen). In Napa Municipal Code (NMC) Chapter 15.04, the City makes several of CALGreen's voluntary provisions mandatory, including lower residential kitchen faucet flow rates and Energy Star appliance requirements. For non-residential projects, the City requires an additional 12 percent indoor savings, tighter specifications for clothes washers, dishwashers, ice makers, food steamers, and water softeners, and lower maximum water pressure. To minimize outdoor water use for new development, the City will continue to enforce the MWELO as it evolves.

Table 4-7 indicates that some passive water savings are included in the City's projected future water demands. Lower income residential demands are also included in water use projections, as shown in Table 4-7 and detailed in Section 4.5.

Table 4-7. Inclusion in Water Use Projections
(DWR Table 4-3 Retail)

Are Future Water Savings Included in Projections? **Drop down list (y/n)**	Yes
If "Yes" to above, **state the section or page number**, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found. ***Optional*** Suppliers may complete Optional Submittal Table 4-4 R to quantify the expected savings.	Section 4.4
Are Lower Income Residential Demands Included In Projections? **Drop down list (y/n)**	Yes
Optional If the method for accounting Lower Income Residential Demands has been included, provide page number where this accounting can be found.	Section 4.5

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

SB 1087 (2006) requires that water providers develop written policies prioritizing development that includes affordable housing to low income households (Government Code Section 65589.7). In 1999, the City of Napa adopted an Inclusionary Housing Ordinance (NMC Section 15.94), essentially requiring that 10 percent of all new dwelling units in a residential development project shall be Affordable Units. In 2012, this was converted to an affordable housing impact fee assessed for both residential and commercial developments. The City places these fees in an Affordable Housing Trust Fund which is used to further the goal of providing affordable housing by leveraging other local, State, and Federal funds. Residential development projects may also satisfy the affordable housing impact fee requirements by proposing and

obtaining City approval for an alternate plan, which may include construction or dedication of new affordable housing units.

The projected water demands shown previously in Table 4-3 include water use for single family and multi-family residential housing needed for low-income households, as identified in the City's 2023-2031 Housing Element (Housing Element).[2] A lower income household is defined as a household that has an income below 80 percent of the area median income, adjusted for family size. According to the City's Housing Element, approximately 38 percent of the City's households had incomes below 80 percent of the area median income.

Therefore, it is estimated that approximately 38 percent of the City's residential water demands are attributed to low-income households. Table 4-8 presents the projected water demands for low income single-family and multi-family residential households.

Table 4-8. Projected Water Demands for Lower Income Households

Water Use Sector	Water Demands for Low Income Households[(a)], AFY				
	2030	2035	2040	2045	2050
Single Family Residential	2,221	2,298	2,298	2,375	2,470
Multi-Family Residential	823	862	862	881	919
Total	**3,044**	**3,160**	**3,160**	**3,256**	**3,389**

(a) Based on data from the City's Housing Element indicating that 38.3 percent of households in the City's water service area are classified as low income.

4.6 CLIMATE CHANGE CONSIDERATIONS

The City's future water demand and use patterns may be impacted by climate change. Warmer temperatures are expected to increase landscaping and irrigation demand and lengthen the growing season. In addition, climate change may increase the frequency and intensity of wildfires, which would increase the fire industry's water demands.

The potential impacts of climate change on the City's water supplies are described in Chapter 6, largely based on DWR analyses contained in their Draft 2025 SWP Delivery Capability Report.

[2] City of Napa. November 2023. 2023-2031 Housing Element. Accessed at https://www.cityofnapa.org/262/Housing-Element on May 4, 2026.

CHAPTER 5
SB X7-7 Baselines, 2020 Target, and 2025 Reporting

In November 2009, SB X7-7 was signed into law as part of a comprehensive water legislation package that addressed both urban and agricultural water conservation. The legislation set a goal of achieving a 20 percent statewide reduction in urban per capita water use by December 31, 2020 (i.e., "20 by 2020"). To meet the urban water use target requirement, each retail supplier was required to determine its baseline water use, as well as its target water use for the year 2020. Water use is measured in gallons per capita per day (GPCD).

This chapter provides a review of the calculation of the City's 2020 Urban Water Use Target (2020 Target) and demonstrates that the City has achieved its 2020 Target in 2025. Although the City missed its 2020 Target in 2020 by approximately four percent, it has since reduced its water use and achieved its 2020 Target. Compliance with the urban water use target requirement is presented in the SB X7-7 Compliance Form, which is included as Appendix G in this plan.

In this UWMP, the City is required to report its compliance with the 2020 Target as of 2020. However, the 2020 urban water use target has since been superseded by the establishment of Urban Water Use Objectives as part of the Making Conservation a California Way of Life regulation adopted on July 3, 2024. Starting in 2024, the City's Urban Water Use Objective is calculated and reported annually through a separate process. Additional information on the City's water conservation practices and objectives is included in Chapter 9.

5.1 OVERVIEW AND BACKGROUND

The City's compliance with SB X7-7 was first addressed in the City's 2010 UWMP, in which the City determined its baseline per capita water use and established and adopted its urban water use targets for 2015 and 2020. Actual water use data was divided by the service area population to obtain baseline and target GPCD water use.

SB X7-7 required each urban water retailer to determine its baseline daily per capita water use over a 10-year or 15-year baseline period. In the City's 2015 UWMP, the 10-year baseline period that the City selected was verified to be 1995 through 2004, and the population and water use targets were updated to reflect 2010 Census data. The City calculated its baselines and water use targets on an individual reporting basis in accordance with SB X7-7 legislation requirements and *DWR Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (2016) (DWR's Methodologies). Details of the specific methodology used to calculate the City's 2020 water use target are documented in its 2015 UWMP.

The City demonstrated that it successfully achieved its 2015 interim target and confirmed its 2020 Target in its 2015 UWMP. In its 2020 UWMP, the City reported that it did not achieve its 2020 Target. In this chapter, the City demonstrates its progress towards compliance with its 2020 Target.

5.2 2020 DAILY PER CAPITA WATER USE COMPLIANCE

In its 2020 UWMP, the City calculated its actual 2020 water use in accordance with DWR's Methodologies. As shown in Table 5-1, urban per capita water use in 2020 was 137 GPCD, which was above the confirmed 2020 Target of 132 GPCD. Therefore, the City did not meet its 2020 final water use target. In 2019, the City was on track to meet its 2020 Target, but COVID-19 pandemic-related increases in residential demand and a historically dry year in 2020 increased per capita water use above the 2020 Target.

Because the City did not achieve its 2020 water use target, its 2025 urban per capita water use was calculated to determine compliance. As shown in Table 5-1, the City's urban per capita water use in 2025 was 119 GPCD, which was below the confirmed 2020 water use target of 132 GPCD. Therefore, the City has met its 2020 final water use target.

Table 5-1. SB X7-7 2020 Target Progress (DWR Table 5-1 Retail)

☐	**Check the box if the Supplier was not an Urban Water Supplier during or before the 2020 UWMP reporting cycle. Proceed to the next table.**					
Was Supplier part of a merger or consolidation since 2020?	Regional Alliance Target or Individual Target? Drop down list	2020 Target	Actual 2020 GPCD	Did Supplier Achieve Targeted Reduction for 2020?	**Only for suppliers that did not meet the Target in 2020 See DWR NOTES below.** Actual 2025 GPCD (From SB X7-7 Compliance Form)	Did Supplier meet the 2020 Target in 2025?
No	Individual Target	132	137	No	119	Yes

DWR NOTES:
Suppliers calculating a 2025 GPCD will need to complete and submit SB X 7-7 Compliance Tables to verify the use of SB X7-7 Methodologies.
Suppliers that were part of a merger or consolidation since 2020 see Chapter 5 and Appendix P for guidance.
NA=Not Applicable

Details of determining the 2025 service area population and gross water use are provided in Sections 5.3 and 5.4, respectively. The City's 2025 compliance water use is provided in Section 5.5.

5.3 SERVICE AREA POPULATION

To calculate its compliance year GPCD, the City must determine the population that it served in 2025. Table 5-2 shows the methods used to estimate the City's 2025 service area population. The City used the DOF data to estimate the 2025 population within City limits. DOF population estimates are based on U.S. Census data, changes in the housing stock, estimated occupancy of housing units, and the number of persons per household. Outside City limits, the City estimated population using the number of dwelling units served and the DOF persons per household data for the unincorporated County. It should be noted that the resident population of Napa State Hospital is served by the City and is also added in separately to the City's service area population as allowed by DWR's Methodologies. The Napa State Hospital population is assumed constant at 1,175 across all years, based on previous reporting from the Executive Director's office at the Napa State Hospital. The City's estimated 2025 water service area population is shown in Table 5-3.

Table 5-2. Method for 2025 Population Estimate
(SB X7-7 Table 2)

Method Used to Determine 2025 Population (may check more than one)	
☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☑	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**3. Other** DWR recommends pre-review

Table 5-3. 2025 Service Area Population
(SB X7-7 Table 3)

2025 Compliance Year Population	
2025	85,366

5.4 GROSS WATER USE

Annual gross water use, as defined in CWC §10608.12(h), is the water that enters the City's distribution system over a 12-month period (calendar year) with certain exclusions. This section discusses the City's annual gross water use in 2025, in accordance with DWR's Methodologies.

The City's gross water use equals the metered production at the Hennessey, Milliken, and Barwick Jamieson WTPs, less deliveries to other agencies (American Canyon, Yountville, St. Helena, Calistoga, and the Veterans Home of California) and agricultural customers. In 2025, the City's actual gross water use was 11,403 AF as shown in Table 5-4.

Table 5-4. 2025 Gross Water Use
(SB X7-7 Table 4)

Compliance Year 2025	2025 Volume Into Distribution System This column will remain blank until SB X7-7 Table 4-A is completed.	2025 Deductions					2025 Gross Water Use
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water This column will remain blank until SB X7-7 Table 4-B is completed.	Water Delivered for Agricultural Use	Process Water This column will remain blank until SB X7-7 Table 4-D is completed.	
	12,211	731		-	77	-	**11,403**

NOTES: Volumes are in AF. In 2025, the City exported water to the City of St. Helena, the Town of Yountville, and the California Veterans Home.

5.5 2025 COMPLIANCE DAILY PER CAPITA WATER USE

Sections 5.3 and 5.4 present the City's 2025 population and gross water use, respectively. The City calculated its actual daily per capita water use for the 2025 calendar year in accordance with DWR's Methodologies. As shown in Table 5-5, urban per capita water use in 2025 was 119 GPCD, which is below the 2020 Target of 132 GPCD. Therefore, the City has met its 2020 final water use target.

Table 5-5. 2025 Gallons Per Capita Per Day
(SB X7-7 Table 5)

2025 Gross Water Fm SB X7-7 Table 4	2025 Population Fm SB X7-7 Table 3	2025 GPCD
11,403	85,366	**119**

Compared to baseline years, water use in the City's service area has generally been reduced due to continued water conservation efforts by the City and its customers as shown by the per capita water use of 119 GPCD in 2025. The complete set of SB X7-7 compliance tables is included in Appendix G.

DWR's Methodologies and CWC §10608.24 allow agencies to adjust their gross water use in 2025 for unusual weather, land use changes, or extraordinary institutional water use. The City has elected not to make the adjustments allowed because these exceptions are not needed to demonstrate compliance with SB X7-7 for 2025.

5.6 REGIONAL ALLIANCE

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

CHAPTER 6
Normal-Year Water Supply Characterization

This chapter describes and reviews the sources of water that may be available to the City. Projected future water supplies, including the use of recycled water, and the potential use of stormwater, desalinated water, and exchanges or transfers are also described in this chapter. The origin of the City's water supply and its quantity, as well as the anticipated actions to meet future demands for each water source are discussed.

6.1 OVERVIEW

The City's existing water supply sources include SWP imports (delivered through the NBA) and local surface water from Milliken Reservoir and Lake Hennessey. The NCFCWCD administers the contract directly with DWR for SWP supplies, and the City receives its annual SWP entitlement through this contract as a SWP subcontractor. Milliken Reservoir and Lake Hennessey are two local surface water reservoirs along tributaries upstream of the Napa River.

All SWP water is delivered to the Edward I. Barwick Jamieson Canyon (Barwick Jamieson) WTP, which was constructed in 1968 and upgraded in 1988 and 2011. Milliken WTP was constructed in 1976 and treats water diverted from Milliken Creek that was released from Milliken Reservoir. Hennessey WTP began operation in 1981 and treats water from Lake Hennessey.

The following sections discuss the management and anticipated availability of the City's water supplies under normal water years. The availability of the City's water supplies under dry conditions, including a single dry year and a drought lasting five years, is described in Chapter 7 of this plan.

6.2 IMPORTED WATER: STATE WATER PROJECT

In 1966, 20 years after the addition of Lake Hennessey and more than 40 years after the creation of Milliken Reservoir, the City added a third source of supply by subcontracting with NCFCWCD for imported surface water from the SWP. The NCFCWCD acts as the SWP contract administrator on behalf of municipalities in the County that own the water entitlements. The SWP diverts water from the Delta at the Barker Slough Pumping Plant east of Vacaville and conveys it approximately 21 miles via the NBA to Cordelia Forebay to serve contractors in Napa and Solano counties. From there, SWP water is pumped an additional 6 miles to the NBA Terminal Reservoirs (two 5 MG raw water storage tanks installed by DWR in 2008 to replace the original 7 MG tank built in 1968). Most of this water represents SWP entitlements for the City and Calistoga, both of which are treated at the Barwick Jamieson WTP. The remainder is American Canyon's SWP entitlement, which is either conveyed to the adjacent American Canyon WTP or delivered as raw water to American Canyon irrigation customers.

The original 1966 agreement with NCFCWCD provided the City with gradually increasing annual allotments of SWP water, known as "Table A" entitlements, reaching a maximum of 12,500 AFY by 1990. The agreement was modified in 1982 following DWR efforts to encourage water conservation. The modified agreement reduced the City's short-term Table A entitlement but increased its final overall entitlement to 18,800 AFY by 2021. In 2009, the SWP contract was amended to accelerate the entitlement schedule, with the City granted its full entitlement of 18,800 AFY beginning in 2010. The current SWP contract is due to expire in 2035, with an extension to 2085 anticipated.

In 2000, the City obtained an additional 1,000 AFY of SWP water in a transfer agreement between NCFCWCD and the Kern County Water Agency (KCWA). Negotiated on behalf of five cities in the County, the agreement established terms for the permanent purchase of 4,025 AFY of SWP entitlement from KCWA. The City and St. Helena purchased the largest shares of this total (1,000 AFY each), while the remaining agencies purchased lesser shares (ranging from 500 to 925 AFY). In 2006, the City purchased St. Helena's 1,000 AFY KCWA entitlement. Amended several times since 2006, this SWP entitlement transfer agreement currently requires that St. Helena purchase a minimum of 600 AFY from the City, with an option to request an additional 200 AFY.

In 2009, the City signed a water transfer agreement with Yountville to obtain Yountville's total SWP Table A entitlement of 1,100 AFY and its NBA conveyance capacity. This agreement allows the City to sell up to 25 AFY to Yountville at retail rates for non-drought emergency and fire flow needs only. There is no minimum sales requirement as there is for the St. Helena agreement. These more recent SWP Table A purchases from other County agencies help bolster supplies for City customers during droughts.

The City's Table A entitlements are summarized as follows:

- NCFCWCD Agreement: 18,800 AFY
- KCWA Purchase (2000): 1,000 AFY
- St. Helena Purchase (2006): 1,000 AFY
- Yountville Purchase (2009): 1,100 AFY

Together, these entitlements total 21,900 AFY and represent the absolute maximum annual yields of Table A water available to the City. Actual deliveries are determined annually by DWR depending on hydrologic conditions. A full (i.e., 100 percent) Table A entitlement (21,900 AFY) would typically be available only during very wet years. In the *Draft State Water Project Delivery Capability Report 2025*[1] (2025 Draft DCR), DWR estimates that 54 percent of the SWP contractor's entitlements would be available for delivery in a normal (average) year under existing conditions, and then be reduced to 48 percent in the future (2043) based on DWR's 50% Level-of-Concern (LOC) Scenario (discussed further in Chapter 7). For the City, this equates to a normal year Table A delivery of 11,826 AFY through 2040 and 10,512 AFY for 2045 and 2050.

The State Water Board is currently in the process of updating the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Watershed (Bay-Delta Plan). Model simulations in initial drafts indicate that the Unimpaired Flow regulatory approach yields significant reductions in SWP Table A allocations for Napa County cities, particularly in critically dry years. The State Water Board continues to refine the model and define impacts. The cities and NCFCWCD, along with the State Water Contractors, support the alternative Healthy Rivers and Landscapes (HRL) approach, which embraces balancing water supply, environmental flows, agriculture, and recreation. Because this HRL approach is expected to be adopted in the final Bay-Delta Plan in 2026, this plan does not include Unimpaired Flow-related Table A curtailments in Chapters 6 or 7. Should this scenario change, future UWMP updates will account for estimated Bay-Delta Plan impacts.

[1] DWR, 2025. *The State Water Project Draft Delivery Capability* Report *2025*. State Water Project Draft Delivery Capability Report 2025.

There are other types of SWP water (besides Table A entitlements) available to the City, including carryover, North of Delta (NOD) Allocation, Advanced Table A, Article 21, and Dry Year water. These categories are described in the following sections. However, because the following supplies from the SWP are either highly variable or not considered additional supply, they are not included as additional supply in the City's supply projections for normal years.

6.2.1 Carryover Water

Carryover water is surplus water from a previous year's entitlement that was stored for use in subsequent years. Stored in San Luis Reservoir, carryover water is considered the first water to be lost if San Luis Reservoir spills. The City typically uses carryover water in the first few months of the year after Article 21 is not available and will continue to do so. Over the long term, this is not considered new supply but simply taking better advantage of existing SWP entitlements.

6.2.2 North of Delta Allocation

Following a 2013 legal settlement resolving *Solano County Water Agency et. al. v. Department of Water Resources* ("Area of Origin" settlement), the City's actual Table A deliveries have been bolstered by the NOD Allocation. Each year, DWR calculates a separate SWP Table A allocation for NOD contractors in Solano, Napa, and Butte counties and Yuba City. The NOD Allocation is expected to be 5 to 25 percent higher than the standard Table A allocation each year, depending on hydrologic conditions and regulatory and operational constraints applicable to only North of Delta. It will not be impacted by restrictions that affect South of Delta (SOD) exports. Starting in 2015, the NOD Allocation ranged from 5 percent to 15 percent higher than standard Table A in its first seven years of implementation. In 2024 and 2025, the allocations were 25 percent and 20 percent higher, respectively, than the base SOD allocations of 40 percent and 50 percent. Current litigation with DWR regarding the treatment of this annual NOD incremental entitlement is expected to be resolved in 2026, clarifying when and how the City can access this additional Table A water.

6.2.3 Advanced Table A Program

Another outcome from the Area of Origin settlement, the Advanced Table A Program, consists of additional SWP water that becomes available from a credit account once all available Table A supplies are exhausted, including any carried over from previous years. This credit account can provide the City with an additional 3,772 AFY when the standard (SOD) allocation is less than or equal to 20 percent. When the standard allocation is greater than 20 percent, the City may borrow up to 5,659 AFY. An additional amount may be requested if Solano County Water Agency and Yuba City do not use their maximum Advanced Table A Program entitlements. The cumulative balance in the Advanced Table A Program account must not exceed 21,900 AF, and it resets to zero whenever Lake Oroville spills.

6.2.4 Article 21 Water

Article 21 water is an interruptible surplus SWP supply. Article 21 of the SWP contract allows for the purchase of surplus water beyond Table A entitlements, provided that the contractor can take delivery during the wet season when excess water is available in the Delta without affecting Table A deliveries to other contractors. The City directs NCFCWCD to use an annual delivery schedule that maximizes the City's use of Article 21 water prior to consumption of carryover water.

6.2.5 Dry Year Water

In dry years, DWR decides whether to operate a Dry Year Water Purchase Program based on Article 56 of the SWP contract. Also pursuant to Article 56, a "Turn-Back Pool" may be established with water from agencies not using their full Table A entitlement, which can be distributed to other agencies requesting additional supplies. NCFCWCD has purchased water through the program and will continue to do so, but it is not considered a reliable supply source due to its variability. In 2008 and 2021, with local reservoir levels low and an initial SWP allocation of just 25 percent and 5 percent, respectively, the City participated in the Yuba Accord Dry Year Water Purchase Program to supplement available supplies and reduce the need for mandatory drought restrictions for its customers.

6.3 LOCAL SURFACE WATER

This section discusses the City's two local surface water supply sources: Milliken Reservoir and Lake Hennessey.

6.3.1 Milliken Reservoir

The City began offering water service in 1923 after purchasing the privately-owned Municipal Water Works. This purchase led to the near-term construction of Milliken Dam to address water quality challenges with water diverted directly from the Napa River north of Trancas Street above the salinity gradient and groundwater pumping along Pine Street that effectively pulled water from the Napa River below the salinity gradient. This major project allowed storage of high-quality water from Milliken Creek, a tributary of the Napa River. The resulting Milliken Reservoir located approximately 5 miles northeast of the City, served as the City's sole water supply source until 1946, when Conn Dam was constructed (creating Lake Hennessey). Milliken Reservoir has historically served as only a seasonal source of supply used in the high-demand summer period when turbidity levels in the reservoir can be effectively treated at the Milliken WTP.

Raw water is currently not taken directly from Milliken Reservoir but is instead released into Milliken Creek by a manually-operated valve system located at the base of the Milliken Dam. About two miles downstream, a diversion dam directs water into a 16-inch diameter above ground raw water pipeline, which runs approximately 1.75 miles and flows via gravity to the Milliken WTP.

The City's water rights to Milliken Reservoir, which is fed by an approximately 6,000-acre watershed, are secured through a license with the State Water Board that authorizes the City to divert and store up to 2,350 AFY from Milliken Creek for beneficial use. Milliken Reservoir has an approximate storage capacity of 1,390 AF, much smaller than its average annual inflow of 3,656 AFY.[2] The storage capacity of Milliken Reservoir is limited to 1,390 AF due to seismic stability concerns from the State Division of Safety of Dams that necessitated lowering the reservoir storage elevation. Similar to the 2020 UWMP, this plan assumes an average yield for Milliken Reservoir of 700 AFY through 2040, reduced by 11 percent to 623 AFY in 2045 and 2050 to match the future climate change adjustment for the SWP.[3]

[2] Source: 2050 Napa Valley Water Resources Study.

[3] SWP reduction from 11,826 AFY to 10,512 AFY for 2045 and 2050 equates to an 11 percent adjustment.

The City holds a permit for direct diversion of 7.74 cubic feet per second (cfs) from Milliken Creek for the period of November through March. However, due to limitations at the Milliken WTP, this water is unable to be treated in the winter due to high turbidity levels.

6.3.2 Lake Hennessey

Located approximately 17 miles north of City Hall, Lake Hennessey is the major local water supply source for the City's water system. By the 1940s, the City grew to support the World War II effort largely focused at nearby Mare Island, and subdivision development was taxing the Milliken Reservoir, which had served as the City's single water supply source for more than two decades. To provide additional water supplies, the City constructed Conn Dam, allowing storage of water from Conn Creek, an up-valley tributary of the Napa River. The resulting reservoir, Lake Hennessey, was formed in 1946 and became the City's primary water supply source until the late 1960s, when it was supplemented by SWP entitlements.

The City's water rights to Lake Hennessey are secured through a permit with the State Water Board. The permit authorizes the City to divert and store up to 30,500 AFY from Conn Creek for beneficial use. Lake Hennessey's tributary watershed area is approximately 35,000 acres, and it has an approximate storage capacity of 31,000 AF. Storage capacity represents the static volume of the reservoir at spillway elevation, assuming no inflow or outflow, and is indicative of the absolute maximum yield in a wet year. While the average inflow to Lake Hennessey is 19,692 AFY,[4] its average yield is estimated to be 17,500 AFY through 2040, reduced by 11 percent to 15,575 AFY in 2045 and 2050 to match the future climate change adjustment for the SWP.

6.4 GROUNDWATER

As confirmed in Table 6-1, the City does not pump groundwater for municipal supply. The *2050 Napa Valley Water Resources Study* (2050 Study), a county-wide water supply planning effort completed in 2005, identified several potential groundwater options that the City may consider in the future. Potential groundwater projects include storing excess SWP entitlements in the groundwater basin along the NBA in Solano County and using new or existing wells in the local groundwater basin for dry year or emergency supplies or as non-potable water for schools and parks. While the City may consider these options, groundwater is not considered part of the City's water supply portfolio for the 2025 UWMP planning period.

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

☑	Check the box if the Supplier does not pump groundwater. Proceed to the next table.						
☐	Check the box if all or part of the groundwater described below is desalinated. (OPTIONAL)						
Groundwater Type **Drop Down List** May use each category multiple times	Potable or Non-Potable (OPTIONAL) **Drop down list**	Location or Basin Name	2021 (AF)	2022 (AF)	2023 (AF)	2024 (AF)	2025 (AF)
Add additional rows as needed							
		Total	0	0	0	0	0

[4] Source: 2050 Napa Valley Water Resources Study.

6.5 STORMWATER

The City does not currently use stormwater as a water supply source and does not have any specific plans to use stormwater to increase its water supplies. While some agencies use stormwater for groundwater recharge, this would not significantly increase the City's water supply since the City does not currently use groundwater as a municipal supply source. Future water supply studies will review all potential water supplies, with a focus on local resources and consideration of long-term policies such as the 2028 California Water Plan currently in development.

6.6 WASTEWATER AND RECYCLED WATER

Recycled water is municipal wastewater that has been treated to a specified quality, allowing it to be used beneficially. This non-potable water supply is typically distributed to large irrigation users such as golf courses, vineyards, parks, and commercial businesses.

The City is a drinking water supplier only and does not produce or distribute recycled water. Within the City's service area, recycled water treatment and distribution is managed by NapaSan. Wastewater from the City and surrounding unincorporated areas is treated by NapaSan at their Soscol Water Recycling Facility (WRF), and recycled water produced there is sold by NapaSan to irrigation customers located both inside and outside the City's service area.

6.6.1 Recycled Water Coordination

In 1998, the City and NapaSan entered into an agreement that permits NapaSan to solicit and provide recycled water service within a specified portion of the City's service area. A copy of the agreement is attached as Appendix H. The agreement originally defined the recycled service area as lands east of the Napa River, south of Imola Avenue, west of Highway 221, and north of American Canyon, along with other specified areas. Generally, this means NapaSan recycled water can be made available to Napa State Hospital, Stanly Ranch, Napa Valley Commons, South Napa Marketplace, and other nearby sites. A 2018 amendment has enabled additional sites such as Tulocay Cemetery to receive recycled water. The agreement includes a "make whole" calculation to ensure that City's water revenues are not adversely affected by existing customers suddenly converting to recycled water.

The first City customer to switch to NapaSan recycled water for irrigation was the Napa Municipal Golf Course in 2003. As of 2025, there are 21 recycled water customers in the City's service area, saving hundreds of AFY in potable water. The City recognizes the value of recycled water as a locally produced, reliable supply source and continues to work with NapaSan to further expand its use to meet non-potable demands within the City's service area. When a City customer switches to NapaSan recycled water for their irrigation needs, demands on the City's water system are reduced, which helps the City meet its conservation goals.

6.6.2 Wastewater Collection, Treatment, and Disposal

NapaSan collects, treats, and disposes of wastewater generated within the City's service area. The NapaSan wastewater and City drinking water customer populations have nearly complete overlap. NapaSan's Soscol WRF is located at the most southern part of the Napa Valley and discharges treated wastewater to the Napa River.

6.6.2.1 Wastewater Collected Within Service Area

As shown in Table 6-2, the Soscol WRF received 8,805 AF of wastewater in 2025 from the City's service area.

Table 6-2. Wastewater Collected Within Service Area in 2025 (DWR Table 6-2 Retail)

☐	Check the box if there is no wastewater collection system. Proceed to the next table.			
	Percentage of 2025 service area served by wastewater collection system (OPTIONAL)			
	Percentage of 2025 service area population served by wastewater collection system (OPTIONAL)			
Wastewater Collection			**Recipient of Collected Wastewater**	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? OPTIONAL **Drop Down List**	Volume of Wastewater Collected from UWMP Service Area 2025 (AF)	Name of Wastewater Treatment Plant (WWTP) and Place ID Number **Drop down list**	Is WWTP Located Within UWMP Area? **Drop Down List**
Napa Sanitation District (NapaSan)	Metered	8,805	Napa Sanitation District WWTP (Soscol Water Recycling Facility), Place ID 243858	Yes
Total Wastewater Received from UWMP Service Area in 2025:		8,805		
NOTES: Plant influent data obtained from NapaSan engineer in May 2026.				

6.6.2.2 Wastewater Treatment and Discharge Within Service Area

The Soscol WRF is a secondary/tertiary treatment facility that treats a mixture of domestic and industrial wastewater and has a dry weather design capacity of 15.4 MGD. From November through April (wet season), treated wastewater is discharged to the Napa River. From May through October (dry season), wastewater is treated and used as recycled water. In 2025, the Soscol WRF produced about 2,200 AFY of recycled water that met the Title 22 California Code of Regulations (Title 22) standards for disinfected tertiary water.

Prior to entering the recycling process, preliminary and primary treatment are used to remove solids and organic matter from the wastewater. For secondary treatment, a portion of the flow enters an activated sludge system consisting of two aeration basins, two secondary clarifiers, four return activated sludge pumps, and two waste activated sludge pumps. Large oxidation ponds provide both storage and secondary treatment for the portion of flow that bypasses the activated sludge system. The ponds promote the growth of algae to oxidize the organic matter in the wastewater.

Recycled water is produced from both activated sludge effluent and oxidation pond effluent. Recycled water treatment consists of:

- **Secondary Effluent Pump Station**: Effluent from the activated sludge system secondary clarifiers and clarified oxidation pond effluent both flow to the secondary effluent pump station where they are lifted to the filters. Three 100-horsepower (hp) pumps, each capable of pumping 10 MGD, are used.

- **Continuous Backwash Filters**: Prior to filtration, more polymers are added, and the water passes through three-stage flocculation. This step conditions the remaining solids so they can then be readily removed through filtration. In the filters, water passes through about six feet of sand, removing the remaining algae solids. To keep the filters clean, air is used to continuously lift, agitate, and wash the sand.
- **Disinfectant Rapid Mixing**: Sodium hypochlorite disinfectant is added to the filtered water to destroy harmful bacteria. Rapid mixing ensures that the chemical is fully and efficiently blended with the filtered water.
- **Chlorine Contact Basins**: The chlorinated water sits for approximately two hours in chlorine contact basins to ensure maximum bacteria reduction.
- **Recycled Water Storage Reservoirs**: Tertiary-treated recycled water is stored in reservoirs for a short time prior to distribution.
- **Recycled Water Pump Station**: The recycled water pump station delivers the water to customers throughout the southern portions of Napa Valley. The pump station uses three 600-hp pumps to distribute the water at pressures of up to 150 pounds per square inch (psi).

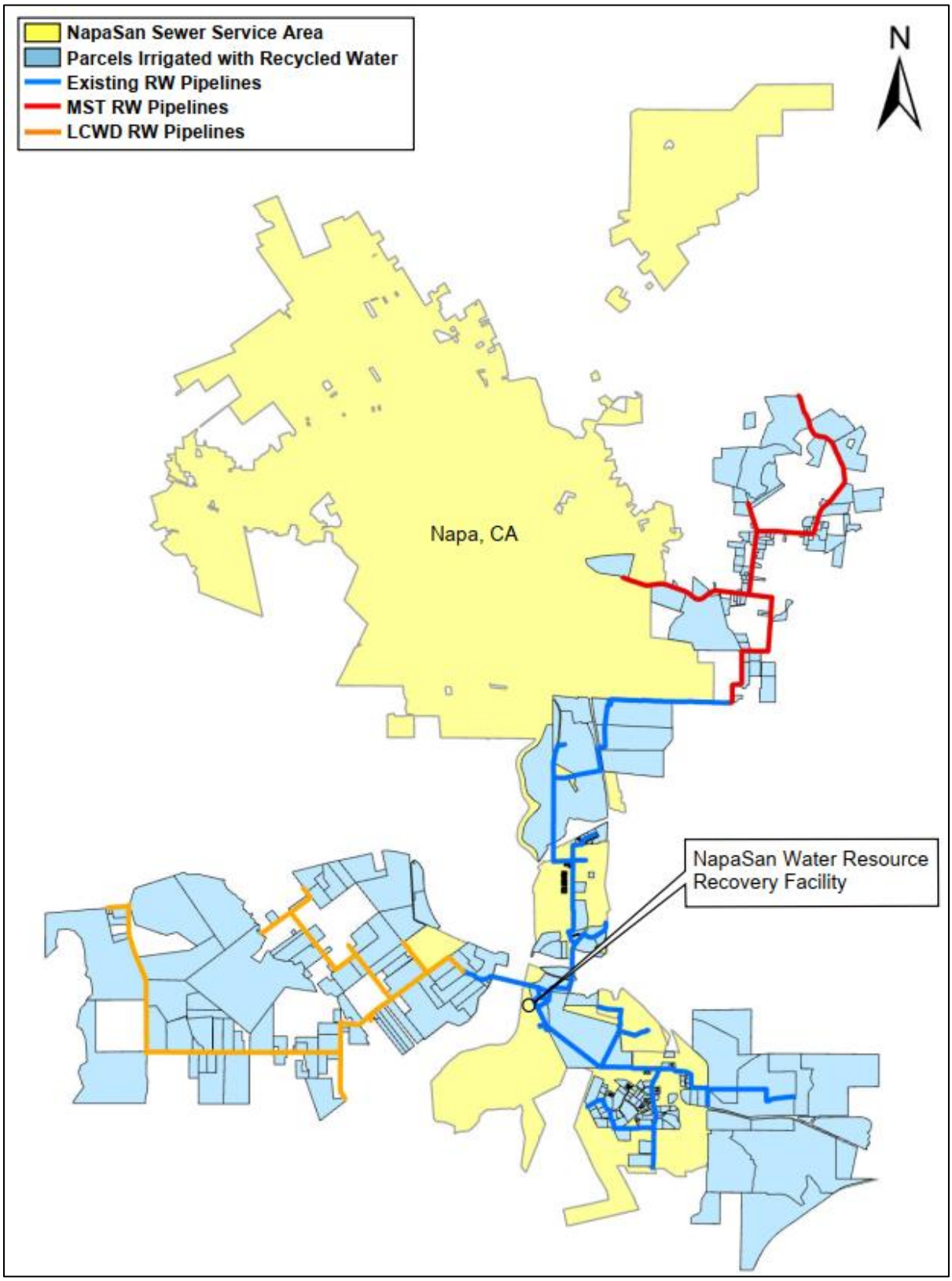
Figure 6-1 shows NapaSan's existing recycled water system pipelines, including the most recently completed extensions to the Los Carneros Water District (LCWD) and Milliken-Sarco-Tulocay (MST) areas.

Table 6-3 presents the volumes of wastewater treated, discharged, and recycled at the Soscol WRF in 2025. Approximately 21 percent (453 AF) of the total tertiary-treated water generated from the City's service area was recycled within the City's service area. The remaining 79 percent (1,720 AF) was delivered outside of the City's service area to vineyards, ranchlands, golf courses, and commercial sites located primarily south and east of the City.

Table 6-3. Wastewater Treatment and Discharge Within Service Area in 2025
(DWR Table 6-3 Retail)

☐	**Check the box if no wastewater is treated or disposed of within the UWMP service area.** Proceed to the next table.													
Wastewater Treatment Plant Name and Place ID Number **Drop down list**	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area? (OPTIONAL) **Drop down list**	2025 Volume of Wastewater Received from UWMP Service Area (As Reported in Submittal Table 6-2 R) (AF)	Total 2025 Volume of Water Treated (AF)	**2025 Outcomes of Treated Wastewater**										
				Water Recycled Within UWMP Service Area (enter data as applicable)		**Water Recycled Outside of UWMP Service Area** (enter data as applicable)		**Effluent Discharge that is not a Permitted Recycled Water Use** (enter data as applicable)		**Required Discharge for Instream Flow** (enter data as applicable)		**Delivered to Another Entity for Additional Treatment** (enter data as applicable)		
				Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Name of other entity
Napa Sanitation District WWTP (Soscol Water Recycling Facility), Place ID 243858	No	2,173	2,173	Tertiary	453	Tertiary	1,720							
Napa Sanitation District WWTP (Soscol Water Recycling Facility), Place ID 243858	No	6,632	6,632					Secondary, Disinfected - 23	6,162					
Total		8,805	8,805		453		1,720		6,162		0		0	

NOTES: Total wastewater treated and recycled water breakdown obtained from NapaSan staff in May 2026. Difference between secondary treated and discharged is evaporative loss from oxidation ponds. Table does note that 1,720 AF of recycled water was delivered to customers outside of the City's drinking water service area. As shown, 453 AF was recycled within the City's service area in 2025.



Source: Napa Sanitation District

Figure 6-1. Napa Sanitation District Recycled Water Pipelines

6.6.3 Potential, Current, and Projected Recycled Water Uses

As shown in Table 6-3, 453 AF of tertiary recycled water produced at NapaSan's Soscol WRF was delivered to recycled water customers within the City's service area by NapaSan in 2025. This volume was purchased by 21 customers that would otherwise use City drinking water to irrigate their landscapes and vineyards. Along with the Napa Golf Course at Kennedy Park, other prominent recycled water users include Napa Valley Memorial Park Cemetery, Napa Valley College, Meritage Resort, and the Napa Valley Commons business park. Extension of NapaSan's recycled water system to the MST area brought recycled water to the Napa State Hospital, the City's largest potable water customer. While there is now a small amount of recycled water used on the hospital grounds for landscape irrigation, the hospital still must complete a major renovation of its irrigation system before it can use recycled water throughout the entire property. New recycled water customers since 2020 include the early phase of the Napa Pipe redevelopment project and the first phases of the Stanly Ranch Resort.

Current and projected recycled water uses within the City's service area are shown in Table 6-4 and consist of agricultural, landscape, and golf course irrigation. These uses are consistent with NapaSan's 2022 Recycled Water Policy (NapaSan Board of Directors Resolution No. 22-020, included as Appendix I) and subsequent recycled water system pipeline extensions. Recycled water use within the City is projected to increase to approximately 800 AFY by 2050, with most of the growth occurring in landscape irrigation.

Table 6-5 compares the 2025 projected recycled water use from the City's 2020 UWMP to the actual 2025 recycled water use. Actual recycled water use in 2025 was below projections from the City's 2020 UWMP due to overestimated use at Stanly Ranch Vineyards and Resort, and slower than expected conversions of commercial and institutional landscapes in South Napa.

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

☐	Check box if recycled water is not used and is not planned for use within the service area of the supplier. The supplier will only complete the column on "Potential Recycled Water Use" and submit an accompanying narrative on the feasibility of that potential recycled water use.
Name(s) of Facility/ies Producing (Treating) the Recycled Water (OPTIONAL) :	Napa Sanitation District WWTP (Soscol Water Recycling Facility)
Name of Supplier Operating the Recycled Water Distribution System (OPTIONAL) :	Napa Sanitation District (NapaSan)
Volume of Supplemental Water Added in 2025 (OPTIONAL) :	
Source of 2025 Supplemental Water (OPTIONAL) :	

Use Type **Drop down list**	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop down list	Additional Information (as needed)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)	**Potential Recycled Water Use**	
									Volume	Narrative page number (OPTIONAL)
Add additional rows as needed										
Agricultural irrigation	Non-Potable	Vineyard Irrigation	63	100	100	100	100	100		
Landscape irrigation (exc golf courses)	Non-Potable	Commercial and Institutional Landscaping	221	300	500	500	500	500		
Golf course irrigation	Non-Potable	Napa Municipal Golf Course at Kennedy Park	169	200	200	200	200	200		
		Subtotal Potable	0	0	0	0	0	0	0	
		Subtotal Non-Potable	453	600	800	800	800	800	0	
		Total	453	600	800	800	800	800	0	0

NOTES: Because no additional golf courses exist in the City service area and agricultural (vineyard) areas are very limited, those types of recycled water use will remain steady. Commercial/institutional landscaping uses have the potential to expand based on NapaSan and City policy.

Table 6-5. 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual (DWR Table 6-5 Retail)

☐	Check the box if recycled water was not used in 2025 nor previously projected for use in 2020. Proceed to the next table.

Use Type Drop Down list	2020 Projection for 2025 (AF)	2025 Actual Use (AF)
Agricultural irrigation	100	63
Landscape irrigation (exc golf courses)	515	221
Golf course irrigation	220	169
Total	835	453

NOTES: 2020 UWMP overestimated vineyard irrigation volumes in the Stanly Ranch area and the pace of commercial/institutional recycled water conversions in South Napa.

6.6.4 Actions to Encourage and Optimize Future Recycled Water Use

As described above, recycled water within the City is supplied by NapaSan. The City will continue to work closely with NapaSan to expand recycled water use throughout the City's service area. Table 6-6 lists anticipated future recycled water use increases within the City's service area.

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

☐	Check the box if the Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.
	Provide page location of narrative in the UWMP

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use (AF)
Add additional rows as needed			
Vineyards in Stanly Lane area	Connect remaining unconnected vineyard acreage in southwest Napa	2028	20
Stanly Ranch Resort	Connect remaining landscape and vineyard areas as final phases of resort/housing construction are completed	2029	60
Napa Pipe	Complete full connection of all common area landscaping in Napa Pipe project	2030	40
Napa State Hospital	Full connection for entire facility landscape	2032	80
South Napa Infill	Connect Imola Avenue commercial landscapes	2034	60
Gasser Infill	Connect residential and commercial landscapes on former Gasser Foundation lands	2035	60
		Total (AF)	320
		Unit Conversion to AF	320

NOTES: Table represents scheduled or anticipated actions within City of Napa drinking water service area only.

6.7 DESALINATED WATER

The City does not currently have a desalination program, nor does it plan to implement one.

6.8 EXCHANGES AND TRANSFERS

The City has considered and will continue to consider opportunities for water exchanges or transfers with water right holders if opportunities arise with acceptable terms and conditions. These potential opportunities could include, but would not be limited to, one-time transfers from farmers who choose to fallow fields and auction off their water. The 2050 Study recommended that County agencies take advantage of NBA conveyance capacity by importing dry year supplies from outside the County. Known as the "Fill the Pipe" option, this would require negotiation of a long-term transfer agreement for reliable dry year supplies from agencies such as Butte County, the City of Vallejo, and Sacramento River users.

NCFCWCD and the City are investigating the potential for a permanent long-term agreement to receive dry year transfers from a fellow State Water Contractor. Should this materialize, the impacts on dry year supply scenarios in Chapter 7 will be accounted for in a future UWMP update.

With significant extra SWP carryover water available in 2024 and 2025, the City made transfers totaling more than 9,000 AF to agencies in Tulare and Kern Counties, receiving much needed capital funds.

6.9 FUTURE WATER PROJECTS

This section discusses the City's potential future water supply projects, including WTP improvements and options to increase future water supplies. Since efforts to evaluate these projects are preliminary, their supplies are not quantified nor are they included in Table 6-7. As future water projects are finalized or agreements made, their supply contributions will be quantified in future UWMPs.

Table 6-7. Expected Future Water Supply Projects or Programs
(DWR Table 6-7 Retail)

☑	Check the box if there are no expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Proceed to the next table.						
☐	Check the box if some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.						
	Provide page location of narrative in the UWMP						
Name of Future Projects or Programs	Joint Project with other suppliers?		Additional Description (as needed)	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Planned Implementation Year	Planned for Use in Year Type **Drop Down List**	Expected Increase in Water Supply to Supplier (This may be a range) (AF)
	Drop Down List (yes/no)	If Yes, Supplier Name					
Add additional rows as needed							

6.9.1 Water Treatment Plant Projects

Improvements to the Barwick Jamieson WTP were completed in 2011, increasing the treatment capacity from 12 MGD to approximately 20 MGD. The ultimate capacity of the Barwick Jamieson WTP is expected to reach 24 MGD, which will help the City treat all of its entitled water supplies from the SWP. While not actually creating new supply, the proposed treatment capacity expansion essentially has the same effect, allowing the City to maximize supplies to which it is entitled. By using more water from the SWP in select years, the City can preserve its local reservoirs for dry years to provide additional reliability.

The Milliken WTP can reliably meet drinking water standards when treating high-quality summer flow releases; however, its existing direct filtration process struggles to treat elevated turbidity and naturally

occurring iron associated with winter flows. In 2024, the City retained Carollo Engineers to evaluate potential upgrades that would allow greater beneficial use of the City's existing water rights, including License 5208 (2,000 AF diversion to storage from November through March) and Permit 18448 (7.74 cubic feet per second (cfs), or approximately 2,350 AF annually, via direct diversion). Analysis of watershed hydrology and historical reservoir operations shows that Milliken Reservoir fills and spills annually, with more than 5,000 AF spilling in an average year and approximately 1,013 AF reliably available for diversion in a dry year after instream flow requirements. Seismic modifications in 2008 reduced reservoir storage capacity from 1,986 AF to 1,390 AF, and the Milliken WTP currently treats about 700 AF per year. Carollo's study is evaluating the addition of roughing filters to improve winter turbidity and metals removal while avoiding full conventional treatment due to site constraints and operational considerations. Depending on final performance testing, upgrades could increase annual treated supply to an estimated range of 930 to 1,860 AF, with the higher volume achievable if treatment capacity is expanded to 4.2 MGD and winter flows can be treated from January through March in compliance with regulatory standards.

The City is advancing the Lake Hennessey Spillway Flow Expansion Project to safely accommodate flows associated with the probable maximum flood (PMF) and address updated hydrologic criteria following the 2017 Oroville Dam spillway erosion. While the spillway is currently designed for 14,000 cfs, updated National Oceanic and Atmospheric Agency (NOAA) hydrologic and hydraulic (H&H) analyses indicate potential outflows of approximately 38,900 cfs, which could result in dam overtopping of up to 1.5 feet. Earlier expansion concepts were evaluated in 1968 and 1988 but were not implemented due to funding constraints. Since 2017, the City has conducted updated studies and completed interim repairs in 2019. The current project, estimated at approximately $11 million, would expand spillway capacity through alternatives such as widening the channel, modifying slopes, raising the dam, or incorporating a gated structure such as a labyrinth weir. In addition to improving dam safety and extending the life of the 75-year-old facility, certain alternatives could increase reservoir storage by approximately 4,560 to 6,840 AF through a 4- to 6-foot raise in water surface elevation. The City is pursuing state and federal funding assistance, including coordination with the U.S. Army Corps of Engineers and application to the California Water Infrastructure Financing Program, and will evaluate financing options to minimize cost impacts to ratepayers.

6.9.2 Sites Reservoir

The Sites Reservoir Project would be a 1.8 million AF off-stream surface storage reservoir located in the Sacramento Valley approximately 10 miles west of the town of Maxwell in Colusa County. The proposed Sites Reservoir will be filled by diverting excess Sacramento River flows originating from unregulated upstream tributaries. Diversions can potentially occur in any month or water year type but would be greatest in the winter months with an emphasis on capturing flows from storm events. The Sites Reservoir will operate in cooperation with CVP and SWP system facilities to produce a wide range of public and ecosystem benefits that can be flexibly managed to adapt to future changes, depending on need and priority.

In January 2022, the City submitted a Letter of Interest to the Sites Project Authority to express its interest in participating in the Site Reservoir Project at a level of 4,000 AF of reservoir release capacity. However, based on the current project participation, and the level of interest of additional potential participants, it may not be possible for the City to become a participant. The Sites Project Authority is evaluating the development of a water transfer program that would allow project participants to transfer a portion or all of their share of capacity to other agencies.

Currently, there are no participants willing to reduce their allotments to free up water supply for new participants to buy in. A secondary means of achieving access to Sites Reservoir water supply would be to execute an agreement with the City of American Canyon who is an original participant and requested 4,000 AF in Sites Reservoir. However, the transfer window must be defined to determine the value of securing water supply from Sites Reservoir. There is more value when there is increased flexibility as to when the water can be moved through the existing SWP infrastructure. The transfer window for Sites Reservoir water, if the same as the transfer window applied to the SWP export pumps, will be limited to June through November in most years depending on conditions. As of July 2025, the transfer windows are not fully defined. The City remains on the waiting list for project participants and will continue to monitor the viability of participation, including other Sites Reservoir participants such as Glenn-Colusa Irrigation District, that may be willing to reliably sell water, and access conveyance capacity in SWP infrastructure that would be used to move the water.

6.9.3 Advanced Water Purification Facility

While traditional surface and imported supplies will remain foundational to the region's water supply portfolio, the City and NapaSan view non-potable and potable reuse as critical components of long-term water supply reliability. To evaluate the feasibility of incorporating purified water through raw water augmentation or treated water augmentation, the agencies commissioned the Napa Purified Water Feasibility Study (Carollo Engineers, March 2024), which evaluated the quantity of recycled water that would be available and the cost to construct and operate the Advanced Water Purification Facility (AWPF) to produce purified water to meet Title 22 drinking water standards for direct potable reuse. The study evaluated the seasonal availability of excess recycled water from the Soscol WRF, primarily during winter and shoulder seasons when recycled water is not needed for irrigation and analyzed construction and operational costs for an AWPF at capacities of 1.8 MGD, 6 MGD, and 10 MGD at two potential locations: the NapaSan Solid Waste Recycling Facility and the City's Barwick Jamieson WTP. The AWPF would utilize advanced treatment processes including ozone and biologically activated carbon, membrane filtration, reverse osmosis, ultraviolet advanced oxidation, disinfection, and engineered storage buffer.

The preferred alternative identified in the study is a 6 MGD AWPF operating approximately six months per year, producing an estimated 2,231 AF of water. Capital costs are estimated at approximately $218 million for treated water augmentation at the NapaSan site (approximately $7,700/AF) and $258 million for raw water augmentation at the Barwick Jamieson WTP (approximately $8,700/AF), with lower costs at the NapaSan site largely due to reduced pipeline and pumping requirements. The project would require new conveyance pipelines, concentrate disposal facilities, and additional operational staffing. The agencies identified a contracted services governance structure as the most viable implementation approach. Development would occur in phased steps including planning, demonstration and public outreach, implementation, and operations, with an estimated timeline of approximately 11 years.

6.9.4 Joint Powers Agreement or Other Cooperative Agreement with Other Local Entities

As recommended in the Napa Valley Drought Contingency Plan (Brown and Caldwell, 2022), the City and municipal water providers in Napa Valley have embarked on a valley-wide optimization plan to determine if use of existing water supplies could be optimized in a manner that results in greater reliability and redundancy of drought year supplies. Initial discussions have considered interties and coordinated operations to determine what future infrastructure investments could be avoided by participants if shared investments are constructed instead.

Preliminary hydraulic assessments have determined that investments are needed to address flow restrictions and/or increase pressure to serve portions of St. Helena and Calistoga's service areas, particularly during peak demand seasons. Several of the municipalities in Napa County have small reservoirs that fill and spill each year; these reservoirs provide local, low-cost water throughout the winter months, but storage is insufficient for multi-year droughts. Each entity must define their capital investment needs to understand what alternate investments could be made regionally, rather than individually. For example, if a water treatment facility needs upgrades to meet seasonal winter water quality challenges and an existing alternate source could be substituted with less capital outlay, greater optimization would result.

Currently, sufficient information regarding system hydraulic restrictions and understanding of individual system pressure criteria were not available to fully define potential synergies across all municipal providers. It is recommended the City and neighboring agencies continue discussions and mutual system considerations to collectively optimize investments.

6.10 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

Table 6-8 shows the actual sources and volumes used to meet City water demands in 2025. Most of the City's water supply in 2025 came from Lake Hennessey, with the remainder coming from the SWP. No water supply from Milliken Reservoir was used in 2025 due to continuing recovery from raw water pipeline damage suffered in the 2017 Atlas Fire.

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

Water Supply		2025		
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Actual Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed				
Supply from Storage	Lake Hennessey	Potable	8,885	30,500
Supply from Storage	Milliken Reservoir	Potable	0	2,350
Purchased or Imported Water	State Water Project	Potable	3,326	21,900
		Subtotal Potable	12,211	54,750
		Subtotal Non-Potable	0	0
		Total	12,211	54,750
NOTES: Total Entitlements represent the annual diversion and storage Water Rights for the two local reservoirs and the City's contractual 100% Table A allocation for the State Water Project.				

Projected supplies that are reasonably available in normal water years through 2050 are shown in Table 6-9. The City's water supply sources are projected to have a combined 30,026 AFY available in 2030 through 2040. Climate change impacts are assumed to reduce both SWP and local water supplies by about 11 percent (to 26,710 AFY) beginning in 2045.

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

Water Supply			Projected Water Supply (Report to the Extent Practicable)									
			2030		2035		2040		2045		2050 (opt)	
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed												
Supply from Storage	Lake Hennessey	Potable	17,500	30,500	17,500	30,500	17,500	30,500	15,575	30,500	15,575	30,500
Supply from Storage	Milliken Reservoir	Potable	700	2,350	700	2,350	700	2,350	623	2,350	623	2,350
Purchased or Imported Water	State Water Project	Potable	11,826	21,900	11,826	21,900	11,826	21,900	10,512	21,900	10,512	21,900
		Subtotal Potable	30,026	54,750	30,026	54,750	30,026	54,750	26,710	54,750	26,710	54,750
		Subtotal Non-Potable	0	0	0	0	0	0	0	0	0	0
		Total	30,026	54,750	30,026	54,750	30,026	54,750	26,710	54,750	26,710	54,750

NOTES: Reasonably Available Volumes are based on an average water year. Through 2040, State Water Project supplies are 54% of Table A (with no Carryover, Article 21, or North of Delta allocation assumed). This Table A allocation represents an average year under Existing Conditions (Adjusted Historical Hydrology) as contained in The State Water Project Draft Delivery Capability Report 2025, DWR, December 2025. 2045 and 2050 use a 48% Table A allocation based on the report's 2043 50% Level of Concern under Future Climate Change Conditions. Local reservoirs supplies are reduced 11% in 2045 and 2050 to match the climate change adjustment for the State Water Project.

6.11 CLIMATE CHANGE IMPACTS

There are concerns that a warming trend that occurred during the latter part of the 20th century will likely continue through the 21st century. Numerous studies have been conducted to evaluate the potential impacts of climate change to water resources. Based on these studies, climate change could impact California's water resources in the following ways:

- Reductions in the average annual snowpack due to a rise in the snowline and a shallower snowpack at low and medium elevations and a shift in snowmelt runoff to earlier in the year
- Changes in the timing, intensity, and variability of precipitation, and an increased amount of precipitation falling as rain instead of as snow
- Long-term changes in watershed vegetation and increased incidence of wildfires that could affect water quality
- Sea level rise and an increase in saltwater intrusion
- Increased water temperatures with accompanying potential adverse effects on some fisheries and water quality
- Increased evaporation and irrigation need
- Changes in urban and agricultural water demand

Because the SWP is a major source of the City's water supply, climate change impacts to the Sacramento–San Joaquin Delta present significant concerns. The Draft 2025 DCR identifies the following potential climate-related impacts to Delta and SWP operations:

- Changes in runoff and snowmelt timing could affect storage reservoir operations by:
  - Increasing the need for flood control storage due to larger and more frequent winter runoff events;
  - Reducing opportunities to refill reservoirs during late spring and early summer; and
  - Decreasing the availability of surface water supplies during the summer and fall seasons.
- Delta levee failures, resulting from sea level rise, seismic events, inadequate maintenance, or a combination of factors, could:
  - Cause saltwater intrusion that degrades Delta water quality; and
  - Disrupt SWP conveyance and exports for extended periods, as major levee failures may require months or years to repair.
- More intense storms and higher runoff volumes could adversely affect Delta water quality by increasing sediment loads and transporting higher levels of urban and agricultural contaminants, potentially limiting SWP operations.

These impacts from climate change have been incorporated into the City's projected water supply from the SWP. The City has also evaluated the impacts of climate change to its local water supplies and has incorporated similar climate change impacts into its local surface water supply projections.

6.12 ENERGY INTENSITY

In accordance with CWC Section 10631.2(a), the energy intensity to provide water service to the City's customers over a one-year period is presented in this section to the extent that the information is available. The amount of energy to divert, pump, treat, and distribute the City's water supply within the system it owns and operates is included. The amount of energy the SWP requires to pump and deliver raw water to the City is excluded.

Water energy intensity is the total amount of energy, calculated on a whole-system basis, used to deliver water to the City's customers for use. Energy intensity is the total amount of energy in kilowatt-hours (kWh) expended per million gallon (MG) of water taken from the City's source to its point of delivery. Understanding the whole-system energy intensity would allow the City to develop the following water supply management and system operation strategies:

- Identifying energy saving opportunities, as energy consumption is often a large portion of the cost of delivering water
- Calculating energy savings and greenhouse gas emissions reductions associated with water conservation programs
- Identifying potential opportunities for receiving energy efficiency funding for water conservation programs
- Informing climate change mitigation strategies
- Benchmarking energy use at each water acquisition and delivery step and comparing energy use among similar agencies

As shown in Table 6-10, the total energy intensity for the City's water service in 2025 was approximately 748 kWh/MG. To provide a more accurate energy intensity calculation, the water volume used includes 799 AF that the City treated and wheeled to American Canyon and Calistoga in 2025.

Table 6-10. Recommended Energy Reporting - Total Utility Approach (DWR Table O-1B)

Water Delivery Product drop down list (If delivering more than one type of product recommend using Table O-1C)	Retail Potable Deliveries	**Only for Water Delivery Products Under the Urban Water Supplier's Operational Control**		
Start Date of Reporting Period	1/1/2025	**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
End Date of Reporting Period	12/31/2025			
Is upstream embedded energy in the values reported?	No			
Units of Measure for Water	AF	**Total Utility** See DWR NOTES	**Hydropower**	**Net Utility**
Volume of Water Entering Process		13,010	-	13,010
Energy Consumed (kWh)		3,171,768	-	3,171,768
Energy Intensity (kWh/vol. converted to MG)		748	-	748

DWR NOTES:
Total Utility: The volume of water entered in the "Total Utility" column should equal the volume of water entering the distribution system (excluding recycled water); in most cases, this is the total volume calculated in UWMP Table 4-1: 2025 Actual Total Uses for Potable and Non-Potable Water. Note if recycled water is included in your Submittal Table 4-1, you must exclude it from your volume in this table.

Quantity of Self-Generated Renewable Energy

75000 kWh

Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data)

Metered Data

Data Quality Narrative:

Volume of Water Entering Process includes 799 AF that the City treats and wheels to the Cities of American Canyon and Calistoga. This provides a more accurate Energy Intensity in this Total Utility Approach. Metered electricity data were tabulated for all relevant City of Napa Pacific Gas & Electric (PG&E) billings covering calendar year 2025.

Narrative:

Electricity is consumed primarily at three water treatment plants and ten pump stations within the City's operational control. Pumping raw water from Lake Hennessey to the Hennessey Water Treatment Plant consumes the largest amount of energy. This is also the site of the City's solar photovoltaic system, which is capable of producing up to 600,000 kWh per year; however, the system was down for most of 2025 due to failed inverters and other needed repairs, and solar production was limited.

Since NapaSan manages all wastewater and recycled water operations (i.e., collection, treatment, discharge, and distribution) within the City's service area, energy reporting for wastewater and recycled water does not apply to the City.

CHAPTER 7
Water Service Reliability and Drought Risk Assessment

This chapter describes the City's water service reliability under various hydrologic conditions, including a severe drought for the next five years. The City's existing and planned water management tools for increasing water supply reliability are also addressed. Responses to actual water shortage conditions are detailed in Chapter 8 of this plan.

7.1 WATER SERVICE RELIABILITY ASSESSMENT

This section presents the constraints on the City's existing and planned water supply sources and describes the historical basis for projecting available supplies under various hydrologic conditions (i.e., normal year, single dry year, and five consecutive dry years). The City's water service reliability is then presented in five-year increments through 2050 based on previous analysis of water use (discussed in Chapter 4) and supply (discussed in Chapter 6). Finally, this section discusses the City's water management tools and options to promote regional supply reliability and minimize the need to import water from other regions.

7.1.1 Constraints on Water Sources

This section discusses the reliability constraints on the City's water supply sources and the City's strategies for managing the risks associated with each supply source. The year-to-year reliability of water supplies from Lake Hennessey, Milliken Reservoir, and the SWP depends on various climatic, environmental, legal, and water quality factors. Each of these factors is discussed in the following sections.

7.1.1.1 Climate Variability

Weather patterns affect hydrologic conditions, which help determine annual SWP deliveries. In critically dry years like 2014 and 2021, SWP contractors received as little as 5 percent of their annual entitlement. Because the City uses SWP supplies, the City is somewhat dependent on precipitation and drought conditions in the Sacramento and San Joaquin river basins. However, with local reservoirs augmenting the City's supply from the SWP, the City is not as vulnerable to climatic effects on its SWP supply. Weather patterns and annual rainfall in the local Lake Hennessey and Milliken Reservoir watersheds affect their yields.

With the conservative assumption that dry conditions will occur simultaneously in the SWP and local watersheds, the City is confident in the minimum supplies presented in this plan for single dry and multiple-dry year conditions. As discussed in Chapter 6 of this plan, climate change may increase the variability in water supply for the City and is addressed in the City's supply projections.

7.1.1.2 Environmental/Legal Restrictions

SWP water is conveyed to the City through the NBA from the Delta. With more than 20 million Californians and millions of acres of irrigated farmland relying on the Delta for water, it is the hub of the State's water distribution system. With runoff from two major river systems flowing into San Francisco Bay, the Delta is also a productive habitat for wildlife, including several endangered species.

The Delta also serves as a critical migration corridor for salmonid species traveling between their natal streams and the Pacific Ocean and provides habitat for the Delta Smelt, a listed species requiring regulatory protection. Protection measures for these species, including operational constraints on pumping, can affect Delta water exports. The SWP is currently operated in compliance with applicable biological opinions and related regulatory requirements issued by the U.S. Fish and Wildlife Service and National Marine Fisheries Service, as well as subsequent updates and court decisions. In the Draft 2025 SWP Delivery Capability Report (Draft 2025 DCR), DWR incorporates these regulatory and environmental

constraints into its modeling of future SWP supplies. Consistent with a conservative planning approach, the 2025 Draft DCR assumes that existing institutional, environmental, regulatory, and legal constraints remain in place over the planning horizon.

As described in Chapter 6 of this plan, some of these SWP environmental impacts for the City have been mitigated by the "Area of Origin" settlement. DWR now calculates a separate SWP Table A allocation for North of Delta (NOD) contractors that will not be affected by restrictions that reduce South of Delta exports.

Through permits and licenses with the State Water Board, the City has a legal entitlement to use water from its local reservoirs (Lake Hennessey and Milliken Reservoir). These appropriative water rights allow the City to divert and store up to 30,500 AFY from Conn Creek and 2,350 AFY from Milliken Creek for beneficial use. The water rights require the City to allow sufficient releases from the reservoirs to provide minimum stream flows, which have been taken into consideration in estimating water supply availability.

The City continues implementation of aspects of the Master Plan for Reservoir and Watershed Operations, one portion of which relates to modeling runoff within the watershed. As part of this effort, the City has been coordinating with the County, who has jurisdiction over land use in thousands of acres of watershed lands, to implement a monitoring and analysis plan and define tributary water quality with the goal of understanding areas that may contribute to changes in water quality. The program ensures targeted efforts and resolution to ensure water quality protection. Another aspect of the Master Plan for Reservoir and Watershed Operations is an assessment of spillway capacity and a probable maximum storm. The recommended capital improvements could impact, and ideally increase, annual supplies available from the City's local reservoirs.

7.1.1.3 Water Quality

Because the Delta is an estuary, salinity is a potential water quality concern. SWP water is required to meet salinity and other water quality objectives for the Delta established by the State Water Board, and these objectives may restrict SWP exports from the Delta.

The City consistently meets drinking water standards prescribed by the U.S. Environmental Protection Agency and the State Water Board. SWP source water can provide a challenge for the Barwick Jamieson WTP during winter storms, when turbidity increases. While process changes including ozonation have improved the WTP's ability to handle high-turbidity raw water, improved watershed management practices near the intake may also help mitigate the issue in the future. The NBA intake at Barker Slough has experienced periodic water quality problems, in part because of organic material from decaying vegetation. Habitat restoration projects initiated to mitigate impacts associated with the Bay Delta Conveyance Project (formerly Twin Tunnels) near the Barker Slough Pumping Plant may further reduce the water supply reliability of the NBA. Potential alternate intake locations for the NBA that would improve raw water quality and avoid Delta Smelt habitat are being evaluated.

Raw water quality is also an issue for the Milliken Reservoir, as higher turbidity levels in the fall, winter, and spring reduce the effectiveness of the Milliken WTP's direct filtration system. The City is considering modifications to Milliken WTP so that this reservoir can be used as a supply source year-round. The supply reliability data in this plan reflect the current practice of using Milliken supplies only during the summer, when lower turbidity levels can be effectively treated.

The Master Plan for Reservoir and Watershed Operations also reviewed water quality impacts to supply. City supply sources have seasonal taste and odor challenges due to algal growth, as well as episodes of

high total organic carbon that increase the formation potential for disinfection byproducts. City staff is cognizant of these challenges and uses vigilance to provide the highest quality water to customers throughout the year with limited exception when constrained due to infrastructure challenges ahead of the treatment plant process. Management of existing reservoir water supplies and alternate supply options to address loss of quantity and quality continues to be an important part of ongoing reservoir and watershed management.

7.1.2 Year Type Characterization

Water supplies can vary year to year depending on hydrologic conditions. Historical data, where available, were used to develop a projected yield for each water supply source under three conditions: (1) normal water year, (2) single dry water year, and (3) five consecutive dry water years. In accordance with the DWR Guidebook, each condition is defined as follows:

- **Normal Water Year**: The year or averaged range of years in the historical sequence most closely representing average water supply.
- **Single Dry Water Year**: The year with the lowest water supply in the historical sequence.
- **Five-Consecutive-Year Drought**: The driest five-year historical sequence.

The following sections describe the historical calendar years selected to represent each of the above conditions for local surface water and SWP supplies.

7.1.2.1 Basis of Water Year Data – Local Surface Water

The City's local surface water supplies are stored in Lake Hennessey and Milliken Reservoir, and each reservoir has a yield that varies with hydrological conditions. During droughts, reduced yields are supplemented by releasing additional stored water (i.e., reservoir drawdown or depletion). Therefore, in single or multiple dry years, local surface water supplies consist of two components: reservoir yield and reservoir depletion. Yield represents the amount of annual recharge, while depletion is the change in reservoir low point from one year to the next. The depletion amount is a factor of water use, evaporation, and bypass flows. Evaporation depends on the climate and the water surface area in the reservoir. The sum of evaporation and bypass losses is assumed to be 1,400 AFY based on the Lake Hennessey median value for the 2001 to 2020 period.

The driest five-year historical sequence for the City occurred during 1987-1992. The Lake Hennessey storage pattern for that period is shown in Figure 7-1, which also notes the yield and depletion for the 1987-1988 period. The recharge amount of 7,700 AF in the winter of 1987-1988 represents the yield. Depletion of 800 AF is the difference between the reservoir low points.

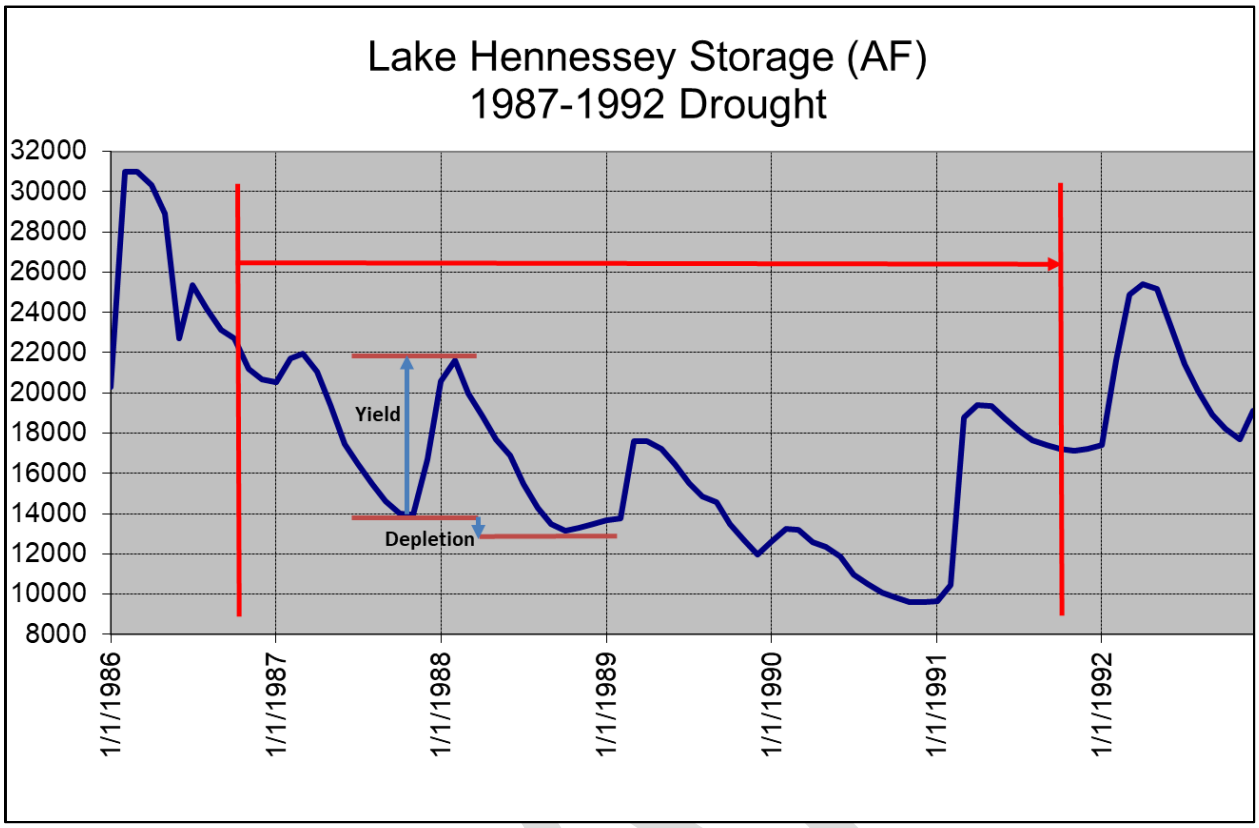


Figure 7-1. Lake Hennessey Storage During 1987-1992 Drought

Estimated reservoir yields for Lake Hennessey and Milliken Reservoir for the different water year conditions are presented in Table 7-1 and are derived from reservoir conditions experienced in the 1987-1992 drought. For Lake Hennessey, the normal year yield of 17,500 AF was derived from a yield curve based on watershed modeling and fifty years of rainfall data, as noted in the 2050 Study. The Lake Hennessey reliable yield of 4,800 AFY for multiple dry years is based on the average annual recharge in the reservoir from 1987 through 1992. Lake Hennessey's firm yield of 2,000 AFY (for a single dry year) is the rounded-up value of the lowest recharge amounts encountered in that drought. Milliken Reservoir typically fills and spills each winter, with a reliable yield of 700 AF. In the extreme single dry year case, a firm yield of 400 AFY is assumed for Milliken Reservoir.

Table 7-1. Estimated Local Reservoir Yields

Source	Yield, AFY		
	Normal Year	Single Dry Year	Multiple Dry Years
Lake Hennessey	17,500	2,000	4,800
Milliken Reservoir	700	400	700
Total	**18,200**	**2,400**	**5,500**

For both the single dry year and the multiple dry year cases, Lake Hennessey is assumed to start at 26,000 AF of storage (out of a total storage capacity of 31,000 AF). The basis for this assumption is that, except for the 1987-1992 drought years shown in Figure 7-1 and the 2021 dry year, Lake Hennessey storage levels after the winter season have been 26,000 AF or greater more than 95 percent of the time. In the remaining years that storage levels have been below 26,000 AF, they were at or above 24,500 AF.

For single dry years, Lake Hennessey storage is assumed to be depleted by 10,900 AFY, with another 1,400 AFY lost to evaporation and bypass flows. Therefore, Lake Hennessey has 9,500 AFY of usable supply in single dry years. Milliken Reservoir is assumed to start at 400 AF of storage and be drawn down 25 percent (100 AF) during single dry years. Therefore, the total available supply from the City's reservoirs during a single dry year is equal to 9,600 AFY.

In the multiple dry year case, the local reservoirs were assumed to draw down by 50 percent over five years. Lake Hennessey was assumed to have a first-year depletion of 6,500 AF (i.e., 25 percent). This initial depletion of 25 percent would be followed by four years at 6.25 percent per year to reach the 50 percent drawdown by the fifth year. These depletion amounts are conservatively higher than what actually occurred in 1987-1992, when the net depletion over that period was just 3,500 AF for Lake Hennessey. For Milliken Reservoir, the 50 percent storage drawdown was assumed to be spread evenly over the five years (i.e., 10 percent per year).

Table 7-2 summarizes the estimated reservoir depletion and resulting available supply for single dry years and five consecutive dry years.

Table 7-2. Estimated Local Reservoir Annual Depletion

Source	Annual Depletion, AFY					
	Single Dry Year	Multiple Dry Year 1	Multiple Dry Year 2	Multiple Dry Year 3	Multiple Dry Year 4	Multiple Dry Year 5
Lake Hennessey[(a)]	10,900	6,500	1,625	1,625	1,625	1,625
Milliken Reservoir[(b)]	100	40	40	40	40	40
Evaporation/Bypass	(1,400)	(1,400)	(1,400)	(1,400)	(1,400)	(1,400)
Available Supply	**9,600**	**5,140**	**265**	**265**	**265**	**265**

(a) Assumed to start with 26,000 AF remaining storage after normal year.
(b) Assumed to start with 400 AF remaining storage after normal year.

Table 7-3 summarizes the available local surface water supplies for each year type by combining the estimated reservoir yields (Table 7-1) and usable depletion (Table 7-2). In single dry years, 66 percent of the normal local surface water supply would be available. During a five-consecutive-year drought, available local surface water supplies range from 32 percent to 58 percent of normal. As discussed in Chapter 6, under future conditions (2045 and 2050), the availability of local surface water supplies is projected to be reduced by 11 percent to match the climate change impacts projected for the SWP.

Table 7-3. Basis of Water Year Data – Local Surface Water
(DWR Table 7-1 Retail)

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	Available Supplies if Year Type Repeats	
		☐ Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP]	
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (AF)	% of Average Supply
Average Year	1922-2021	18,200	100%
Single-Dry Year	2021	12,000	66%
Consecutive Dry Years 1st Year	1987	10,640	58%
Consecutive Dry Years 2nd Year	1988	5,765	32%
Consecutive Dry Years 3rd Year	1989	5,765	32%
Consecutive Dry Years 4th Year	1990	5,765	32%
Consecutive Dry Years 5th Year	1991	5,765	32%

NOTES: Multiple versions of DWR Table 7-1 are used; this table is for Local Surface Water supplies only (Lake Hennessey and Milliken Reservoir) based on existing conditions through 2040. Future (2045 and 2050) conditions are assumed to be reduced by 11% to match climate change impacts assumed for the SWP.

7.1.2.2 Basis of Water Year Data – SWP

The ability of the SWP to deliver water to its contractors in any given year depends on several factors, including rainfall, size of snowpack, runoff, water in storage, and pumping capacity in the Delta. Endangered fish species and Delta water quality are also significant factors affecting SWP deliveries. The actual delivery, or yield, varies from year to year and is described as a percentage of the contractual entitlement. For the City, annual SWP deliveries are a percentage of Table A water. While this entire entitlement may be available in wet years, lesser amounts are delivered in average, single dry, and multiple dry years. As presented in Chapter 6 of this plan, the City's full Table A entitlement is 21,900 AFY.

SWP reliability is based on analysis performed by DWR in its 2025 Draft DCR. Supply projections under existing and future conditions are based on conservative assumptions of climate and hydrology, while also accounting for BiOps and water quality objectives (e.g., salinity). DWR estimates the SWP's future water delivery capability as percentages of the maximum Table A amount under multiple risk-informed climate scenarios (50%, 75%, and 95% Level-of-Concern) for the year 2043.

Results from the 50% Level-of-Concern scenario have been utilized for this plan for future 2045 and 2050 projections. This scenario reflects what DWR terms as a "middle-of-the-road" future for the SWP around the year 2043. It assumes moderately warmer and wetter conditions, including about a 2.7°F rise in average temperature, slightly more overall rainfall, more intense heavy rain events, and about 6 inches of sea level rise at the Golden Gate. It also assumes today's land use and water-management rules stay the same, without accounting for newer agreements or ongoing regulatory updates. Because this represents an average outcome, there is about a 50 percent chance that real 2043 conditions could be better or

worse than this scenario. However, it is considered a reasonable and typical future scenario suitable for future planning considering reasonably foreseeable changes.

Based on the 2025 Draft DCR, projected deliveries from the SWP are summarized as follows:

- Normal (Average) Year:
  - Existing Conditions: 54 percent (based on 1922-2021 average)
  - Future (2043) 50% Level-of-Concern Scenario: 48 percent (based on 1922-2021 average)
- Single Dry Year:
  - Existing Conditions: 10 percent (based on 2021)
  - Future (2043) 50% Level-of-Concern Scenario: 8 percent (based on 2021)
- Multiple-Year Drought:
  - Existing Conditions: 22 percent (based on 1987-1992)
  - Future (2043) 50% Level-of-Concern Scenario: 15 percent (based on 1987-1992)

To further emphasize a conservative approach for its SWP reliability, the City will assume the following are unavailable: carryover water, NOD Allocation, Article 21 water, and Dry Year water. In the single dry and multiple dry year cases, the City assumes that carryover water would be exhausted, so the City can receive an additional 3,772 AFY in Advanced Table A water (in addition to its Table A allocation). Table 7-4 summarizes the assumptions for SWP supply reliability used in this plan.

Table 7-4. State Water Project Reliability Assumptions

Water Year Type	Table A[(a)], percent	Table A, AFY	Advanced Table A[(b)], AFY	Total SWP Deliveries, AFY
Existing Conditions (through 2040)				
Normal	54%	11,826	--	**11,826**
Single Dry	10%	2,190	3,772	**5,962**
Multiple Dry	22%	4,818	3,772	**8,590**
Future Conditions (2045 and 2050)				
Normal	48%	10,512	--	**10,512**
Single Dry	8%	1,752	3,772	**5,524**
Multiple Dry	15%	3,285	3,772	**7,057**

(a) 100 percent Table A is 21,900 AFY. Assumed reliability is based on Table 6-2 of the 2025 Draft DCR for existing conditions (through 2040) and future (2043) conditions under the 50% Level-of-Concern (LOC) Scenario (for 2045 and 2050).
(b) Carryover water is assumed to be exhausted, so the City is entitled to Advanced Table A water. Refer to Sections 6.2.1 and 6.2.3.

Table 7-5 presents the basis of water year data for the City's SWP supplies and calculates the volumes available as a percentage of a normal year's supply.

Table 7-5. Basis of Water Year Data – State Water Project
(DWR Table 7-1 Retail)

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	Available Supplies if Year Type Repeats	
		☐ Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP]	
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (AF)	% of Average Supply
Average Year	1922-2021	11,826	100%
Single-Dry Year	2021	5,962	50%
Consecutive Dry Years 1st Year	1987	8,590	73%
Consecutive Dry Years 2nd Year	1988	8,590	73%
Consecutive Dry Years 3rd Year	1989	8,590	73%
Consecutive Dry Years 4th Year	1990	8,590	73%
Consecutive Dry Years 5th Year	1991	8,590	73%

NOTES: Multiple versions of DWR Table 7-1 are used; this table is for State Water Project supplies only based on existing conditions through 2040. Future (2045 and 2050) conditions are based on the Draft 2025 DCR 50% Level-of-Concern Scenario.

7.1.3 Water Service Reliability

This section presents comparisons of projected water supplies and demands from 2030 through 2050 under the following hydrologic conditions: normal year, single dry year, and five consecutive dry years. It should be noted that water year types do not necessarily coincide between local reservoirs and the SWP. For example, a normal rainfall year in the Lake Hennessey watershed may occur during a dry year for the SWP watershed. However, this plan assumes that dry years occur simultaneously in both the local surface water and SWP supplies for a more conservative estimate of supply reliability.

Unless otherwise noted, it is assumed demand projections will not change with hydrologic conditions. In other words, demands are assumed to be unconstrained unless they are limited by available supplies.

7.1.3.1 Water Service Reliability – Normal Year

The City's normal water year supplies include local surface water stored in Lake Hennessey and Milliken Reservoir and imported water from the SWP. Table 7-6 shows that in normal years, the City's supplies are adequate to meet projected demands.

Table 7-6. Normal Year Supply and Demand Comparison
(DWR Table 7-2 Retail)

	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
Supply totals (autofill from Submittal Table 6-9 R)	30,026	30,026	30,026	26,710	26,710
Use totals (autofill from Submittal Table 4-2 R)	13,560	14,035	14,110	14,510	14,810
Surplus/(shortfall)	16,466	15,991	15,916	12,200	11,900

7.1.3.2 Water Service Reliability – Single Dry Year

As shown in Table 7-7, in single dry years following a normal year the City's supplies are adequate to meet projected demands through 2050.

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

	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
Supply totals	17,962	17,962	17,962	16,204	16,204
Use totals	13,560	14,035	14,110	14,510	14,810
Surplus/(shortfall)	4,402	3,927	3,852	1,694	1,394
NOTES: For 2045 and 2050, Local Surface Water supply totals incorporate an 11% reduction due to assumed long-term climate change impacts. 2045 and 2050 State Water Project supply totals incorporate reductions based on the 50% Level of Concern under Future Climate Change Conditions.					

7.1.3.3 Water Service Reliability – Five Consecutive Dry Years

Table 7-8 shows that the City's supplies are adequate to meet projected demands during five-year droughts beginning in 2030, 2035 and 2040. For extended droughts beginning in 2045 and 2050, supply deficits of 16 to 18 percent are anticipated beginning in the second year. Stage 2 of the WSCP would likely need to be implemented to reduce water demands. Supply augmentation with Dry Year water purchases could also be employed.

Table 7-8. Multiple Dry Years Supply and Demand Comparison (DWR Table 7-4 Retail)

		2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
First year	Supply totals	19,230	19,230	19,230	16,527	16,527
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	5,670	5,195	5,120	2,017	1,717
Second year	Supply totals	14,355	14,355	14,355	12,188	12,188
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	795	320	245	(2,322)	(2,622)
Third year	Supply totals	14,355	14,355	14,355	12,188	12,188
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	795	320	245	(2,322)	(2,622)
Fourth year	Supply totals	14,355	14,355	14,355	12,188	12,188
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	795	320	245	(2,322)	(2,622)
Fifth year	Supply totals	14,355	14,355	14,355	12,188	12,188
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	795	320	245	(2,322)	(2,622)

NOTES: For 2045 and 2050, Local Surface Water supply totals incorporate an 11% reduction due to assumed long-term climate change impacts. 2045 and 2050 State Water Project supply totals incorporate reductions based on the 50% Level of Concern under Future Climate Change Conditions.

7.1.4 Water Management Tools and Options

To maximize the use of local water resources and minimize the need to import water from other regions, the City focuses on demand reduction, specifically prioritizing water use efficiency and conservation and encouraging recycled water use where available. Chapter 9 of this plan details the City's water use efficiency and conservation efforts.

Also, as described in Chapter 6, the City is exploring a number of potential future water supply projects, including WTP improvements and options, to increase future water supplies.

7.2 DROUGHT RISK ASSESSMENT

In accordance with CWC Section 10612, urban water suppliers must conduct a Drought Risk Assessment (DRA), which evaluates the risk of a severe drought occurring for the next five consecutive years (2026-2030). Supply conditions for the DRA are based on what would be the five driest consecutive years on record.

This section reviews the data and methods used to define the DRA water shortage condition and evaluates each water source's reliability under the proposed drought condition. Finally, total water supplies during the five-year drought are compared to projected demands.

7.2.1 Data, Methods, and Basis for Water Shortage Condition

Since the DRA can be updated independently from the five-year UWMP cycle, a summary of the data and basis for the water shortage condition is provided in this section. The basis for the water shortage condition for a five-year drought starting in 2026 and continuing through 2030 is the same as assumed for the multiple dry year described above.

The City's local surface water supplies from Lake Hennessey and Milliken Reservoir yield are based on their estimated multiple dry year yield (see Table 7-1) and estimated annual depletion in multiple dry years (see Table 7-2).

SWP reliability is assumed to be 22 percent of the maximum Table A amounts (21,900 AFY for the City). In all five years of the DRA, the City assumes that carryover water would be exhausted, so the City can receive at least 3,772 AFY in Advanced Table A water (in addition to its Table A allocation).

7.2.2 DRA Water Source Reliability

The City's multiple dry year supplies include local surface water (i.e., reservoir yield and depletion) and SWP imports. The City's local surface water availability is based on estimated multiple dry year yield and annual depletion. The 2026 to 2030 SWP allocation is assumed to be 22 percent with Advanced Table A supply available in each year.

Table 7-9 summarizes the available supplies for each year of the DRA by supply source.

Table 7-9. Projected Supplies for Drought Risk Assessment

Supply Source	Available Supply, AFY				
	2026	2027	2028	2029	2030
Lake Hennessey[a] / Milliken Reservoir[a]	10,640	5,765	5,765	5,765	5,765
SWP Table A[b]	4,818	4,818	4,818	4,818	4,818
SWP Carryover	0	0	0	0	0
SWP Article 21	0	0	0	0	0
SWP Advanced Table A	3,772	3,772	3,772	3,772	3,772
Dry Year Purchases/ Other Water	0	0	0	0	0
Total	**19,230**	**14,355**	**14,355**	**14,355**	**14,355**

(a) Sum of multiple dry year yield and depletion. Refer to Table 7-1 and Table 7-2.
(b) The SWP Table A allocation is assumed to be 22 percent for 2026 to 2030, assuming multiple dry year conditions.

7.2.3 Total Water Supply and Use Comparison

As shown in Table 7-10, during a five-year drought beginning in 2026 and continuing through 2030, the City is projected to have adequate supplies to meet the projected demand.

Table 7-10. Five-Year Drought Risk Assessment
(DWR Table 7-5 Retail)

2026	Total
Total Water Use (AF)	12,481
Total Supplies (AF)	19,230
Surplus/Shortfall w/o WSCP Action	6,749
2027	**Total**
Total Water Use (AF)	12,751
Total Supplies (AF)	14,355
Surplus/Shortfall w/o WSCP Action	1,604
2028	**Total**
Total Water Use (AF)	13,020
Total Supplies (AF)	14,355
Surplus/Shortfall w/o WSCP Action	1,335
2029	**Total**
Total Water Use (AF)	13,290
Total Supplies (AF)	14,355
Surplus/Shortfall w/o WSCP Action	1,065
2030	**Total**
Total Water Use (AF)	13,560
Total Supplies (AF)	14,355
Surplus/Shortfall w/o WSCP Action	795
NOTES: Water Use is based on slight annual increase in demands based on population growth and new development. Supplies are based on the 1987-1992 Multiple Dry Year scenario reflected in DWR Tables 7-1 and 7-4.	

CHAPTER 8
Water Shortage Contingency Plan

This chapter presents the City's Water Shortage Contingency Plan (WSCP), water supply reliability analysis summary, seismic risk assessment and mitigation plan, and WSCP adoption procedures. This chapter describes the City's WSCP, which is included as Appendix J to allow for updates independent of the UWMP preparation process.

8.1 WATER SHORTAGE CONTINGENCY PLAN BACKGROUND

Water shortages occur whenever the available water supply cannot meet the normally expected customer water use. This can be due to several reasons, including climate change, drought, and catastrophic events. Drought, regulatory action constraints, and natural and manmade disasters may occur at any time. A WSCP presents how an urban water supplier plans to respond to a water shortage condition and helps prevent catastrophic service disruptions.

In 2018, the California State Legislature enacted two policy bills, (SB 606 (Hertzberg) and AB 1668 (Friedman)) (2018 Water Conservation Legislation), to establish a new foundation for long-term improvements in water conservation and drought planning to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning; the City's WSCP has been updated to be consistent with these requirements.

8.2 WATER SHORTAGE CONTINGENCY PLAN

The City's WSCP is included in this plan as Appendix J and describes the City's strategic plan for preparing and responding to water shortages. Chapter 13.10 of the Napa Municipal Code (NMC) supports the City's WSCP actions.

The WSCP includes water shortage stages and associated shortage response actions, as well as the City's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting.

The City intends for its WSCP to be dynamic, so that it may assess response action effectiveness and adapt to foreseeable and unforeseeable events. It may also be updated to conform to State legislative and regulatory requirements. Therefore, the City's WSCP is included in this plan as an appendix to allow for updates to be made outside of the UWMP preparation process. When an update to the WSCP is proposed, the revised WSCP will undergo the process described in Section 8.5.

8.3 WATER SUPPLY RELIABILITY ANALYSIS SUMMARY

Chapters 6 and 7 present the City's water supply sources and reliability, respectively. Findings show the City can reliably meet its projected demands through 2050 in normal hydrologic conditions, as well as single dry year conditions. In multiple dry year scenarios beginning in 2045 and 2050, supply shortfalls can be eliminated by reducing demand with the appropriate stage of this WSCP.

Statewide water supply conditions and actions by other agencies may impact the City's available water supply. A water shortage condition occurs when the available supply of potable water cannot meet ordinary water demands for human consumption, sanitation, fire protection, and other beneficial uses. In some cases, the City may foresee a water shortage, but the water shortage may also be caused by an unforeseen sudden or emergency event. In general, the City's water supply conditions may be affected by the following:

- Local surface water availability (Lake Hennessey and Milliken Reservoir yields and available storage for drawdown in dry years)
- State Water Project (SWP) annual supply allocations
- Sacramento-San Joaquin Delta (Delta) and North Bay Aqueduct vulnerability to seismic events, changing environmental and regulatory requirements, and climate change
- Climatic variability and drought conditions

The City plans for potential drought events annually by conducting an annual water supply and demand assessment in accordance with its WSCP to determine its water supply conditions for the current year and a potential subsequent dry year.

In addition to hydrologic and regulatory supply constraints, seismic events pose a significant risk to water supply reliability due to the potential for infrastructure damage and resulting supply interruptions. Given California's high seismic activity and the likelihood of future earthquakes, UWMPs are required to include a seismic risk assessment and mitigation plan. The City's seismic risk assessment and mitigation planning efforts are described in the section below.

8.4 SEISMIC RISK ASSESSMENT AND MITIGATION PLAN

CWC Section 10632.5(a) requires that UWMPs include a plan to assess and mitigate a water system's seismic vulnerabilities. The City's Hazard Mitigation Plan Update[1] (City HMP Update, updated in 2022) meets this requirement because it addresses seismic risk. It is incorporated into this plan by reference. The City HMP Update was submitted to the Federal Emergency Management Agency (FEMA), which found it in conformance with Title 44 Code of Federal Regulations Part 201.6 Local Mitigation Plans.

While California experiences hundreds of earthquakes each year, most are below magnitude-3.0 and cause minimal damage. The United States Geological Survey (USGS) roughly defines strong earthquakes (which can cause moderate damage to structures) as measuring greater than magnitude-5.0, while major earthquakes measure more than magnitude-7.0.

The City is in a seismically active region. In August 2014, a magnitude-6.0 earthquake centered in South Napa caused significant damage throughout the region, including numerous water main breaks. The West Napa Fault runs along the western edge of the City, while the Rodgers Creek Fault and Green Valley/Concord Fault run through the County. A 2016 report[2] by the USGS estimated the probabilities for magnitude-6.7 (or larger) earthquakes on major fault lines in the San Francisco Bay Area by the year 2043. The Rodgers Creek Fault

[1] City of Napa, 2022. *Hazard Mitigation Plan Update*.
https://www.cityofnapa.org/DocumentCenter/View/12156/City-of-Napa-Hazard-Mitigation-Plan-2022?bidId=

[2] U.S. Geological Survey (USGS), 2016. *Earthquake Outlook for the San Francisco Bay Region 2014-2043*. https://pubs.usgs.gov/fs/2016/3020/fs20163020.pdf

has a 33 percent chance of one or more earthquakes of magnitude-6.7 or larger by 2043, while the Green Valley/Concord Fault has a 16 percent chance of one or more such earthquakes in that timeframe.

The City HMP Update identifies risks posed by disasters (including earthquakes) and ways to minimize damage from those disasters. To promote an earthquake-safe community, the City HMP Update proposes two objectives: (1) continue requiring all new buildings and infrastructure to be designed and constructed to resist earthquake stresses; and (2) identify options, incentives, and funding sources for retrofitting seismically vulnerable structures. Each objective is associated with implementation actions, many of which the City is already implementing. The implementation actions relevant to the City's water system include:

- Discourage locating facilities necessary for emergency services and major utility lines and facilities within areas subject to strong or violent ground shaking.
- Require that facilities necessary for emergency services be capable of withstanding a maximum credible earthquake from any of the seven known active faults in the region and remaining operational to provide emergency response.
- Design and install seismic-resistant transmission and distribution pipeline joints across known faults and on newly constructed bridges.
- Invest in automation and control features on asbestos cement transmission pipeline to protect against catastrophic failures.

To address the seismic vulnerabilities of its water system facilities, the City has completed a Risk and Resilience Assessment (RRA) of its water system. Completed in accordance with America's Water Infrastructure Act, the RRA systematically evaluated the City's assets, threats, and risks, as well as countermeasures that might be implemented to minimize overall risk to the system. To ensure the security of the City's water system, the RRA is retained by the City as a confidential document.

8.5 WATER SHORTAGE CONTINGENCY PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

The City's WSCP (Appendix J) is adopted concurrently with this plan, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. An electronic copy of the WSCP will be submitted to DWR within 30 days of adoption.

No later than 30 days after adoption, a copy of this WSCP will be available at the City's offices. A copy will also be provided to Napa County. An electronic copy of the WSCP will also be available for public review and download on the City's website.

The City's WSCP is an adaptive management plan and is subject to refinements as needed to ensure that the City's shortage response actions and mitigation strategies are effective and produce the desired results. When a revised WSCP is proposed, the revised WSCP will undergo the process described above for adoption by City Council and distribution to Napa County, the City's customers, and the general public.

CHAPTER 9
Demand Management Measures

This chapter describes the City's historical and existing water conservation efforts, status of implementation of Demand Management Measures (DMMs), and projected future water conservation implementation.

9.1 WATER CONSERVATION PROGRAM OVERVIEW

Water use efficiency and conservation has been and will continue to be an integral part of the City's long-term water supply management strategy. The City first instituted successful demand reduction measures during the drought of 1987-1992, after which the City made several of those measures permanent, including school education, public information, and a very successful toilet replacement program that continued for three decades. The City's strategy for water use efficiency and conservation includes: (1) offering existing customers an array of free services, rebates, and education so that older high water use equipment and behaviors are replaced with more water efficient ones; and (2) maximizing the water efficiency of new development to minimize its impact on the City's future water demands.

In 2002, the City joined the California Urban Water Conservation Council, which has now evolved into the California Water Efficiency Partnership (CalWEP). CalWEP seeks to maximize urban water efficiency and conservation statewide using innovative technologies and practices and effective public policy, all within a collaborative framework.

The City's SB X7-7 per capita water use target for 2020 was 132 GPCD. In 2020, the City's overall per capita water use was 137 GPCD and did not meet this target. In 2025, the City's overall per capita water use was 119 GPCD and met its per capita water use target, partly due to the DMMs it implemented. The City will continue to expand its water conservation efforts to meet its Urban Water Use Objective (UWUO) and other measures in the Making Conservation a California Way of Life Regulation (AB 1668 and SB 606) finalized in 2024.

9.2 EXISTING AND PLANNED DEMAND MANAGEMENT MEASURES

Retail water agencies are required to provide a description of the DMMs associated with the following:

- Water Waste Prevention Ordinances
- Metering
- Conservation Pricing
- Public Education and Outreach
- Programs to Assess and Manage Distribution System Real Loss
- Water Conservation Program Coordination and Staffing Support

The City is also required to describe any other DMMs that it has implemented that have had significant impact on water use.

This section describes the existing and planned DMMs. For each DMM, the current program is described, along with how the DMM was implemented over the previous five years and future implementation plans.

9.2.1 Water Waste Prevention Ordinances

9.2.1.1 DMM Description

NMC Chapter 13.09 lays out regulations to eliminate wasteful water-using practices within the City's service area. Specific water waste prohibitions are enforced via administrative citations issued by the Utilities Director, with repeated violations subject to escalating fines.

9.2.1.2 Implementation over the Past Five Years to Achieve Water Use Targets

Following the end of the 2021-2023 statewide and local drought emergency, the City applied lessons learned during the drought to clarify and update its permanent water waste prohibitions. Adopted by City Council in June 2023, the water waste prohibitions in NMC Chapter 13.09 address open-ended hose use, driveway and sidewalk washing, wasteful irrigation practices, and significant leaks. The City's Water Conservation Specialist follows up on all water waste complaints, using educational warnings as a first method to change behavior. During a declared drought, additional staff routinely patrol for violations.

The City also has in place local ordinances to ensure water efficient design in new development. Local high-performance building regulations are more stringent than CALGreen, making several voluntary provisions mandatory and requiring a more stringent tier of indoor water use savings for non-residential buildings. The City aggressively enforces the statewide Model Water Efficient Landscape Ordinance (MWELO) to prevent outdoor water waste in new development.

9.2.1.3 Plans for Continued Implementation

The City will continue to enforce its water waste prohibitions through public education and fines when warranted. The effectiveness of water waste prevention will be evaluated based on the number of violations, as well as the overall demand reduction after declaring a water shortage.

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

9.2.2 Metering

9.2.2.1 DMM Description

The City's water system is fully metered. Excluding fire sprinkler services, all existing connections have meters and are billed by volume of use. The City employs Automatic Meter Reading (AMR) throughout the entire system and will be transitioning to Advanced Metering Infrastructure (AMI) over the next decade. For the AMR meters equipped with Encoder Receiver Transmitters (ERTs), City staff perform drive-by meter readings via radio, which significantly reduces the time required for meter reading. After each meter read cycle, the City can quickly alert customers with exceptionally high usage compared to previous years. These alerts often lead customers to discover and repair leaks more quickly.

Newer meters preserve 40 days of historical water usage data that can be analyzed in hourly intervals. These data can assist customers in determining the timing and reason for their unexpected high usage.

9.2.2.2 Implementation over the Past Five Years to Achieve Water Use Targets

Over the past five years, the City has leveraged its fully metered system to support achievement of its water use targets. Meter data are reviewed each billing cycle to identify unusually high consumption, and customers are proactively notified to investigate potential leaks or inefficiencies, resulting in timely repairs and reduced water loss. The City also evaluates systemwide production data against billed consumption to support water loss control and efficient system operations, strengthening overall demand management and compliance with water use efficiency requirements.

9.2.2.3 Plans for Continued Implementation

The City requires all new connections to be metered and billed based on the volume of water used, as detailed in Section 9.2.3. The City will monitor water usage characteristics of its customers and focus water conservation efforts on high water users. Current plans include the establishment of a networked AMI system that will provide early leak detection for customers and more extensive water use data to inform the City's water conservation priorities.

9.2.3 Conservation Pricing

9.2.3.1 DMM Description

The City's water rate structure encourages conservation by incorporating a water quantity (i.e., volumetric) charge in addition to a fixed service charge. Consequently, water usage reductions directly reduce customer costs, while excessive water use increases costs. In addition, water rates for single-family residential customers are tiered, with higher usage tiers paying higher rates. There is no tiered rate structure for multi-family residential, commercial/industrial/institutional, or irrigation customers.

9.2.3.2 Implementation over the Past Five Years to Achieve Water Use Targets

The City's 2025 water rate schedule is shown in Table 9-1. As previously noted, besides the water quantity charge, the City also has a fixed bimonthly service charge that varies with service size and applies to all customer classes. Water quantity charges are higher for customers served outside City limits and for customers in certain high-elevation zones (to cover pumping costs). The current rate structure was adopted by the City Council in 2023 and included five years of automatic annual increases. No special drought rates were used in the recent 2012-2016 drought. However, the City can establish a special drought block rate structure by resolution during severe droughts.

Table 9-1. City of Napa Current Water Rate Schedule		
Service Size/Customer Class	Inside City Rate[a] dollars	Outside City Rate[a] dollars
Bimonthly Fixed Service Charge – All Customer Classes (Excluding Fire Services)		
3/4-inch	63.53	
1-inch	63.53	
1 1/2-inch	121.51	
2-inch	191.07	
3-inch	376.56	
4-inch	585.24	
6-inch	1,164.91	
8-inch	2,092.39	
Water Quantity Charge[b]		
Single-Family Residential[c]		
0-14 units	6.67	9.85
15-27 units	9.82	14.08
28+ units	11.92	15.53
Multi-Family Residential	9.27	13.64
Commercial/Industrial/Institutional	9.25	13.55
Irrigation	9.34	13.76
Pumped Zone Customers[d]	3.00	

(a) Water rate schedule (as of October 1, 2025) from City of Napa website. Water quantity charges are higher for customers located outside City limits.
(b) Water quantity charge is cost per unit, where 1 unit = 1,000 gallons.
(c) Single-family residential usage is tiered, with higher usage tiers charged higher rates.
(d) Elevation surcharge (i.e., in addition to water quantity charge) for customers in pumped zones.

9.2.3.3 Plans for Continued Implementation

Implementation of this DMM is expected to help the City achieve its water use objectives. As required, the City will evaluate the need to readjust rates and/or rate structures to ensure continued service to its customers while encouraging water efficiency. In 2028, the City is planning to conduct a new rate study, which will inform the next iteration of water rates. The City will evaluate the effectiveness of its rates by tracking changes in unit water use resulting from rate increases.

9.2.4 Public Education and Outreach

9.2.4.1 DMM Description

The City regularly promotes water efficiency and conservation and educates the community through its website (cityofnapa.org/water), messaging on bimonthly water bills, and fliers and brochures available at both the Utilities Department office and at public events. Media coverage of the City's water conservation program is provided through local newspaper, magazine, and radio advertisements and interviews. City

staff also deliver presentations to community and business groups, as well as make appearances at local public events such as Earth Day, Napa Farmers Market, and Napa Town & Country Fair.

9.2.4.2 Implementation over the Past Five Years to Achieve Water Use Targets

As part of its school education program, the City continues its active membership in the Environmental Education Coalition of Napa County (EECNC), which organizes the local Earth Day event, awards scholarships, distributes field trip bus grants, and publicizes water education offerings to area K-12 teachers. Over the past five years, City water conservation education and outreach was inhibited somewhat by the pandemic, but offerings beyond the regular appearances at community events included:

- **Water Education Assembly.** Since the 2016-17 school year, the City has contracted with the group ZunZun to present musical assemblies for elementary school students that focus on where their water comes from, water conservation, and climate change. ZunZun's bilingual programs are always lively, with students and teachers singing and playing a variety of folkloric instruments. From 2021 to 2025, ZunZun conducted 95 virtual and in-person assemblies attended by nearly 19,000 students.
- **Water Treatment Plant Field Trip**. City staff provide tours of the Barwick Jamieson WTP, either separately or as part of a combined full-day trip in conjunction with the Napa Recycling & Composting Facility and NapaSan's Soscol WRF. The tours include an introductory discussion, plant tour, and drinking water-related giveaways for students. Bus transportation costs are covered by the City and its partners. Student visits to the treatment plant were eliminated during the pandemic and did not resume until early 2026.
- **Project WET (Water Education for Teachers)**. Napa County teachers can gain access to award-winning classroom activities and earn a stipend or 0.5 continuing education units by participating in *Project WET for the Napa Valley*, which consists of six hours of hands-on, action-packed training. Project WET promotes awareness, appreciation, knowledge, and stewardship of water resources through the dissemination of classroom-ready teaching aids. Interdisciplinary activities for grades K-12 are designed to enhance existing curriculum and are aligned to Common Core State Standards. Since the first offering in 2012, the City has certified more than 30 local teachers in this curriculum. While no trainings have been conducted in the past five years, the City and its local partners will resume this program.
- **High School Video Contest.** Starting in the 2015-16 school year, the City has been instrumental in organizing the Napa County Water Conservation Video Contest by developing annual themes and judging the winning entries. The contest is open to all local students in grades 9-12, and the annual winning video is posted online and played before films at a local theater, thereby extending the water conservation outreach.

The City routinely advertises in the *Napa Valley Marketplace* magazine, which is mailed out to 33,000 local homes and businesses every month. For the 2021-2025 period, more than 70 ads with a water conservation theme were placed. At public events, the City hosts a display booth that reaches thousands of water customers via educational literature, free water-saving device giveaways, and direct questions answered by the City's Water Conservation Specialist.

9.2.4.3 Plans for Continued Implementation

The City will continue to implement the public education and outreach strategies described above. Implementation of this DMM is expected to help the City achieve its water use targets by educating water users about the value of water, the importance of improving water use efficiency, and avoiding water waste.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

9.2.5.1 DMM Description

The City performs an annual water audit that conforms to the AWWA Manual M36 and is required by state regulations. A water audit is a process of calculating water use throughout a water system to quantify the unaccounted-for water (i.e., the difference between metered production and metered consumption on a system-wide basis) and establish estimates for both real losses (e.g., leaks) and apparent losses (e.g., metering inaccuracies). The City is required to have its annual AWWA Water Audit validated and submitted to DWR.

The City responds promptly to visible water main and service line leaks to minimize losses. For less obvious leaks, the City may contract with leak detection professionals to use sonic methods. In addition, the City provides financial incentives for customers to promptly repair leaks on their side of the meter.

9.2.5.2 Implementation over the Past Five Years to Achieve Water Use Targets

The City has used AWWA's free audit software (Excel) to thoroughly document its distribution system attributes and performance indicators related to water loss. Annual electronic calibration of source meters and other improved practices over the years have increased the reliability of this audit data. The Water Audit Data Validity Score has remained in the 70s since 2020, putting the City in Tier IV (of V). For 2024, the City calculated 1,013 AF of combined real and apparent losses. The key performance indicator is real losses per service connection per day, which was 22.4 gallons per service connection per day in 2024, just under the 2028 State Water Board standard of 26.8.

9.2.5.3 Plans for Continued Implementation

Implementation of this DMM is ongoing and is a vital element of the City's water supply management efforts. By quickly identifying sources of water loss, the City can promptly make repairs and minimize losses. The City will continue to improve its annual AWWA Water Audit process and work to reduce its real and apparent losses to meet the State Water Board standards. Accelerated replacement of older water mains and meters will assist this effort. Conducting a real loss component analysis will also help guide the City's efforts in an economically efficient manner. Water supplier-specific performance standards for real losses per connection per day are in development and will guide the City's efforts to control leaks within its distribution system.

9.2.6 Water Conservation Program Coordination and Staffing Support

9.2.6.1 DMM Description

The City designates its Water Resources Analyst as its Water Conservation Coordinator, with 65 percent of the position's duties budgeted to managing and developing the DMMs described in this chapter. The Water Conservation Coordinator is a Level 3 Water Use Efficiency Practitioner and a Certified Landscape Irrigation Auditor.

A full-time Water Conservation Specialist supports the water conservation program by providing direct customer service in the field and assisting with program development and development plan review. Other Water Division staff assist as needed, including service workers who alert customers of excessive use and office staff who help at large public events.

9.2.6.2 Implementation over the Past Five Years to Achieve Water Use Targets

Over the past five years, the City has maintained the Water Conservation Coordinator and Water Conservation Specialist positions to execute the DMMs described in this chapter. The City's annual water conservation budget has increased to about $600,000, including personnel. Some of these costs are offset through grant funding and shared rebate costs with other agencies.

9.2.6.3 Plans for Continued Implementation

The City plans to maintain the Water Conservation Coordinator and Water Conservation Specialist positions, while adding a part-time employee to assist with school education and multi-family and commercial programs. Implementation of this DMM is ongoing and expected to help the City achieve its water use targets by making water conservation and implementation of the City's water conservation program a priority among City employees.

9.2.7 Other Demand Management Measures

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

- Water conservation services
- Rebate programs
- Commercial, industrial, and institutional (CII) conservation programs
- Water Offset Program

Each program is described below, along with a summary of implementation over the past five years and plans for continued implementation.

9.2.7.1 Water Conservation Services

9.2.7.1.1 DMM Description

The City offers several water conservation services to the public, as described below. These services are offered at no cost to customers and are complemented by the City's rebate programs, which are described in Section 9.2.7.2.

- **Water-Wise Home Survey**. Marketed to all single family and multi-family residential customers, this program includes a site visit by the Water Conservation Specialist who checks leaks, plumbing fixture flow rates, and irrigation system performance. If warranted, customers are offered free low-flow showerheads, faucet aerators, rebate information, and irrigation scheduling and maintenance tips.

- **Free Water-Saving Devices**. City water customers are entitled to an array of free water conservation devices, such as low-flow showerheads, faucet aerators, garden hose nozzles, and hose timers. The materials can be obtained from the Utilities Department office, at public events, or as part of a Water-Wise Home Survey.
- ***Water-Wise Gardening in the Napa Valley*** **website** (napa.watersavingplants.com). This website contains an extensive landscape photo and plant information database, along with a gardening and irrigation guide appropriate for the local climate.
- **Water-Wise Landscaping Workshop Series**. This is an annual program to educate the public on the water-saving benefits of improved irrigation scheduling, drip irrigation, soil amendments, mulch, and climate-appropriate plant selection. The City benefits from strong partnerships with the Napa County Resource Conservation District (RCD) and the University of California Master Gardeners of Napa County in putting on these workshops, and the City sometimes co-sponsors the event with a nearby agency such as the Town of Yountville.
- **Water-Wise Demonstration Gardens**. The public is welcome to visit three demonstration gardens, including a walk-through 9,000 square-foot space at Fire Station #3 featuring an array of lawn substitutes, California native plants, colorful low-water-use species, and weather-based "smart" irrigation control. The other two sites are the Vintage High School Rain Garden and Water-Wise Landscape, installed in 2013, and the former Water Division office, whose lawn was replaced with water-wise plants in the fall of 2014. The current Utilities Department office is slated for an extensive demonstration garden in the coming years.
- **Climate-Friendly Garden Tour**. Since 2011, the City has partnered with other local agencies to offer an annual garden tour that typically features a dozen local residential, commercial, or institutional landscapes demonstrating the beauty of low-water-use design. During the pandemic, virtual tours of individual gardens were streamed. The in-person tour resumed in 2023.

9.2.7.1.2 Implementation over the Past Five Years to Achieve Water Use Targets

Between 2021 and 2025:

- City staff completed 500 Water-Wise Home Surveys.
- Approximately 1,200 water-saving devices were distributed.
- The *Water-Wise Gardening in the Napa Valley* website received more than 20,000 unique visitors.
- Eight in-person Water-Wise Landscaping workshops were held in 2024 and 2025, for a total of 210 attendees.
- More than 700 people attended the 2023-2025 Climate-Friendly Garden tours.

9.2.7.1.3 Plans for Continued Implementation

The City plans to continue the above water conservation services to meet future water use objectives.

9.2.7.2 Rebate Programs

9.2.7.2.1 DMM Description

The City maintains rebate programs to financially incentivize its customers to improve water efficiency. Current rebate programs include turf replacement, CII appliance upgrades, and smart water monitors.

- **"Cash for Grass" Turf Replacement Rebate**. First introduced in 2010, this program currently offers all residential and CII customers $1.00 per square foot to replace high water use lawn areas with low-water use plants or permeable hardscape, with an extra $1.00 bonus for parking strip areas. The maximum rebate is $750 for single family residential customers and $2,500 for multi-family residential and CII customers. Projected water savings are 25 gallons per year per square foot of turf removed.
- **Smart Rebates**. The City participates in the CalWEP-administered Smart Rebates Program offering rebates on commercial high-efficiency clothes washers (HECWs) ($400), HETs ($200), and high-efficiency urinals (HEUs) ($300). While these rebates are intended for CII customers, multi-family residential common areas are also eligible for HECW rebates.
- **Smart Home Water Monitor**. In 2021, the City introduced an instant rebate on the purchase of a Flume device. The Flume device allows customers to monitor their water use from their smartphone, enabling instant detection of leaks. This partnership with CalWEP and Flume allows customers to purchase the device for just $64 when it normally retails for $249.
- **Smart Irrigation Controller**. In 2022, the City introduced an instant rebate on the purchase of a Rachio Smart Sprinkler Controller. Replacing a standard timer, this device provides weather-based self-adjusting schedules that can save up to 50% on outdoor water use. This partnership with CalWEP and Rachio currently provides City customers a 15% discount on the retail price, rising to 25% during certain promotional weeks throughout the year.

9.2.7.2.2 Implementation over the Past Five Years to Achieve Water Use Targets

Over the last five years, the City issued 656 "Cash for Grass" rebates representing 505,000 square feet of turf removed, saving about 39 AFY. A limited amount of Smart Rebates were issued to commercial customers between 2021 and 2025, while more than 700 Flume devices and 200 Rachio controllers were purchased by primarily residential customers.

9.2.7.2.3 Plans for Continued Implementation

The City anticipates continuing these rebate programs to achieve its future water use objectives, depending on customer participation and available funding. The City plans to expand its partnership with CalWEP in order to offer instant rebates on additional irrigation equipment, leak monitors, and food service equipment. The Cash For Grass rebate incentive will increase and include a bonus rebate amount for rain garden areas. Additional rebates for water-efficient devices will be considered based on cost-effectiveness.

9.2.7.3 Commercial, Industrial, and Institutional Conservation Programs

9.2.7.3.1 DMM Description

The City offers its CII customers the following specialized conservation services:

- **Water-Wise Business Survey**. Offered to all CII customers to help them use water more efficiently and potentially reduce operating costs, the survey consists of a water use history and billing analysis; site visit by City staff; evaluation of fixtures, appliances, and equipment; a landscape irrigation audit; and a follow-up recommendations report.
- **Landscape Irrigation Audits**. Full landscape irrigation audits are typically conducted as part of a Water-Wise Business Survey for large commercial and institutional sites, but CII customers can also request standalone landscape irrigation audits. Results often point out simple changes in controller scheduling, sprinkler and drip emitter maintenance, and plant selection that can help improve water use efficiency.
- **Green Business Stipend**. Since 2013, the City has been offering a $500 stipend to local businesses that complete the Green Business Certification Program and implement a comprehensive sustainability program, including water use efficiency.
- **Qualified Water Efficient Landscaper (QWEL) Training**. Since 2020, the City has sponsored this EPA WaterSense-certified, 20-hour training course and certification program, and offering it free of charge to local landscape professionals. The landscape professionals, and their clients, benefit from education about local water supplies, soils, landscape water budgets, irrigation system audits, and controller programming.

9.2.7.3.2 Implementation over the Past Five Years to Achieve Water Use Targets

Over the past five years, the City completed several Water-Wise Business Surveys, with many CII customers participating in the Cash For Grass Rebate Program to address their irrigation use. The City trained more than 30 additional QWEL-certified landscape professionals since 2021.

9.2.7.3.3 Plans for Continued Implementation

The City plans to continue the above CII conservation programs to meet future water use objectives, particularly in the landscape irrigation area to incentivize CII customers affected by AB 1572, the upcoming phased-in bans on the use of drinking water to irrigate non-functional turf.

9.3 CALIFORNIA WATER EFFICIENCY PARTNERSHIP

The City is an active member of the CalWEP, establishing a firm commitment to the implementation of DMMs to conserve its water supplies. The City plans to continue implementation of its DMMs into the future. The City also plans to comply with the State Water Board's Making Conservation a California Way of Life Regulation to meet its UWUO and to meet its water loss performance standards.

Other DMMs may be implemented by the City as deemed necessary based on customer participation, water savings, cost effectiveness, and other relevant factors.

9.3.1 Urban Water Use Objectives

The Making Conservation a California Way of Life Legislation (Legislation) established a new framework for improvements in long-term urban water use efficiency. This Legislation builds on the statewide 2020 water conservation targets set under SB X7-7 (CWC §10609.2(d)). Under the Legislation, the State Water Board, in coordination with DWR, was required to adopt urban water use efficiency standards, variances, and performance measures by June 30, 2022.

On July 3, 2024, the State Water Board adopted the Making Conservation a California Way of Life Regulation. As part of this regulation, urban water suppliers will be held to annual UWUOs. The City is required to calculate its UWUO annually, which is a sum of water efficiency budgets for the following uses:

- Residential indoor water use,
- Residential outdoor water use,
- Real water loss, and
- CII landscapes with dedicated irrigation meters (DIMs).

The City's UWUO is calculated using statewide efficiency standards, and considers the City's water service area population, climate, and landscape area. Efficiency standards for the different components will progressively decrease from 2025 to 2040. Variances and adjustments may be allowed for special cases such as seasonal population fluctuation, special landscape areas (sports fields and recreational areas), direct/indirect potable reuse, and agricultural uses. Figure 9-1 summarizes the components that make up the UWUO.

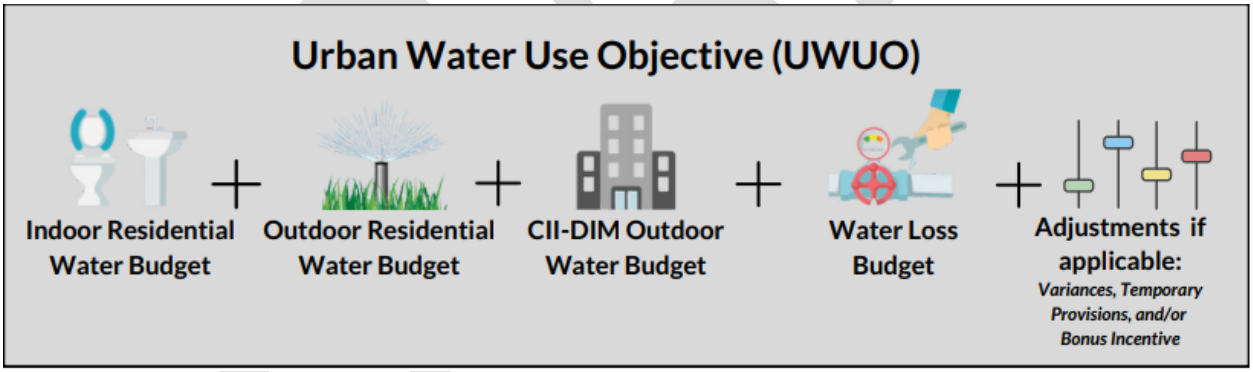


Figure 9-1. Urban Water Use Objective Components[1]

In addition to calculating and complying with the UWUO, beginning in 2027, the City will need to classify its CII properties, and begin deploying best management practices (BMPs) for indoor and outdoor CII water use. These CII performance measures are intended to enable water-usage benchmarking per CII classification category, as well as establish BMPs for indoor and outdoor CII water use.

[1]California Water Efficiency Partnership. May 2024. *Making Conservation a California Way of Life Standards Framework Cut Sheet.*

9.3.1.1 Annual Water Use Reporting

Starting in 2024, the City is required to calculate its UWUO, compare its actual water use to its UWUO, and provide an Annual Water Use Report to the State by January 1 of each year. Reporting is based on fiscal year data. The City's UWUO will become increasingly stringent from 2025 to 2040. If the City anticipates that it would not be able to meet this regulation, the City will need to develop a plan and intensify or implement demand management actions to maintain compliance with the regulation.

The City submitted its Fiscal Year 2024/25 Annual Water Use Report to the State in December 2025. The report indicated that the City's water use is well below its UWUO and that the City will likely continue to meet its UWUO over at least the next several years. The City will continue to prepare its Annual Water Use Report each year to assess progress.

Reporting and compliance with the UWUO falls under the authority of the State Water Board and is tracked separately from the UWMP. Therefore, UWUO compliance projections are not included in this UWMP.

CHAPTER 10
Plan Adoption, Submittal, and Implementation

This chapter provides information regarding the notification, public hearing, adoption, and submittal of the City's 2025 UWMP and WSCP. It also includes discussion on plan implementation and the process of amending the UWMP and WSCP.

10.1 INCLUSION OF ALL 2025 DATA

As indicated in Section 2.4 of this plan, the City uses a calendar year for water supply and demand accounting, and therefore this plan includes data through December 2025.

10.2 NOTICE OF PUBLIC HEARING

In accordance with the Act, the City must provide an opportunity for the public to provide input on this plan, including the WSCP. The City must consider all public input prior to its adoption. There are two audiences to be notified for the public hearing: cities/counties and the public.

10.2.1 Notices to Cities and Counties

As discussed in Section 2.5 of this plan, the City provided greater than a 60-day notice regarding the preparation of its 2025 UWMP and WSCP to cities and counties in its service area including the following agencies:

- City of American Canyon
- Town of Yountville
- City of St. Helena
- City of Calistoga
- Napa Sanitation District
- Veterans Home of California
- Napa County

The notices of preparation are included as Appendix E. Notifications to cities and counties in accordance with the Act are summarized in Table 10-1.

The City also coordinated the preparation of this plan internally and with input from the above-listed agencies. Upon substantial completion of this plan, the City provided the agencies listed above, including internally within the City and the County, notices of public hearing (Appendix E).

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

City Name	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
City of Napa	Yes	Yes
City of American Canyon	Yes	Yes
Town of Yountville	Yes	Yes
City of St. Helena	Yes	Yes
City of Calistoga	Yes	Yes
County Name **Drop Down List**	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
Napa County	Yes	Yes
NOTES: For Napa County, the Planning and Public Works Departments were each notified. In addition, the Napa Sanitation District (NapaSan) was notified, as it is the local recycled water purveyor. The Veterans Home of California was also notified, as it occasionally receives water deliveries from the City.		

10.2.2 Notice to the Public

To allow ample time for public comments to be prepared and received, the City issued a notice of public hearing to the public and provided a public review period following the notice and prior to adoption of the 2025 UWMP and WSCP.

A notice of public hearing was issued in accordance with Government Code Section 6066 and was published in *The Press Democrat* and *Napa Valley Register* newspapers. In addition, the notice was posted on the City's website (cityofnapa.org/water). A copy of the published Notice of Public Hearing is included in Appendix E.

10.3 PUBLIC HEARING AND ADOPTION

The City encouraged community review of this plan, including its WSCP component, using newspaper notices, the City's weekly e-newsletter, social media posts, and the City's website. The public notices included the time and place of the public hearing, as well as the location where the plan is available for public inspection.

10.3.1 Public Hearing

The City held a public hearing on June 16, 2026, during which the City received and considered input from the public before adopting the 2025 UWMP and WSCP. As part of the public hearing, the City also provided a report on the City's compliance with the Water Conservation Act of 2009. The report included information on the City's baseline water use, water use targets, compliance, WSCP, and implementation of the UWMP.

The public hearing provided an opportunity for City water users and the general public to become familiar with the 2025 UWMP and WSCP and ask questions about the City's plans for continuing to provide reliable, high-quality, essential drinking water supply and mitigating potential water shortage conditions. Copies of the Draft 2025 UWMP were made available for public inspection at the Utilities Department, City Hall, and the Napa County Library. An electronic copy of the Draft 2025 UWMP was also available for review on the City's website: cityofnapa.org/water. The public was invited to forward any written comments to the City Clerk.

10.3.2 Adoption

After the public hearing, this 2025 UWMP and WSCP were adopted by the City Council on June 16, 2026. The City adopted the WSCP separately so that it may be updated independently of the UWMP as necessary. Copies of the adopted resolutions are included in Appendix K.

10.4 PLAN SUBMITTAL

This adopted 2025 UWMP will be submitted to DWR within 30 days of adoption and by July 1, 2026. The adopted 2025 UWMP will be submitted electronically to DWR using the Water Use Efficiency (WUE) data submittal tool. A CD or hardcopy of the adopted 2025 UWMP will also be submitted to the California State Library.

No later than 30 days after adoption, a copy of the adopted 2025 UWMP, including the WSCP, will be provided to the cities and counties to which the City provides water.

10.5 PUBLIC AVAILABILITY

No later than 30 days after submittal to DWR, copies of this plan, including the adopted WSCP, will be available at the Utilities Department, City Hall, and the Napa County Library for public review during normal business hours. An electronic copy of the adopted 2025 UWMP will also be available for review and download on the City's website: cityofnapa.org/water.

10.6 PLAN IMPLEMENTATION

The 2025 UWMP will be the source document for any SB 610 Water Supply Assessments or SB 221 Water Supply Verifications required for any proposed projects in the City's water service area between 2026 and 2030 that are subject to the California Environmental Quality Act and would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling unit project. Also, this 2025 UWMP will provide guidance and direction on development of new local supplies and implementation of water use efficiency and conservation programs.

10.7 AMENDING AN ADOPTED UWMP OR WATER SHORTAGE CONTINGENCY PLAN

The City may amend its 2025 UWMP and WSCP jointly or separately. If the City amends one or both documents, the City will follow the notification, public hearing, adoption, and submittal process described in Sections 10.2 through 10.4 above. In addition to submitting amendments to DWR through the WUE data portal, within 30 days after adoption, copies of amendments or changes to the plans will be submitted to the California State Library, as well as any city or county within which the supplier provides water.

Appendix A

Urban Water Management Planning Act Legislative Requirements

Appendix A
California Water Code—Urban Water Management Planning

This material is for informational purposes only and is not to be used in place of official California Water Code.

This appendix presents updated sections of California Water Code (Water Code) as of the publication of this Guidebook and as compiled by California Department of Water Resources (DWR) staff. The selection here focuses on the portions of Water Code directly relevant to preparation of an Urban Water Management Plan (UWMP), and sections of Water Code that are contextually relevant to urban water suppliers and DWR.

Water Code published here also concerns the Urban Water Management Planning Act, the Water Conservation Act of 2009 (SB X7-7), which covers sustainable water use and demand reduction, and more. Further legislative information is available on the California Legislative Information website.

Contents

Water Conservation Act of 2009 (SB X7-7)

This section contains information extracted from Water Code Division 6, *Conservation, Development, and Utilization of State Water Resources*, Part 2.55, *Sustainable Water Use And Demand Reduction*. Click on any section header below to read Water Code directly at the California Legislative Information website.

Chapter 1. General Declarations and Policy, Sections 10608–10608.8

Section 10608.

The Legislature finds and declares all of the following:

(a) Water is a public resource that the California Constitution protects against waste and unreasonable use.

(b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.

(c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.

(d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.

(e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.

(f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

(g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

(h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less

useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

Section 10608.4.

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

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20- percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(k) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(l) Advance regional water resources management.

Section 10608.8.

(a)

(1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

(b) This part does not limit or otherwise affect the application of Chapter 3.5 commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

(c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

(d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

Chapter 2. Definitions, Section 10608.12

Section 10608.12.

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

(a) "Affordable housing" has the same meaning as defined in Section 34191.30 of the Health and Safety Code.

(b) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor

for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.

(c) "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

(3) 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.

(4) 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.

(d) Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.

(e) "CII water use" means water used by commercial water users, industrial water users, institutional water users, and large landscape water users.

(f) "Commercial water user" means a water user that provides or distributes a product or service.

(g) "Common area" means that portion of a common interest development or of a property owned or managed by a homeowners' association or a community service organization or similar entity that is not assigned or allocated to the exclusive use of the occupants of an individual dwelling unit within the property.

(h) "Common interest development" has the same meaning as in Section 4100 of the Civil Code.

(i) "Community service organization or similar entity" has the same meaning as in Section 4110 of the Civil Code.

(j) "Community space" means an area designated by a property owner or a governmental agency to accommodate human foot traffic for civic, ceremonial, or other community events or social gatherings

(k) Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.

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

(m) "Functional turf" means a ground cover surface of turf located in a recreational use area or community space. Turf enclosed by fencing or other barriers to permanently preclude human access for recreation or assembly is not functional turf.

(n) "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.

(o) "Homeowners' association" means an "association" as defined in Section 4080 of the Civil Code.

(p) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.

(q) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.

(r) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.

(s) "Large landscape" means a nonresidential landscape as described in the performance measures for CII water use adopted pursuant to Section 10609.10.

(t) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater

than or equal to the present value of the local cost of implementing that measure.

(u) "Nonfunctional turf" means any turf that is not functional turf, and includes turf located within street rights-of-way and parking lots.

(v) "Performance measures" means actions to be taken by urban retail water suppliers that will result in increased water use efficiency by CII water users. Performance measures may include, but are not limited to, educating CII water users on best management practices, conducting water use audits, and preparing water management plans. Performance measures do not include process water.

(w) "Potable reuse" means direct potable reuse, indirect potable reuse for groundwater recharge, and reservoir water augmentation as those terms are defined in Section 13561.

(x) "Potable water" means water that is suitable for human consumption.

(y) "Process water" means water used by industrial water users for producing a product or product content or water used for research and development. Process water includes, but is not limited to, continuous manufacturing processes, and water used for testing, cleaning, and maintaining equipment. Water used to cool machinery or buildings used in the manufacturing process or necessary to maintain product quality or chemical characteristics for product manufacturing or control rooms, data centers, laboratories, clean rooms, and other industrial facility units that are integral to the manufacturing or research and development process is process water. Water used in the manufacturing process that is necessary for complying with local, state, and federal health and safety laws, and is not incidental water, is process water. Process water does not mean incidental water uses.

(z) "Public water system" has the same meaning as defined in Section 116275 of the Health and Safety Code.

(aa) "Recreational use area" means an area designated by a property owner or a governmental agency to accommodate human foot traffic for recreation, including, but not limited to, sports fields, golf courses, playgrounds, picnic grounds, or pet exercise areas. This recreation may be either formal or informal.

(ab) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050.

(ac) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:

(1) The capture and reuse of stormwater or rainwater.

(2) The use of recycled water.

(3) The desalination of brackish groundwater.

(4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.

(ad) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.

(ae) "Turf" has the same meaning as defined in Section 491 of Title 23 of the California Code of Regulations

(af) "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.

(ag) "Urban water supplier" has the same meaning as defined in Section 10617.

(ah) "Urban water use objective" means an estimate of aggregate efficient water use for the previous year based on adopted water use efficiency standards and local service area characteristics for that year, as described in Section 10609.20.

(ai) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.

(aj) "Urban wholesale water supplier" means a water supplier, either publicly or privately owned, that provides more than 3,000 acre- feet of water annually at wholesale for potable municipal purposes.

Chapter 2.5. Nonfunctional Turf

Section 10608.14.

(a) The use of potable water for the irrigation of nonfunctional turf located on commercial, industrial, and institutional properties, other than a cemetery, and on properties of homeowners' associations, common interest developments, and community service organizations or similar entities is prohibited as of the following dates:

(1) All properties owned by the Department of General Services, beginning January 1, 2027.

(2) All properties owned by local governments, local or regional public agencies, and public water systems, except those specified in paragraph (5), beginning January 1, 2027.

(3) All other institutional properties and all commercial and industrial properties, beginning January 1, 2028.

(4) All common areas of properties of homeowners' associations, common interest developments, and community service organizations or similar entities, beginning January 1, 2029.

(5) All properties owned by local governments, local public agencies, and public water systems in a disadvantaged community, beginning January 1, 2031, or the date upon which a state funding source is made available to fund conversion of nonfunctional turf on these properties to climate-appropriate landscapes, whichever is later.

(b) Notwithstanding subdivision (a), the use of potable water is not prohibited by this section to the extent necessary to ensure the health of trees and other perennial nonturf plantings, or to the extent necessary to address an immediate health and safety need.

(c) The board may, upon a showing of good cause for reasons including economic hardship, critical business need, and potential impacts to human health or safety, postpone a compliance deadline in subdivision (a) by up to three years for certain persons, institutions, and businesses, and may create a form to be used for compliance certification to the board by property owners.

(d) Public water systems shall, by no later than January 1, 2027, revise their regulations, ordinances, or policies governing water service to include the requirements of subdivisions (a) and (b), as revised by the board pursuant to subdivision (c), and shall communicate the requirements to their customers on or before that date.

(e)

(1) An owner of commercial, industrial, or institutional property with more than 5,000 square feet of irrigated area other than a cemetery shall certify to the board, commencing June 30, 2030, and every three years thereafter through 2039, that their property is in compliance with the requirements of this chapter.

(2) An owner of a property with more than 5,000 square feet of irrigated common area that is a homeowners' association, common interest development, or community service organization or similar entity shall certify to the board, commencing June 30, 2031, and every three years thereafter through 2040, that their property is in compliance with the requirements of this chapter.

(f) Noncompliance by a person or entity with this chapter or regulations adopted thereunder shall be subject to civil liability and penalties set forth in Section 1846, or to civil liability and penalties imposed by an urban retail water supplier pursuant to a locally adopted ordinance or policy.

(g)

(1) A public water system, city, county, or city and county may enforce the provisions of this chapter.

(2) To avoid duplication of enforcement, any entity identified in paragraph (1) that is not a retail public water system shall notify the retail public water system 30 days prior to enforcement of the provisions of this chapter against a property served by such system.

(3) Nothing in paragraph (2) shall preclude enforcement by any entity identified in paragraph (1) once adequate notice is given.

(h) The department shall, when using funds appropriated for water conservation for turf replacement, prioritize financial assistance for nonfunctional turf replacement to public water systems serving disadvantaged communities and to owners of affordable housing.

(i) The department shall utilize the saveourwater.com internet website and outreach campaign to provide information and resources on converting nonfunctional turf to native vegetation.

(j) The Governor's Office of Business and Economic Development shall support small and minority-owned businesses that provide services that advance compliance with this chapter.

Chapter 3. Urban Retail Water Suppliers, Sections 10608.16–10608.44

Section 10608.16.

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

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

Section 10608.20.

(a)

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

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

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

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

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

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2017 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.

(B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10- percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.

(3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.

(4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:

(A) Consider climatic differences within the state.

(B) Consider population density differences within the state.

(C) Provide flexibility to communities and regions in meeting the targets.

(D) Consider different levels of per capita water use according to plant water needs in different regions.

(E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.

(F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.

(c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

(d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.

(e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

(f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.

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

(h)

(1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:

(A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area

population, indoor residential water use, and landscaped area water use.

(B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.

(2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its internet website, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

(h)

(1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

(j)

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

(2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water supplier and urban retail water suppliers.

Section 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 (c) 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.

Section 10608.24.

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

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

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

(d)

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

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

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

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

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

(e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

(f)

(1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining

gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

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

Section 10608.26.

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

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

(b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under federal Executive Order 13514.

(d)

(1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

(2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of

Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

Section 10608.28.

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

(1) Through an urban wholesale water supplier.

(2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).

(3) Through a regional water management group as defined in Section 10537.

(4) By an integrated regional water management funding area.

(5) By hydrologic region.

(6) Through other appropriate geographic scales for which computation methods have been developed by the department.

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

Section 10608.32.

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

Section 10608.34.

(a)

(1) On or before January 1, 2017, the department shall adopt rules for all of the following:

(A) The conduct of standardized water loss audits by urban retail water suppliers in accordance with the method adopted by the American Water Works Association in the third edition of Water Audits and Loss

Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0.

(B) The process for validating a water loss audit report prior to submitting the report to the department. For the purposes of this section, "validating" is a process whereby an urban retail water supplier uses a technical expert to confirm the basis of all data entries in the urban retail water supplier's water loss audit report and to appropriately characterize the quality of the reported data. The validation process shall follow the principles and terminology laid out by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0. A validated water loss audit report shall include the name and technical qualifications of the person engaged for validation.

(C) The technical qualifications required of a person to engage in validation, as described in subparagraph (B).

(D) The certification requirements for a person selected by an urban retail water supplier to provide validation of its own water loss audit report.

(E) The method of submitting a water loss audit report to the department.

(2) The department shall update rules adopted pursuant to paragraph (1) no later than six months after the release of subsequent editions of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36. Except as provided by the department, until the department adopts updated rules pursuant to this paragraph, an urban retail water supplier may rely upon a subsequent edition of the American Water Works Association's Water Audits and Loss Control Programs, Manual M36 or the Free Water Audit Software.

(b)

(1) On or before October 1 of each year until October 1, 2023, each urban retail water supplier reporting on a calendar year basis shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year as prescribed by the department pursuant to subdivision (a).

(2) On or before January 1 of each year until January 1, 2024, each urban retail water supplier reporting on a fiscal year basis shall submit a completed and validated water loss audit report for the previous fiscal year as prescribed by the department pursuant to subdivision (a).

(3) On or before January 1, 2024, and on or before January 1 of each year thereafter, each urban retail water supplier shall submit a completed and

validated water loss audit report for the previous calendar year or previous fiscal year as part of the report submitted to the department pursuant to subdivision (a) of Section 10609.24 and as prescribed by the department pursuant to subdivision (a).

(4) Water loss audit reports submitted on or before October 1, 2017, may be completed and validated with assistance as described in subdivision (c).

(c) Using funds available for the 2016–17 fiscal year, the board shall contribute up to four hundred thousand dollars ($400,000) towards procuring water loss audit report validation assistance for urban retail water suppliers.

(d) Each water loss audit report submitted to the department shall be accompanied by information, in a form specified by the department, identifying steps taken in the preceding year to increase the validity of data entered into the final audit, reduce the volume of apparent losses, and reduce the volume of real losses.

(e) At least one of the following employees of an urban retail water supplier shall attest to each water loss audit report submitted to the department:

(1) The chief financial officer.

(2) The chief engineer.

(3) The general manager.

(f) The department shall deem incomplete and return to the urban retail water supplier any final water loss audit report found by the department to be incomplete, not validated, unattested, or incongruent with known characteristics of water system operations. A water supplier shall resubmit a completed water loss audit report within 90 days of an audit being returned by the department.

(g) The department shall post all validated water loss audit reports on its internet website in a manner that allows for comparisons across water suppliers. The department shall make the validated water loss audit reports available for public viewing in a timely manner after their receipt.

(h) Using available funds, the department shall provide technical assistance to guide urban retail water suppliers' water loss detection programs, including, but not limited to, metering techniques, pressure management techniques, condition-based assessment techniques for transmission and distribution pipelines, and utilization of portable and permanent water loss detection devices.

(i) No earlier than January 1, 2019, and no later than July 1, 2020, the board shall adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. In adopting these rules, the board shall employ full life-cycle cost accounting to evaluate the costs of meeting the performance standards. The board may consider establishing a minimum

allowable water loss threshold that, if reached and maintained by an urban water supplier, would exempt the urban water supplier from further water loss reduction requirements.

Section 10608.35.

(a) The department, in coordination with the board, shall conduct necessary studies and investigations and make a recommendation to the Legislature, by January 1, 2020, on the feasibility of developing and enacting water loss reporting requirements for urban wholesale water suppliers.

(b) The studies and investigations shall include an evaluation of the suitability of applying the processes and requirements of Section 10608.34 to urban wholesale water suppliers.

(c) In conducting necessary studies and investigations and developing its recommendation, the department shall solicit broad public participation from stakeholders and other interested persons.

Section 10608.36.

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

Section 10608.40.

Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

Section 10608.42.

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

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

Section 10608.43.

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

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

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

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

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

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

Section 10608.44.

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

Chapter 5. Sustainable Water Management, Section 10608.50

Section 10608.50.

(a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

(1) Revisions to the requirements for urban and agricultural water management plans.

(2) Revisions to the requirements for integrated regional water management plans.

(3) Revisions to the eligibility for state water management grants and loans.

(4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.

(5) Increased funding for research, feasibility studies, and project construction.

(6) Expanding technical and educational support for local land use and water management agencies.

(b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

Chapter 6. Standardized Data Collection, Section 10608.52

Section 10608.52.

(a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

(b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

Chapter 7. Funding Provisions, Sections 10608.56–10608.60

Section 10608.56.

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

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

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

(d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.

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

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan

is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

Section 10608.60.

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

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

Chapter 9. Urban Water Use Objectives and Water Use Reporting, Sections 10609–10609.38

Section 10609.

(a) The Legislature finds and declares that this chapter establishes a method to estimate the aggregate amount of water that would have been delivered the previous year by an urban retail water supplier if all that water had been used efficiently. This estimated aggregate water use is the urban retail water supplier's urban water use objective. The method is based on water use efficiency standards and local service area characteristics for that year. By comparing the amount of water actually used in the previous year with the urban water use objective, local urban water suppliers will be in a better position to help eliminate unnecessary use of water; that is, water used in excess of that needed to accomplish the intended beneficial use.

(b) The Legislature further finds and declares all of the following:

(1) This chapter establishes standards and practices for the following water uses:

(A) Indoor residential use.

(B) Outdoor residential use.

(C) CII water use.

(D) Water losses.

(E) Other unique local uses and situations that can have a material effect on an urban water supplier's total water use.

(2) This chapter further does all of the following:

(A) Establishes a method to calculate each urban water use objective.

(B) Considers recycled water quality in establishing efficient irrigation standards.

(C) Requires the department to provide or otherwise identify data regarding the unique local conditions to support the calculation of an urban water use objective.

(D) Provides for the use of alternative sources of data if alternative sources are shown to be as accurate as, or more accurate than, the data provided by the department.

(E) Requires annual reporting of the previous year's water use with the urban water use objective.

(F) Provides a bonus incentive for the amount of potable recycled water used the previous year when comparing the previous year's water use with the urban water use objective, of up to 10 percent of the urban water use objective.

(3) This chapter requires the department and the board to solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter.

(4) This chapter preserves the Legislature's authority over long- term water use efficiency target setting and ensures appropriate legislative oversight of the implementation of this chapter by doing all of the following:

(A) Requiring the Legislative Analyst to conduct a review of the implementation of this chapter, including compliance with the adopted standards and regulations, accuracy of the data, use of alternate data, and other issues the Legislative Analyst deems appropriate.

(B) Stating legislative intent that the director of the department and the chairperson of the board appear before the appropriate Senate and Assembly policy committees to report on progress in implementing this chapter.

(C) Providing one-time-only authority to the department and board to adopt water use efficiency standards, except as explicitly provided in this chapter. Authorization to update the standards shall require separate legislation.

(c) It is the intent of the Legislature that the following principles apply to the development and implementation of long-term standards and urban water use objectives:

(1) Local urban retail water suppliers should have primary responsibility for meeting standards-based water use targets, and they shall retain the flexibility to develop their water supply portfolios, design and implement water conservation strategies, educate their customers, and enforce their rules.

(2) Long-term standards and urban water use objectives should advance the state's goals to mitigate and adapt to climate change.

(3) Long-term standards and urban water use objectives should acknowledge the shade, air quality, and heat-island reduction benefits provided to communities by trees through the support of water-efficient irrigation practices that keep trees healthy.

(4) The state should identify opportunities for streamlined reporting, eliminate redundant data submissions, and incentivize open access to data collected by urban and agricultural water suppliers.

Section 10609.2.

(a) The board, in coordination with the department, shall adopt long-term standards for the efficient use of water pursuant to this chapter on or before June 30, 2022.

(b) Standards shall be adopted for all of the following:

(1) Outdoor residential water use.

(2) Outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.

(3) A volume for water loss.

(c) When adopting the standards under this section, the board shall consider the policies of this chapter and the proposed efficiency standards' effects on local wastewater management, developed and natural parklands, and urban tree health. The standards and potential effects shall be identified by May 30, 2022. The board shall allow for public comment on potential effects identified by the board under this subdivision.

(d) The long-term standards shall be set at a level designed so that the water use objectives, together with other demands excluded from the long-term standards such as CII indoor water use and CII outdoor water use not connected to a dedicated landscape meter, would exceed the statewide conservation targets required pursuant to Chapter 3 (commencing with Section 10608.16).

(e) The board, in coordination with the department, shall adopt by regulation variances recommended by the department pursuant to Section 10609.14 and guidelines and methodologies pertaining to the calculation of an urban retail water supplier's urban water use objective recommended by the department pursuant to Section 10609.16.

Section 10609.4.

(a)

(1) Until January 1, 2025, the standard for indoor residential water use shall be 55 gallons per capita daily.

(2) Beginning January 1, 2025, and until January 1, 2030, the standard for indoor residential water use shall be 47 gallons per capita daily.

(3) Beginning January 1, 2030, the standard for indoor residential water use shall be 42 gallons per capita daily.

(b)

(1) The department, in coordination with the board, shall conduct necessary studies and investigations to assess and quantify the economic benefits and impacts of the 2030 indoor residential use standard on water, wastewater, and recycled water systems and shall include saturation end-use studies. The studies and investigations shall build on the standards and potential effects identified pursuant to subdivision (c) of Section 10609.2 and shall also consider, and as appropriate incorporate, other regional and statewide studies that quantify the impacts on water, wastewater, and recycled water systems, and evaluate the long-term effects of telework. To facilitate these studies and investigations, the board may request necessary and relevant information from wastewater agencies, including monthly influent flow, actions taken to reassess treatment processes, and the impact of the implementation of this chapter on wastewater operations, maintenance, and capital investment. The department, in coordination with the board, shall summarize the findings of these studies and investigations in a report to the Legislature on or before October 1, 2028. The report shall be submitted in compliance with Section 9795 of the Government Code.

(2) If the department, in coordination with the board, determines that the 2030 indoor residential use standard is likely to unduly impact affordability of water and wastewater services, the department and the board may jointly recommend to the Legislature an alternate date on which the 2030 indoor residential use standard shall take effect. This determination shall be made using at least two years of data reflecting application of the 2025 indoor residential use standard.

(3) Based upon the studies and investigations conducted pursuant to paragraph (1), the department shall consider whether to recommend, for adoption by the board, additional variances to accommodate unique challenges related to residential indoor water use pursuant to Section 10609.2. Variance options may include, but are not limited to, stranded assets, impacts on disadvantaged communities, impacts to environmental flows, or adverse impacts to wastewater or recycled water operations.

(4) The studies, investigations, and report described in paragraph (1) shall include timely and inclusive collaboration with, and input from, a broad group of stakeholders, including, but not limited to, environmental groups, experts in indoor plumbing, water, wastewater, and recycled water agencies.

(c) An urban retail water supplier shall not be subject to enforcement pursuant to this chapter solely for failing to meet the indoor residential use standard.

Section 10609.6.

(a)

(1) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor residential use for adoption by the board in accordance with this chapter.

(2)

(A) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).

(B) The standards shall apply to irrigable lands.

(C) The standards shall include provisions for swimming pools, spas, and other water features. Ornamental water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, shall be analyzed separately from swimming pools and spas.

(b) The department shall, by January 1, 2021, provide each urban retail water supplier with data regarding the area of residential irrigable lands in a manner that can reasonably be applied to the standards adopted pursuant to this section.

(c) The department shall not recommend standards pursuant to this section until it has conducted pilot projects or studies, or some combination of the two, to ensure that the data provided to local agencies are reasonably accurate for the

data's intended uses, taking into consideration California's diverse landscapes and community characteristics.

Section 10609.8.

(a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor irrigation of landscape areas with dedicated irrigation meters or other means of calculating outdoor irrigation use in connection with CII water use for adoption by the board in accordance with this chapter.

(b) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).

(c) The standards shall include an exclusion for water for commercial agricultural use meeting the definition of subdivision (b) of Section 51201 of the Government Code.

Section 10609.9.

For purposes of Sections 10609.6 and 10609.8, "principles of the model water efficient landscape ordinance" means those provisions of the model water efficient landscape ordinance applicable to the establishment or determination of the amount of water necessary to efficiently irrigate both new and existing landscapes. These provisions include, but are not limited to, all of the following:

(a) Evapotranspiration adjustment factors, as applicable.

(b) Landscape area.

(c) Maximum applied water allowance.

(d) Reference evapotranspiration.

(e) Special landscape areas, including provisions governing evapotranspiration adjustment factors for different types of water used for irrigating the landscape.

Section 10609.10.

(a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, performance measures for CII water use for adoption by the board in accordance with this chapter.

(b) Prior to recommending performance measures for CII water use, the department shall solicit broad public participation from stakeholders and other interested persons relating to all of the following:

(1) Recommendations for a CII water use classification system for California that address significant uses of water.

(2) Recommendations for setting minimum size thresholds for converting mixed CII meters to dedicated irrigation meters, and evaluation of, and recommendations for, technologies that could be used in lieu of requiring dedicated irrigation meters.

(3) Recommendations for CII water use best management practices, which may include, but are not limited to, water audits and water management plans for those CII customers that exceed a recommended size, volume of water use, or other threshold.

(c) Recommendations of appropriate performance measures for CII water use shall be consistent with the October 21, 2013, report to the Legislature by the Commercial, Industrial, and Institutional Task Force entitled "Water Use Best Management Practices," including the technical and financial feasibility recommendations provided in that report, and shall support the economic productivity of California's commercial, industrial, and institutional sectors.

(b)

(1) The board, in coordination with the department, shall adopt performance measures for CII water use on or before June 30, 2022.

(2) Each urban retail water supplier shall implement the performance measures adopted by the board pursuant to paragraph (1).

Section 10609.12.

The standards for water loss for urban retail water suppliers shall be the standards adopted by the board pursuant to subdivision (i) of Section 10608.34.

Section 10609.14.

(a) The department, in coordination with the board, shall conduct necessary studies and investigations and, no later than October 1, 2021, recommend for adoption by the board in accordance with this chapter appropriate variances for unique uses that can have a material effect on an urban retail water supplier's urban water use objective.

(b) Appropriate variances may include, but are not limited to, allowances for the following:

(1) Significant use of evaporative coolers.

(2) Significant populations of horses and other livestock.

(3) Significant fluctuations in seasonal populations.

(4) Significant landscaped areas irrigated with recycled water having high levels of total dissolved solids.

(5) Significant use of water for soil compaction and dust control.

(6) Significant use of water to supplement ponds and lakes to sustain wildlife.

(7) Significant use of water to irrigate vegetation for fire protection.

(8) Significant use of water for commercial or noncommercial agricultural use.

(d) The department, in recommending variances for adoption by the board, shall also recommend a threshold of significance for each recommended variance.

(e) Before including any specific variance in calculating an urban retail water supplier's water use objective, the urban retail water supplier shall request and receive approval by the board for the inclusion of that variance.

(f) The board shall post on its Internet Web site all of the following:

(1) A list of all urban retail water suppliers with approved variances.

(2) The specific variance or variances approved for each urban retail water supplier.

(3) The data supporting approval of each variance.

Section 10609.15.

To help streamline water data reporting, the department and the board shall do all of the following:

(a) Identify urban water reporting requirements shared by both agencies, and post on each agency's Internet Web site how the data is used for planning, regulatory, or other purposes.

(b) Analyze opportunities for more efficient publication of urban water reporting requirements within each agency, and analyze how each agency can integrate various data sets in a publicly accessible location, identify priority actions, and implement priority actions identified in the analysis.

(c) Make appropriate data pertaining to the urban water reporting requirements that are collected by either agency available to the public according to the principles and requirements of the Open and Transparent Water Data Act (Part 4.9 (commencing with Section 12400)).

Section 10609.16.

The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, guidelines and methodologies for the board to adopt that identify how an urban retail water supplier calculates its urban water use objective. The guidelines and methodologies shall address, as necessary, all of the following:

(a) Determining the irrigable lands within the urban retail water supplier's service area.

(b) Updating and revising methodologies described pursuant to subparagraph (A) of paragraph (1) of subdivision (h) of Section 10608.20, as appropriate, including methodologies for calculating the population in an urban retail water supplier's service area.

(c) Using landscape area data provided by the department or alternative data.

(d) Incorporating precipitation data and climate data into estimates of a urban retail water supplier's outdoor irrigation budget for its urban water use objective.

(e) Estimating changes in outdoor landscape area and population, and calculating the urban water use objective, for years when updated landscape imagery is not available from the department.

(f) Determining acceptable levels of accuracy for the supporting data, the urban water use objective, and compliance with the urban water use objective.

Section 10609.18.

The department and the board shall solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter. The board shall hold at least one public meeting before taking any action on any standard or variance recommended by the department.

Section 10609.20.

(a) Each urban retail water supplier shall calculate its urban water use objective no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use conditions for the previous calendar or fiscal year.

(c) Each urban water supplier's urban water use objective shall be composed of the sum of the following:

(1) Aggregate estimated efficient indoor residential water use.

(2) Aggregate estimated efficient outdoor residential water use.

(3) Aggregate estimated efficient outdoor irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use.

(4) Aggregate estimated efficient water losses.

(5) Aggregate estimated water use in accordance with variances, as appropriate.

(d)

(1) An urban retail water supplier that delivers water from a groundwater basin, reservoir, or other source that is augmented by potable reuse water may adjust its urban water use objective by a bonus incentive calculated pursuant to this subdivision.

(2) The water use objective bonus incentive shall be the volume of its potable reuse delivered to residential water users and to landscape areas with dedicated irrigation meters in connection with CII water use, on an acre-foot basis.

(3) The bonus incentive pursuant to paragraph (1) shall be limited in accordance with one of the following:

(A) The bonus incentive shall not exceed 15 percent of the urban water supplier's water use objective for any potable reuse water produced at an existing facility.

(B) The bonus incentive shall not exceed 10 percent of the urban water supplier's water use objective for any potable reuse water produced at any facility that is not an existing facility.

(4) For purposes of this subdivision, "existing facility" means a facility that meets all of the following:

(A) The facility has a certified environmental impact report, mitigated negative declaration, or negative declaration on or before January 1, 2019.

(B) The facility begins producing and delivering potable reuse water on or before January 1, 2022.

(C) The facility uses microfiltration and reverse osmosis technologies to produce the potable reuse water.

(e)

(1) The calculation of the urban water use objective shall be made using landscape area and other data provided by the department and pursuant to the standards, guidelines, and methodologies adopted by the board. The department shall provide data to the urban water supplier at a level of detail sufficient to allow the urban water supplier to verify its accuracy at the parcel level.

(2) Notwithstanding paragraph (1), an urban retail water supplier may use alternative data in calculating the urban water use objective if the supplier demonstrates to the department that the alternative data are equivalent, or superior, in quality and accuracy to the data provided by the department. The department may provide technical assistance to an

urban retail water supplier in evaluating whether the alternative data are appropriate for use in calculating the supplier's urban water use objective.

Section 10609.21.

(a) For purposes of Section 10609.20, and notwithstanding paragraph (4) of subdivision (d) of Section 10609.20, "existing facility" also includes the North City Project, phase one of the Pure Water San Diego Program, for which an environmental impact report was certified on April 10, 2018.

(b) This section shall become operative on January 1, 2019.

Section 10609.22.

(a) An urban retail water supplier shall calculate its actual urban water use no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use for the previous calendar or fiscal year.

(c) Each urban water supplier's urban water use shall be composed of the sum of the following:

(1) Aggregate residential water use.

(2) Aggregate outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.

(3) Aggregate water losses.

Section 10609.24.

(a) An urban retail water supplier shall submit a report to the department no later than January 1, 2024, and by January 1 every year thereafter. The report shall include all of the following:

(1) The urban water use objective calculated pursuant to Section 10609.20 along with relevant supporting data.

(2) The actual urban water use calculated pursuant to Section 10609.22 along with relevant supporting data.

(3) Documentation of the implementation of the performance measures for CII water use.

(4) A description of the progress made towards meeting the urban water use objective.

(5) The validated water loss audit report conducted pursuant to Section 10608.34.

(b) The department shall post the reports and information on its internet website.

(c) The board may issue an information order or conservation order to, or impose civil liability on, an entity or individual for failure to submit a report required by this section.

Section 10609.25.

As part of the first report submitted to the department by an urban retail water supplier no later than January 1, 2024, pursuant to subdivision (a) of Section 10609.24, each urban retail water supplier shall provide a narrative that describes the water demand management measures that the supplier plans to implement to achieve its urban water use objective by January 1, 2027.

Section 10609.26.

(a)

(1) On and after January 1, 2024, the board may issue informational orders pertaining to water production, water use, and water conservation to an urban retail water supplier that does not meet its urban water use objective required by this chapter. Informational orders are intended to obtain information on supplier activities, water production, and conservation efforts in order to identify technical assistance needs and assist urban water suppliers in meeting their urban water use objectives.

(2) In determining whether to issue an informational order, the board shall consider the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet the urban water use objective.

(3) The board shall share information received pursuant to this subdivision with the department.

(4) An urban water supplier may request technical assistance from the department. The technical assistance may, to the extent available, include guidance documents, tools, and data.

(b) On and after January 1, 2025, the board may issue a written notice to an urban retail water supplier that does not meet its urban water use objective required by this chapter. The written notice may warn the urban retail water supplier that it is not meeting its urban water use objective described in Section 10609.20 and is not making adequate progress in meeting the urban water use objective, and may request that the urban retail water supplier address areas of concern in its next annual report required by Section 10609.24. In deciding whether to issue a written notice, the board may consider whether the urban retail water supplier has received an informational order, the degree to which the urban retail water supplier is not

meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet its urban water use objective.

(1) On and after January 1, 2026, the board may issue a conservation order to an urban retail water supplier that does not meet its urban water use objective. A conservation order may consist of, but is not limited to, referral to the department for technical assistance, requirements for education and outreach, requirements for local enforcement, and other efforts to assist urban retail water suppliers in meeting their urban water use objective.

(2) In issuing a conservation order, the board shall identify specific deficiencies in an urban retail water supplier's progress towards meeting its urban water use objective, and identify specific actions to address the deficiencies.

(3) The board may request that the department provide an urban retail water supplier with technical assistance to support the urban retail water supplier's actions to remedy the deficiencies.

(c) A conservation order issued in accordance with this chapter may include requiring actions intended to increase water-use efficiency, but shall not curtail or otherwise limit the exercise of a water right, nor shall it require the imposition of civil liability pursuant to Section 377.

Section 10609.27.

Notwithstanding Section 10609.26, the board shall not issue an information order, written notice, or conservation order pursuant to Section 10609.26 if both of the following conditions are met:

(a) The board determines that the urban retail water supplier is not meeting its urban water use objective solely because the volume of water loss exceeds the urban retail water supplier's standard for water loss.

(b) Pursuant to Section 10608.34, the board is taking enforcement action against the urban retail water supplier for not meeting the performance standards for the volume of water losses.

Section 10609.28.

The board may issue a regulation or informational order requiring a wholesale water supplier, an urban retail water supplier, or a distributor of a public water supply, as that term is used in Section 350, to provide a monthly report relating to water production, water use, or water conservation.

Section 10609.30.

On or before January 10, 2024, the Legislative Analyst shall provide to the appropriate policy committees of both houses of the Legislature and the public a report evaluating the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. The board and the department shall provide the Legislative Analyst with the available data to complete this report.

(a) The report shall describe all of the following:

(1) The rate at which urban retail water users are complying with the standards, and factors that might facilitate or impede their compliance.

(2) The accuracy of the data and estimates being used to calculate urban water use objectives.

(3) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.

(4) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.

(5) The early indications of how implementing this chapter might impact the efficiency of statewide urban water use.

6) Recommendations, if any, for improving statewide urban water use efficiency and the standards and practices described in this chapter.

(7) Any other issues the Legislative Analyst deems appropriate.

Section 10609.32.

It is the intent of the Legislature that the chairperson of the board and the director of the department appear before the appropriate policy committees of both houses of the Legislature on or around January 1, 2026, and report on the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. It is the intent of the Legislature that the topics to be covered include all of the following:

(a) The rate at which urban retail water suppliers are complying with the standards, and factors that might facilitate or impede their compliance.

(b) What enforcement actions have been taken, if any.

(c) The accuracy of the data and estimates being used to calculate urban water use objectives.

(d) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.

(e) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.

(f) An assessment of how implementing this chapter is affecting the efficiency of statewide urban water use.

Section 10609.34.

Notwithstanding Section 15300.2 of Title 14 of the California Code of Regulations, an action of the board taken under this chapter shall be deemed to be a Class 8 action, within the meaning of Section 15308 of Title 14 of the California Code of Regulations, provided that the action does not involve relaxation of existing water conservation or water use standards.

Section 10609.36.

(a) Nothing in this chapter shall be construed to determine or alter water rights. Sections 1010 and 1011 apply to water conserved through implementation of this chapter.

(b) Nothing in this chapter shall be construed to authorize the board to update or revise water use efficiency standards authorized by this chapter except as explicitly provided in this chapter. Authorization to update the standards beyond that explicitly provided in this chapter shall require separate legislation.

(c) Nothing in this chapter shall be construed to limit or otherwise affect the use of recycled water as seawater barriers for groundwater salinity management.

Section 10609.38.

The board may waive the requirements of this chapter for a period of up to five years for any urban retail water supplier whose water deliveries are significantly affected by changes in water use as a result of damage from a disaster such as an earthquake or fire. In establishing the period of a waiver, the board shall take into consideration the breadth of the damage and the time necessary for the damaged areas to recover from the disaster.

Urban Water Management Planning Act

This section contains information extracted from Water Code Division 6, *Conservation, Development, and Utilization of State Water Resources*, Part 2.6, *Urban Water Management Planning*. Click on any section header below to read Water Code directly at the California Legislative Information website.

Chapter 1. General Declaration and Policy, Sections 10610–10610.4

Section 10610.

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

Section 10610.2.

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

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate, and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years now and into the foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require

specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

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

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

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

Section 10610.4.

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

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

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

(c) Urban water suppliers shall be required to develop water management plans to achieve the efficient use of available supplies and strengthen local drought planning.

Chapter 2. Definitions, Sections 10611–10618

Section 10611.

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

Section 10611.3.

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

Section 10611.5.

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

Section 10612.

"Drought risk assessment" means a method that examines water shortage risks based on the driest five-year historic sequence for the agency's water supply, as described in subdivision (b) of Section 10635.

Section 10613.

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

Section 10614.

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

Section 10615.

"Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

Section 10616.

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

Section 10616.5.

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

Section 10617.

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

Section 10617.5.

"Water shortage contingency plan" means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.

Section 10618.

"Water supply and demand assessment" means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.

Chapter 3. Urban Water Management Plans

Article 1. General Provisions, Sections 10620–10621

Section 10620.

(a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d)

(1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water

management planning where those plans will reduce preparation costs and contribute to the achievement of conservation, efficient water use, and improved local drought resilience.

(2) Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.

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

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

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

Section 10621.

(a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.

(d) 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).

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

(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

Article 2. Contents of Plans, Sections 10630–10634

Section 10630.

It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.

Section 10630.5.

Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

Section 10631.

A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following:

(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the

drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.

(B) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater.

(C) For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin 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 coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(D) 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.

(E) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water

supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(d)

(1) For an urban retail water supplier, 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, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(J) Distribution system water loss.

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

(3)

(A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

(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.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met

the distribution loss standards enacted by the board pursuant to Section 10608.34.

(4)

(A) Water use projections, where available, shall 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.

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

(1)

(A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

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

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

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

(vi) Water conservation program coordination and staffing support.

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

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive 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.

(g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

(h) 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 (f). 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 (f).

Section 10631.1.

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

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under

Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

Section 10631.2.

(a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

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

(c) The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.

Section 10632.

(a) Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

(1) The analysis of water supply reliability conducted pursuant to Section 10635.

(2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:

(A) The written decision making process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

(3)

(A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross- reference relating its existing categories to the six standard water shortage levels.

(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state- mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

(5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications.

(6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

(7)

(A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

(8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

(9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

(10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

(b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an 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.

(c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

Section 10632.1.

An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.

Section 10632.2.

An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from

taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

Section 10632.3.

It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

Section 10632.5.

(a) In addition to the requirements of paragraph (3) of subdivision of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106- 390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

Section 10633.

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

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

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

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

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

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

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

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

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.

Article 2.5. Water Service Reliability, Section 10635

Section 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 long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included

in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

(c) 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.

(d) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

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

Article 3. Adoption and Implementation of Plans, Sections 10640–10645

Section 10640.

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

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of

Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

Section 10641.

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

Section 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 both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

Section 10643.

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

Section 10644.

(a)

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

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall

include any standardized forms, tables, or displays specified by the department.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

(c)

(1)

(A) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before July 1, in the years ending in seven and two, a report summarizing the status of the plans and water shortage contingency plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans and water shortage contingency plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan and water shortage contingency plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans and water shortage contingency plans submitted pursuant to this part.

(B) The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.

(C) The department shall submit the report to the Legislature for the 2015 plans by July 1, 2017, and the report to the Legislature for the 2020 plans and water shortage contingency plans by July 1, 2022.

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

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

Section 10645.

(a) 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.

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

Chapter 4. Miscellaneous Provisions, Sections 10650–10657

Section 10650.

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

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

(b) Any action or proceeding alleging that a plan or water shortage contingency plan, or action taken pursuant to either, does not comply with this part shall be commenced within 90 days after filing of the plan or water shortage contingency plan or an amendment to either pursuant to Section 10644 or the taking of that action.

Section 10651.

In any action or proceeding to attack, review, set aside, void, or annul a plan or a water shortage contingency plan, or an action taken pursuant to either by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

Section 10652.

The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the

plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

Section 10653.

The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the board and the Public Utilities Commission, for the preparation of water management plans, water shortage contingency plans, or conservation plans; provided, that if the board or the Public Utilities Commission requires additional information concerning water conservation, drought response measures, or financial conditions to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan that complies with analogous federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

Section 10654.

An urban water supplier may recover in its rates the costs incurred in preparing its urban water management plan, its drought risk assessment, its water supply and demand assessment, and its water shortage contingency plan and implementing the reasonable water conservation measures included in either of the plans.

Section 10655.

If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

Section 10656.

An urban water supplier is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.

Section 10657.

The department may adopt regulations regarding the definitions of water, water use, and reporting periods, and may adopt any other regulations deemed necessary or desirable to implement this part. In developing regulations pursuant to this section, the department shall solicit broad public participation from stakeholders and other interested persons.

Appendix B

Demonstration of Reduced Delta Reliance

City of Napa
Reduced Reliance on the Delta

JOINTLY PREPARED BY

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LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

City	City of Napa
Delta	Sacramento-San Joaquin Delta
DWR	California Department of Water Resources
DWR Guidebook	Urban Water Management Plan Guidebook 2025
NapaSan	Napa Sanitation District
NCFCWCD	Napa County Flood Control & Water Conservation District
SWP	State Water Project
UWMP	Urban Water Management Plan
WR P1	Delta Plan Policy WR P1

City of Napa
Reduced Reliance on the Delta

The purpose of this document is to demonstrate compliance with the Sacramento-San Joaquin Delta Reform Act of 2009, which is described below, followed by an analysis of the City of Napa's (City) reduced reliance in accordance with State protocols and expected outcomes for reduced reliance on the Delta.

1.0 SACRAMENTO-SAN JOAQUIN DELTA REFORM ACT OF 2009

Under the Sacramento-San Joaquin Delta Reform Act of 2009, State and local public agencies proposing a "covered action" in the Sacramento-San Joaquin Delta (Delta) must submit a written certification of consistency to the Delta Stewardship Council as to whether the covered action is consistent with applicable Delta Plan policies. Covered actions include a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta. Anyone may appeal a certification of consistency, and if the Delta Stewardship Council grants the appeal, the covered action may not be implemented until the agency proposing the covered action submits a revised certification of consistency, and either no appeal is filed, or the Delta Stewardship Council denies the subsequent appeal.

An urban water supplier that anticipates participating in or receiving water from a proposed covered action is required to provide information in their Urban Water Management Plans (UWMPs), starting with their 2015 UWMP, that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (WR P1).

WR P1 details the requirements for a covered action to demonstrate consistency with reduced reliance on the Delta and improved regional self-reliance. WR P1 subsection (a) states that:

(a) Water shall not be exported from, transferred through, or used in the Delta if all of the following apply:

- *(1) One or more water suppliers that would receive water as a result of the export, transfer, or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c);*
- *(2) That failure has significantly caused the need for the export, transfer, or use; and*
- *(3) The export, transfer, or use would have a significant adverse environmental impact in the Delta.*

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a)(1) above.

(c)(1) Water suppliers that have done all the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:

- *(A) Completed a current Urban or Agricultural Water Management Plan (Plan) which has been reviewed by the California Department of Water Resources for compliance with the applicable requirements of Water Code Division 6, Parts 2.55, 2.6, and 2.8;*
- *(B) Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and*
- *(C) Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code section 1011(a).*

The analysis and documentation provided below include all of the elements described in WR P1(c)(1) that need to be included in a water supplier's UWMP to support a certification of consistency for a future covered action.

The inclusion of this document as an appendix in the 2015, 2020, and 2025 UWMPs fulfills the requirements of WR P1 subsection (c)(1) Paragraph A.

Future projects under evaluation as described in Chapter 6 and the Demand Management Measures described in Chapter 9 of the City's 2025 UWMP fulfill the requirements of WR P1 subsection (c)(1) Paragraph B.

2.0 REDUCED RELIANCE ANALYSIS

The methodology used to determine the City's reduced Delta reliance and improved regional self-reliance is consistent with the approach detailed by the California Department of Water Resources (DWR) in Appendix C of their "Urban Water Management Plan Guidebook 2025" (DWR Guidebook), issued in January 2026. The following analysis uses narrative justifications to account for supplies and document specific data sources. All data represent average or normal water year conditions and were obtained from the 2025 UWMP, previously adopted UWMPs, and discussions with the City. The analysis was conducted at the retail level, focusing on the City's demands and available supplies (i.e., local surface water and imported water through the State Water Project (SWP)).

Table 1 through Table 4 present the analysis of the City's reduced Delta reliance using DWR's spreadsheet tool and fulfill the requirements of WR P1 subsection (c)(1) Paragraph C. Descriptions of the various inputs of the analysis are provided below:

- **Baseline (2010) and 2015-2050 Conditions** – The analysis uses a normal water year representation of 2010 as the baseline, which is consistent with the approach described in the DWR Guidebook. Data for the City's 2010 baseline are taken from its 2010 UWMP, while actual conditions for 2015, 2020, and 2025 are based on data reported in the City's 2015, 2020, and 2025 UWMPs, respectively. Normal year projections for 2030 through 2050 are also based on the City's 2025 UWMP. Where historical or projected data were unavailable (e.g., actual supplies used to meet demands), the City provided that information separately.
- **Service Area Water Demands with Water Use Efficiency Accounted For** – These values reflect the City's actual and projected water use, including potable water demands, recycled water demands, and losses. Water the City delivers to other agencies (City of American Canyon, Town of Yountville, City of St. Helena, City of Calistoga, and California Veterans Home) and Agricultural customers is excluded.
- **Non-Potable Water Demands** – These values consist of recycled water demands.
- **Water Supplies Contributing to Regional Self-Reliance**
  - ***Water Use Efficiency*** – This amount is calculated by DWR's spreadsheet tool based on the City's baseline demand, actual demands, and expected future demands. For each year, the value shown is the reduction in per capita water demand from the baseline (2010) multiplied by the actual or projected population.

— ***Water Recycling*** – Napa Sanitation District (NapaSan) provides recycled water to customers within the City's drinking water service area. Recycled water contributes to regional self-reliance by reducing the demand for potable water.

- **Water Supplies from the Delta Watershed**
  - ***CVP/SWP Contract Supplies*** – The City sub-contracts with the Napa County Flood Control & Water Conservation District (NCFCWCD) for imported surface water from the SWP. Beginning in 2000, the City increased its SWP entitlement through transfer agreements with the Kern County Water Agency, the City of St. Helena, and the Town of Yountville.

Table 1. Calculation of Water Use Efficiency (DWR Table C-1)

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	13,730	11,694	13,900	11,856	13,210	13,860	13,910	14,310	14,610
Non-Potable Water Demands	288	437	568	453	600	800	800	800	800
Potable Service Area Demands with Water Use Efficiency Accounted For	13,442	11,257	13,332	11,403	12,610	13,060	13,110	13,510	13,810

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Population	86,743	87,615	86,906	85,366	88,946	92,526	96,106	99,686	103,266

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Per Capita Water Use (GPCD)	138	115	137	119	127	126	122	121	119
Change in Per Capita Water Use from Baseline (GPCD)		(24)	(1)	(19)	(12)	(12)	(17)	(17)	(19)
Estimated Water Use Efficiency Since Baseline		2,320	135	1,826	1,173	1,278	1,783	1,938	2,192

Table 2. Calculation of Service Area Water Demands Without Water Use Efficiency (DWR Table C-2)

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	13,730	11,694	13,900	11,856	13,210	13,860	13,910	14,310	14,610
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline		2,320	135	1,826	1,173	1,278	1,783	1,938	2,192
Service Area Water Demands without Water Use Efficiency Accounted For	13,730	14,014	14,035	13,682	14,383	15,138	15,693	16,248	16,802

Table 3. Calculation of Supplies Contributing to Regional Self-Reliance (DWR Table C-3)

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Water Use Efficiency	-	2,320	135	1,826	1,173	1,278	1,783	1,938	2,192
Water Recycling	288	437	568	453	600	800	800	800	800
Stormwater Capture and Use									
Advanced Water Technologies									
Conjunctive Use Projects									
Local and Regional Water Supply and Storage Projects	4,260	3,983	4,998	8,885	5,044	5,485	5,768	6,215	6,629
Other Programs and Projects the Contribute to Regional Self-Reliance									
Water Supplies Contributing to Regional Self-Reliance	4,548	6,740	5,701	11,164	6,817	7,563	8,351	8,952	9,621

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	13,730	14,014	14,035	13,682	14,383	15,138	15,693	16,248	16,802

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Water Supplies Contributing to Regional Self-Reliance	4,548	6,740	5,701	11,164	6,817	7,563	8,351	8,952	9,621
Change in Water Supplies Contributing to Regional Self-Reliance		2,192	1,153	6,616	2,269	3,015	3,803	4,404	5,073

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Percent of Water Supplies Contributing to Regional Self-Reliance	33.1%	48.1%	40.6%	81.6%	47.4%	50.0%	53.2%	55.1%	57.3%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		15.0%	7.5%	48.5%	14.3%	16.8%	20.1%	22.0%	24.1%

Table 4. Calculation of Reliance on Water Supplies from the Delta Watershed (DWR Table C-4)

Water Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
CVP/SWP Contract Supplies	9,182	7,274	8,334	3,326	7,566	7,575	7,342	7,295	7,181
Delta/Delta Tributary Diversions									
Transfers and Exchanges									
Other Water Supplies from the Delta Watershed									
Total Water Supplies from the Delta Watershed	9,182	7,274	8,334	3,326	7,566	7,575	7,342	7,295	7,181

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	13,730	14,014	14,035	13,682	14,383	15,138	15,693	16,248	16,802

Change in Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Water Supplies from the Delta Watershed	9,182	7,274	8,334	3,326	7,566	7,575	7,342	7,295	7,181
Change in Water Supplies from the Delta Watershed		(1,908)	(848)	(5,856)	(1,616)	(1,607)	(1,840)	(1,887)	(2,001)

Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045	2050 (Optional)
Percent of Water Supplies from the Delta Watershed	66.9%	51.9%	59.4%	24.3%	52.6%	50.0%	46.8%	44.9%	42.7%
Change in Percent of Water Supplies from the Delta Watershed		-15.0%	-7.5%	-42.6%	-14.3%	-16.8%	-20.1%	-22.0%	-24.1%

3.0 EXPECTED OUTCOMES FOR REDUCED RELIANCE ON THE DELTA

As stated in WR P1(c)(1)(C), commencing in 2015, UWMPs are required to include expected outcomes for measurable reduction in Delta reliance and improved regional self-reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount or percentage of water used from the Delta.

The following provides a summary of the near-term (2030) and long-term (2050) expected outcomes for the City's Delta reliance and regional self-reliance based on the assumptions described in the previous section and DWR's analysis tool. The results show that the City is measurably reducing reliance on the Delta and improving regional self-reliance, based on the percentage of the City's water supplies from the Delta watershed.

Expected Outcomes for Regional Self-Reliance (Table 3):

- Near-term (2030) – Normal water year regional self-reliance is expected to increase by approximately 2,269 AFY from the 2010 baseline. Increased use of local and regional water supplies is a major factor, supplemented by water use efficiency and recycled water.
- Long-term (2050) – Normal water year regional self-reliance is expected to increase by approximately 5,073 AFY from the 2010 baseline. Increased use of local and regional water supplies is a major factor, supplemented by water use efficiency and recycled water.

Expected Outcomes for Percent of Water Supplies from the Delta Watershed (Table 4):

- Near-term (2030) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 14.3 percent relative to the 2010 baseline.
- Long-term (2050) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 24.1 percent relative to the 2010 baseline.

Appendix C

DWR 2025 Urban Water Management Plan Tables

Submittal Table 2-1 Retail: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2025	Volume of Water Supplied 2025 (AF)
Add additional rows as needed			
CA2810003	City of Napa	25,500	12,211
	Total	25,500	12,211
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES: Volumes are in acre-feet (AF). Excludes 799 AF treated & wheeled to the cities of American Canyon and Calistoga, as those agencies provide the source of supply.			

Submittal Table 2-2: Plan Identification		
Select One	**Type of Plan**	**Name of Regional Alliance or RUWMP** (Drop Down List)
☑	**Individual UWMP**	
	If Water Supplier is also a member of a SB X7-7 Regional Alliance, select name from the drop-down.	
☐	**Regional Urban Water Management Plan (RUWMP)**	
	If Supplier selected RUWMP, select name from the drop-down.	
NOTES:		

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesale supplier
☑	Supplier is a retail supplier
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP (Select from the drop down list).	
Unit	AF
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES:	

Submittal Table 2-4 Retail: Water Supplier Information Exchange **Water Code Section 10631(h)**
The retail Supplier has informed the following wholesale supplier(s) of projected water use.
Wholesale Water Supplier Name
Add additional rows as needed
Napa County Flood Control and Water Conservation District (NCFCWCD)
NOTES: NCFCWCD is the direct local contractor with DWR for State Water Project (SWP) supplies. In this way it acts as a wholesaler to the City, a SWP subcontractor.

Submittal Table 3-1 Retail: Population - Current and Projected **Water Code Section 10631(a)**						
Population Served	2025	2030	2035	2040	2045	2050(opt)
	85,366	88,946	92,526	96,106	99,686	103,266
NOTES: 2025 calculated using California Department of Finance E-5 Estimates (May 2025) and persons-per-connection estimates. 2030-2050 projections use incremental 5-year increases derived from the current City of Napa General Plan.						

Submittal Table 4-1 Retail: Total Uses for Potable and Non-Potable Water — Actual Water Code Section 10631(d)(1)			
Use Type	Additional Description (as needed)	2025 Actual Water Use	
Drop down list May select each use multiple times These are the only use types that will be recognized by the WUEdata online submittal tool		**Potable or Non-Potable** (OPTIONAL) Drop down list	Volume (AF)
Add additional rows as needed			
Single Family		Potable	5,542
Multi-Family		Potable	2,057
Commercial	Commercial, non-City Institutional	Potable	2,548
Industrial		Potable	109
Institutional/Governmental	City of Napa municipal only, excluding dedicated irrigation accounts	Potable	29
Landscape	Commercial, Industrial, Institutional Dedicated Irrigation Meters (DIMs)	Potable	455
Agricultural		Potable	77
Sales/Transfers/Exchanges to other Suppliers	City of St. Helena, Town of Yountville, Veterans Home of California	Potable	731
Other (optional)	Hydrant flushing, firefighting, street cleaning (estimate)	Potable	28
Distribution System Water Loss	Real and Apparent Losses (estimate)	Potable	635
		Subtotal Potable	12,211
		Subtotal Non-Potable	0
		Total	12,211
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.			
NOTES: The City is a drinking water provider only and does not distribute non-potable water to customers.			

Submittal Table 4-2 Retail: Total Uses for Potable, and Non-Potable Water — Projected Water Code Section 10631(d)(1)							
Use Type	Additional Description (as needed)	**Projected Water Use** (Report To the Extent that Records are Available)					
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		**Potable or Non-Potable** (OPTIONAL) Drop down list	**2030 (AF)**	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 opt (AF)**
Add additional rows as needed.							
Single Family		Potable	5,800	6,000	6,000	6,200	6,450
Multi-Family		Potable	2,150	2,250	2,250	2,300	2,400
Commercial	Commercial, non-City Institutional	Potable	3,050	3,225	3,300	3,500	3,500
Industrial		Potable	150	175	200	200	200
Institutional/Governmental	City of Napa municipal only, excluding dedicated irrigation accounts	Potable	30	30	30	30	30
Landscape	Commercial, Industrial, Institutional Dedicated Irrigation Meters (DIMs)	Potable	400	400	400	400	400
Agricultural		Potable	150	175	200	200	200
Sales/Transfers/Exchanges to other Suppliers	City of St. Helena, Town of Yountville, California Veterans Home	Potable	800	800	800	800	800
Other (optional)	Hydrant flushing, firefighting, street cleaning	Potable	30	30	30	30	30
Distribution System Water Loss	Real and Apparent Losses	Potable	1,000	950	900	850	800
		Subtotal Potable	13,560	14,035	14,110	14,510	14,810
		Subtotal Non-Potable	0	0	0	0	0
		Total	13,560	14,035	14,110	14,510	14,810
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.							
NOTES: The City is a drinking water provider only and does not distribute non-potable water to customers.							

Submittal Table 4-3 Retail: Inclusion in Water Use Projections Water Code Section 10631 (a), 10631 (d)(4)(A), and 10631 (d)(4)(B)	
Are Future Water Savings Included in Projections? **Drop down list (y/n)**	Yes
If "Yes" to above, **state the section or page number**, in the cell to the right, where citations of the codes, ordinances, or otherwise are utilized in demand projections are found. ***Optional*** Suppliers may complete Optional Submittal Table 4-4 R to quantify the expected savings.	Section 4.4
Are Lower Income Residential Demands Included In Projections? **Drop down list (y/n)**	Yes
Optional If the method for accounting Lower Income Residential Demands has been included, provide page number where this accounting can be found.	Section 4.5
DWR NOTES: Additional guidance is provided in Appendix K.	
NOTES:	

Submittal Table 4-5 Retail: Water Loss Audit Reporting Water Code Section 10631(d)(3)(A)		
Public Water System ID # Reported in Table 2-1 R	Reporting Period	Submitted to DWR Water Loss Audit Program (yes/no)
Report submittal status for all five years for each Public Water System as available. Add rows as needed		
CA2810003	**2020**	Yes
	2021	Yes
	2022	Yes
	2023	Yes
	2024	Yes
DWR NOTES: Suppliers will provide a link to the WUEdata submittals of their Water Loss Audit Reports.		
NOTES:		

Submittal Table 4-6 Retail: Progress Towards 2028 Water Loss Standard
Water Code Section 10631(d)(3)(C)

Public Water System ID # Reported in Submittal Table 2-1 R	Did the Water Board Calculate a Water Loss Standard for this Public Water System? (y/n) If no, Supplier will not complete this row.	Real Water Loss					Apparent Water Loss				
		State Water Board Standard		Most Recent AWWA Water Loss Audit			State Water Board Standard		Most Recent AWWA Water Loss Audit		
		2028 Real Water Loss Standard per Unit per day	Units for Real Water Loss Drop down list	Number of Units (Connections or Miles corresponding with units selected)	Volume of Total Real Loss (from AWWA Water Loss Audit) (AF)	Real Water Loss Per Unit per Day	2028 Apparent Water Loss Standard per Unit per Day	Units for Apparent Water Loss	Number of Connections	Volume of Total Apparent Loss (from AWWA Water Loss Audit) (AF)	Apparent Water Loss Per Unit per Day
Add additional rows as needed.											
CA2810003	Yes	26.8	Gallons per Service Connection per Day (GPSCD)	26362	660	22.4	6.3	Gallons per Service Connection per Day (GPSCD)	26362	353	12.0

Submittal Table 5-1 Retail: SB X7-7 2020 Target Progress
Water Code Section 10608.40

☐	**Check the box if the Supplier was not an Urban Water Supplier during or before the 2020 UWMP reporting cycle. Proceed to the next table.**					
Was Supplier part of a merger or consolidation since 2020?	Regional Alliance Target or Individual Target? Drop down list	2020 Target	Actual 2020 GPCD	Did Supplier Achieve Targeted Reduction for 2020?	**Only for suppliers that did not meet the Target in 2020 See DWR NOTES below.**	
					Actual 2025 GPCD (From SB X7-7 Compliance Form)	Did Supplier meet the 2020 Target in 2025?
No	Individual Target	132	137	No	119	Yes

DWR NOTES:
Suppliers calculating a 2025 GPCD will need to complete and submit SB X 7-7 Compliance Tables to verify the use of SB X7-7 Methodologies.
Suppliers that were part of a merger or consolidation since 2020 see Chapter 5 and Appendix P for guidance.
NA=Not Applicable

NOTES:

Submittal Table 6-1 Retail: Groundwater Volume Pumped Water Code Section 10631(4) and 10631(4)(c)							
☑	Check the box if the Supplier does not pump groundwater. Proceed to the next table.						
☐	Check the box if all or part of the groundwater described below is desalinated. (OPTIONAL)						
Groundwater Type **Drop Down List** May use each category multiple times	Potable or Non-Potable (OPTIONAL) **Drop down list**	Location or Basin Name	2021 (AF)	2022 (AF)	2023 (AF)	2024 (AF)	2025 (AF)
Add additional rows as needed							
		Total	0	0	0	0	0
DWR NOTES: **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.							
NOTES							

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area Water Code Section 10633(a)				
☐	Check the box if there is no wastewater collection system. Proceed to the next table.			
	Percentage of 2025 service area served by wastewater collection system (OPTIONAL)			
	Percentage of 2025 service area population served by wastewater collection system (OPTIONAL)			
Wastewater Collection			**Recipient of Collected Wastewater**	
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? OPTIONAL **Drop Down List**	Volume of Wastewater Collected from UWMP Service Area 2025 (AF)	Name of Wastewater Treatment Plant (WWTP) and Place ID Number **Drop down list**	Is WWTP Located Within UWMP Area? **Drop Down List**
Napa Sanitation District (NapaSan)	Metered	8,805	Napa Sanitation District WWTP (Soscol Water Recycling Facility), Place ID 243858	Yes
Total Wastewater Received from UWMP Service Area in 2025:		8,805		
NOTES: Plant influent data obtained from NapaSan engineer in May 2026.				

Submittal Table 6-3 Retail: Wastewater Treatment and Outcomes Within UWMP Service Area
Water Code Section 10633(b)

☐ **Check the box if no wastewater is treated or disposed of within the UWMP service area.**
Proceed to the next table.

Wastewater Treatment Plant Name and Place ID Number **Drop down list**	Does This Plant Treat Wastewater Generated Outside the UWMP Service Area? (OPTIONAL) **Drop down list**	2025 Volume of Wastewater Received from UWMP Service Area (As Reported in Submittal Table 6-2 R) (AF)	Total 2025 Volume of Water Treated (AF)	2025 Outcomes of Treated Wastewater										
				Water Recycled Within UWMP Service Area (enter data as applicable)		**Water Recycled Outside of UWMP Service Area** (enter data as applicable)		**Effluent Discharge that is not a Permitted Recycled Water Use** (enter data as applicable)		**Required Discharge for Instream Flow** (enter data as applicable)		**Delivered to Another Entity for Additional Treatment** (enter data as applicable)		
				Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Treatment Level **Drop down list**	Volume (AF)	Name of other entity
Napa Sanitation District WWTP (Soscol Water Recycling Facility), Place ID 243858	No	2,173	2,173	Tertiary	453	Tertiary	1,720							
Napa Sanitation District WWTP (Soscol Water Recycling Facility), Place ID 243858	No	6,632	6,632					Secondary, Disinfected - 23	6,162					
Total		8,805	8,805		453		1,720		6,162		0		0	

NOTES: Total wastewater treated and recycled water breakdown obtained from NapaSan staff in May 2026. Difference between secondary treated and discharged is evaporative loss from oxidation ponds. Table does note that 1,720 AF of recycled water was delivered to customers outside of the City's drinking water service area. As shown, 453 AF was recycled within the City's service area in 2025.

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area
Water Code Section 10633 (c),(d),(e)

☐ Check box if recycled water is not used and is not planned for use within the service area of the supplier. The supplier will only complete the column on "Potential Recycled Water Use" and submit an accompanying narrative on the feasibility of that potential recycled water use.

Name(s) of Facility/ies Producing (Treating) the Recycled Water (OPTIONAL) :	Napa Sanitation District WWTP (Soscol Water Recycling Facility)
Name of Supplier Operating the Recycled Water Distribution System (OPTIONAL) :	Napa Sanitation District (NapaSan)
Volume of Supplemental Water Added in 2025 (OPTIONAL) :	
Source of 2025 Supplemental Water (OPTIONAL) :	

Use Type **Drop down list**	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop down list	Additional Information (as needed)	2025 (AF)	2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)	**Potential Recycled Water Use**	
									Volume	Narrative page number (OPTIONAL)
Add additional rows as needed										
Agricultural irrigation	Non-Potable	Vineyard Irrigation	63	100	100	100	100	100		
Landscape irrigation (exc golf courses)	Non-Potable	Commercial and Institutional Landscaping	221	300	500	500	500	500		
Golf course irrigation	Non-Potable	Napa Municipal Golf Course at Kennedy Park	169	200	200	200	200	200		
		Subtotal Potable	0	0	0	0	0	0	0	
		Subtotal Non-Potable	453	600	800	800	800	800	0	
		Total	453	600	800	800	800	800	0	0

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.
Additional Guidance: See Appendix M, Section M.21 for detailed guidance on this table.
Potential recycled water use: a description of the feasibility of these uses must be included in the narrative.
Multiple Producers: If you have multiple recycled water producers, submit a separate table for each.

NOTES: Because no additional golf courses exist in the City service area and agricultural (vineyard) areas are very limited, those types of recycled water use will remain steady. Commercial/institutional landscaping uses have the potential to expand based on NapaSan and City policy.

Submittal Table 6-5 Retail: 2020 UWMP Recycled Water Use Projection Compared to 2025 Actual Water Code Section 10633(e)		
☐	Check the box if recycled water was not used in 2025 nor previously projected for use in 2020. Proceed to the next table.	
Use Type Drop Down list	2020 Projection for 2025 (AF)	2025 Actual Use (AF)
Agricultural irrigation	100	63
Landscape irrigation (exc golf courses)	515	221
Golf course irrigation	220	169
Total	835	453
NOTES: 2020 UWMP overestimated vineyard irrigation volumes in the Stanly Ranch area and the pace of commercial/institutional recycled water conversions in South Napa.		

Submittal Table 6-6 Retail: Methods to Encourage Future Recycled Water Use Water Code Section 10633 (f)			
☐	Check the box if the Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in the UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use (AF)
Add additional rows as needed			
Vineyards in Stanly Lane area	Connect remaining unconnected vineyard acreage in southwest Napa	2028	20
Stanly Ranch Resort	Connect remaining landscape and vineyard areas as final phases of resort/housing construction are completed	2029	60
Napa Pipe	Complete full connection of all common area landscaping in Napa Pipe project	2030	40
Napa State Hospital	Full connection for entire facility landscape	2032	80
South Napa Infill	Connect Imola Avenue commercial landscapes	2034	60
Gasser Infill	Connect residential and commercial landscapes on former Gasser Foundation lands	2035	60
		Total (AF)	320
		Unit Conversion to AF	320
DWR NOTES: **Units of measure** (AF, CCF, MG) MUST remain consistent with units reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3. **The unit conversion to Acre Feet** addresses the Water Code's requirement that this value be provided in acre-feet.			
NOTES: Table represents scheduled or anticipated actions within City of Napa drinking water service area only.			

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs
Water Code Section 10631(f)

☑	Check the box if there are no expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Proceed to the next table.
☐	Check the box if some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.
	Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other suppliers?		Additional Description (as needed)	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Planned Implementation Year	Planned for Use in Year Type **Drop Down List**	Expected Increase in Water Supply to Supplier (This may be a range) (AF)
	Drop Down List (yes/no)	If Yes, Supplier Name					
Add additional rows as needed							

DWR NOTES:
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure reported in Submittal Table 2-3.

NOTES:

Submittal Table 6-8 Retail: Water Supplies — Actual
Water Code Section 10631 (b)

Water Supply		**2025**		
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Description (as needed)	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Actual Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed				
Supply from Storage	Lake Hennessey	Potable	8,885	30,500
Supply from Storage	Milliken Reservoir	Potable	0	2,350
Purchased or Imported Water	State Water Project	Potable	3,326	21,900
		Subtotal Potable	12,211	54,750
		Subtotal Non-Potable	0	0
		Total	12,211	54,750

DWR NOTES:
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table identifies the unit of measure selected in Submittal Table 2-3.
Total Entitlement: e.g. Water Right, Groundwater Allocation, Contracted Amount.

NOTES: Total Entitlements represent the annual diversion and storage Water Rights for the two local reservoirs and the City's contractual 100% Table A allocation for the State Water Project.

Submittal Table 6-9 Retail: Water Supplies — Projected
Water Code Section 10631 (b)

Water Supply			Projected Water Supply (Report to the Extent Practicable)									
			2030		2035		2040		2045		2050 (opt)	
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool	Additional Detail on Water Supply	**Potable or Non-Potable** (after treatment if treated) (OPTIONAL) Drop Down list	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)	Reasonably Available Volume (AF)	Total Entitlement (OPTIONAL) See 'DWR Notes' below (AF)
Add additional rows as needed												
Supply from Storage	Lake Hennessey	Potable	17,500	30,500	17,500	30,500	17,500	30,500	15,575	30,500	15,575	30,500
Supply from Storage	Milliken Reservoir	Potable	700	2,350	700	2,350	700	2,350	623	2,350	623	2,350
Purchased or Imported Water	State Water Project	Potable	11,826	21,900	11,826	21,900	11,826	21,900	10,512	21,900	10,512	21,900
		Subtotal Potable	30,026	54,750	30,026	54,750	30,026	54,750	26,710	54,750	26,710	54,750
		Subtotal Non-Potable	0	0	0	0	0	0	0	0	0	0
		Total	30,026	54,750	30,026	54,750	30,026	54,750	26,710	54,750	26,710	54,750

DWR NOTES:

Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.

Total Entitlement: e.g. Water Right, Groundwater Allocation, Contracted Amount.

NOTES: Reasonably Available Volumes are based on an average water year. Through 2040, State Water Project supplies are 54% of Table A (with no Carryover, Article 21, or North of Delta allocation assumed). This Table A allocation represents an average year under Existing Conditions (Adjusted Historical Hydrology) as contained in The State Water Project Draft Delivery Capability Report 2025, DWR, December 2025. 2045 and 2050 use a 48% Table A allocation based on the report's 2043 50% Level of Concern under Future Climate Change Conditions. Local reservoirs supplies are reduced 11% in 2045 and 2050 to match the climate change adjustment for the State Water Project.

Optional Submittal Table O-1B: Recommended Energy Reporting - SINGLE DELIVERY PRODUCT - TOTAL UTILITY APPROACH

Water Delivery Product drop down list (If delivering more than one type of product recommend using Table O-1C)	Retail Potable Deliveries	**Only for Water Delivery Products Under the Urban Water Supplier's Operational Control**		
Start Date of Reporting Period	1/1/2025	**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
End Date of Reporting Period	12/31/2025			
Is upstream embedded energy in the values reported?	No			
Units of Measure for Water	AF	**Total Utility** See DWR NOTES	**Hydropower**	**Net Utility**
Volume of Water Entering Process		13,010	-	13,010
Energy Consumed (kWh)		3,171,768	-	3,171,768
Energy Intensity (kWh/vol. converted to MG)		748	-	748

DWR NOTES:

Total Utility: The volume of water entered in the "Total Utility" column should equal the volume of water entering the distribution system (excluding recycled water); in most cases, this is the total volume calculated in UWMP Table 4-1: 2025 Actual Total Uses for Potable and Non-Potable Water. Note if recycled water is included in your Submittal Table 4-1, you must exclude it from your volume in this table.

Quantity of Self-Generated Renewable Energy

75000 kWh

Data Quality (Estimate, Metered Data, Combination of Estimates and Metered Data)

Metered Data

Data Quality Narrative:

Volume of Water Entering Process includes 799 AF that the City treats and wheels to the Cities of American Canyon and Calistoga. This provides a more accurate Energy Intensity in this Total Utility Approach. Metered electricity data were tabulated for all relevant City of Napa Pacific Gas & Electric (PG&E) billings covering calendar year 2025.

Narrative:

Electricity is consumed primarily at three water treatment plants and ten pump stations within the City's operational control. Pumping raw water from Lake Hennessey to the Hennessey Water Treatment Plant consumes the largest amount of energy. This is also the site of the City's solar photovoltaic system, which is capable of producing up to 600,000 kWh per year; however, the system was down for most of 2025 due to failed inverters and other needed repairs, and solar production was limited.

NOTES:

Optional Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment) TOTAL SUPPLIES			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	**Available Supplies if Year Type Repeats**	
		☐ Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP]	
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (AF)	**% of Average Supply**
Average Year	1922-2021	30,026	100%
Single-Dry Year	2021	17,962	60%
Consecutive Dry Years 1st Year	1987	19,230	64%
Consecutive Dry Years 2nd Year	1988	14,355	48%
Consecutive Dry Years 3rd Year	1989	14,355	48%
Consecutive Dry Years 4th Year	1990	14,355	48%
Consecutive Dry Years 5th Year	1991	14,355	48%

DWR NOTES: Supplier may use multiple versions of Submittal Table 7-1 R if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Submittal Table 7-1 R, in the "Note" section of each submittal table, state that multiple versions of Submittal Table 7-1 R are being used and identify the particular water source that is being reported in each submittal table.
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table reports the units of measure reported in Submittal Table 2-3.

NOTES:

Optional Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment) LOCAL SURFACE WATER			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	**Available Supplies if Year Type Repeats**	
		☐ Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP]	
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (AF)	**% of Average Supply**
Average Year	1922-2021	18,200	100%
Single-Dry Year	2021	12,000	66%
Consecutive Dry Years 1st Year	1987	10,640	58%
Consecutive Dry Years 2nd Year	1988	5,765	32%
Consecutive Dry Years 3rd Year	1989	5,765	32%
Consecutive Dry Years 4th Year	1990	5,765	32%
Consecutive Dry Years 5th Year	1991	5,765	32%

DWR NOTES: Supplier may use multiple versions of Submittal Table 7-1 R if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Submittal Table 7-1 R, in the "Note" section of each submittal table, state that multiple versions of Submittal Table 7-1 R are being used and identify the particular water source that is being reported in each submittal table.
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table reports the units of measure reported in Submittal Table 2-3.

NOTES: Multiple versions of DWR Table 7-1 are used; this table is for Local Surface Water supplies only (Lake Hennessey and Milliken Reservoir) based on existing conditions through 2040. Future (2045 and 2050) conditions are assumed to be reduced by 11% to match climate change impacts assumed for the SWP.

Optional **Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)** **STATE WATER PROJECT**			
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2024-2025, use 2025	**Available Supplies if Year Type Repeats**	
		☐ Check the box if quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. **Location:** [insert location from UWMP]	
		Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available (AF)	**% of Average Supply**
Average Year	1922-2021	11,826	100%
Single-Dry Year	2021	5,962	50%
Consecutive Dry Years 1st Year	1987	8,590	73%
Consecutive Dry Years 2nd Year	1988	8,590	73%
Consecutive Dry Years 3rd Year	1989	8,590	73%
Consecutive Dry Years 4th Year	1990	8,590	73%
Consecutive Dry Years 5th Year	1991	8,590	73%

DWR NOTES: Supplier may use multiple versions of Submittal Table 7-1 R if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Submittal Table 7-1 R, in the "Note" section of each submittal table, state that multiple versions of Submittal Table 7-1 R are being used and identify the particular water source that is being reported in each submittal table.
Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3. This table reports the units of measure reported in Submittal Table 2-3.

NOTES: Multiple versions of DWR Table 7-1 are used; this table is for State Water Project supplies only based on existing conditions through 2040. Future (2045 and 2050) conditions are based on the Draft 2025 DCR 50% Level-of-Concern Scenario.

Submittal Table 7-2 Retail: Normal Year Supply and Use Comparison Water Code Section 10635 (a)					
	2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
Supply totals (autofill from Submittal Table 6-9 R)	30,026	30,026	30,026	26,710	26,710
Use totals (autofill from Submittal Table 4-2 R)	13,560	14,035	14,110	14,510	14,810
Surplus/(shortfall)	16,466	15,991	15,916	12,200	11,900
OPTIONAL Planned WSCP Actions					
WSCP - supply augmentation benefit					
WSCP - use reduction savings benefit					
Revised Surplus/(shortfall)					
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES:					

Submittal Table 7-3 Retail: Single Dry Year Supply and Use Comparison Water Code Section 10635(a)					
	2030 (AF)	**2035 (AF)**	**2040 (AF)**	**2045 (AF)**	**2050 (AF)**
Supply totals	17,962	17,962	17,962	16,204	16,204
Use totals	13,560	14,035	14,110	14,510	14,810
Surplus/(shortfall)	4,402	3,927	3,852	1,694	1,394
OPTIONAL Planned WSCP Actions					
WSCP - supply augmentation benefit					
WSCP - use reduction savings benefit					
Revised Surplus/(shortfall)					
DWR NOTES : Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.					
NOTES: For 2045 and 2050, Local Surface Water supply totals incorporate an 11% reduction due to assumed long-term climate change impacts. 2045 and 2050 State Water Project supply totals incorporate reductions based on the 50% Level of Concern under Future Climate Change Conditions.					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Use Comparison Water Code Section 10635(a)						
		2030 (AF)	2035 (AF)	2040 (AF)	2045 (AF)	2050 (AF)
First year	Supply totals	19,230	19,230	19,230	16,527	16,527
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	5,670	5,195	5,120	2,017	1,717
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Second year	Supply totals	14,355	14,355	14,355	12,188	12,188
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	795	320	245	(2,322)	(2,622)
	OPTIONAL WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Third year	Supply totals	14,355	14,355	14,355	12,188	12,188
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	795	320	245	(2,322)	(2,622)
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Fourth year	Supply totals	14,355	14,355	14,355	12,188	12,188
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	795	320	245	(2,322)	(2,622)
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					
Fifth year	Supply totals	14,355	14,355	14,355	12,188	12,188
	Use totals	13,560	14,035	14,110	14,510	14,810
	Surplus/(shortfall)	795	320	245	(2,322)	(2,622)
	OPTIONAL Planned WSCP Actions					
	WSCP - supply augmentation benefit					
	WSCP - use reduction savings benefit					
	Revised Surplus/(shortfall)					

DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.

NOTES: For 2045 and 2050, Local Surface Water supply totals incorporate an 11% reduction due to assumed long-term climate change impacts. 2045 and 2050 State Water Project supply totals incorporate reductions based on the 50% Level of Concern under Future Climate Change Conditions.

Submittal Table 7-5 Retail: Five-Year Drought Risk Assessment Water Code Section 10635(b)(3)	
2026	**Total**
Total Water Use (AF)	12,481
Total Supplies (AF)	19,230
Surplus/Shortfall w/o WSCP Action	6,749
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2027	**Total**
Total Water Use (AF)	12,751
Total Supplies (AF)	14,355
Surplus/Shortfall w/o WSCP Action	1,604
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2028	**Total**
Total Water Use (AF)	13,020
Total Supplies (AF)	14,355
Surplus/Shortfall w/o WSCP Action	1,335
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2029	**Total**
Total Water Use (AF)	13,290
Total Supplies (AF)	14,355
Surplus/Shortfall w/o WSCP Action	1,065
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
2030	**Total**
Total Water Use (AF)	13,560
Total Supplies (AF)	14,355
Surplus/Shortfall w/o WSCP Action	795
OPTIONAL Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit (AF)	
WSCP - use reduction savings benefit (AF)	
Revised Surplus/(shortfall)	
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.	
NOTES: Water Use is based on slight annual increase in demands based on population growth and new development. Supplies are based on 1987-1992 Multiple Dry Year scenario reflected in Table 7-1 and 7-4.	

Submittal Table 8-1: Cross-reference for Standard vs Supplier Shortage Levels Water Code Section 10632(a)(3)(B)			
☑	Check the box if the Supplier uses the Standard six levels of water shortage. Proceed to the next table.		
Standard Shortage Levels	**Percent Shortage Range**	**Suppliers Shortage Levels**	**Percent Shortage Range**
1	Up to 10%		
2	Up to 20%		
3	Up to 30%		
4	Up to 40%		
5	Up to 50%		
6	>50%		
NOTES:			

Submittal Table 8-2 Retail: Supply Augmentation and Other Actions Water Code Section 10632(a)(4)(A),(C) and (E)				
Yes	Is the Supplier completing this table using the standard six levels? (yes/no)			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)	
Add additional rows as needed				
1				No action at this shortage level
2				No action at this shortage level
3	Implement or Modify Drought Rate Structure or Surcharge	Percentage	10-15%	If determined necessary by City Council and set by resolution
4	Transfers	Volume	Market-dependent	SWP Dry Year Transfer Program
5	Other Purchases	Volume	Market-dependent	Yuba Accord Dry Year Purchase Program
6	Other Actions (describe)	Volume	Market-dependent	Intertie connections with other Napa County cities
DWR NOTES: Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Submittal Table 2-3.				
NOTES:				

Submittal Table 8-3 Retail: Demand Reduction Actions Water Code Section 10632(a)(4)(B),(D), and (E)					
Yes	Is the Supplier completing this table using the standard six levels? (yes/no)				
Shortage Level	Demand Reduction Actions **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)	Penalty, Charge, or Other Enforcement? **For Retail Suppliers Only** Drop Down List
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)		
Add additional rows as needed					
1	Expand Public Information Campaign			Boosts effectiveness of other, quantifiable actions	No
1	Offer Water Use Surveys	Percentage	0-2%	Standard offering for water customers	No
1	Provide Rebates on Plumbing Fixtures and Devices	Percentage	0-2%	Standard offering for water customers	No
1	Provide Rebates for Landscape Irrigation Efficiency	Percentage	0-2%	Standard offering for water customers	No
1	Provide Rebates for Turf Replacement	Percentage	0-5%	Standard offering for water customers	No
1	Other - Require automatic shut of hoses	Percentage	0-1%		Yes
1	Other - Prohibit use of potable water for washing hard surfaces	Percentage	0-1%		Yes
1	Landscape - Restrict or prohibit runoff from landscape irrigation	Percentage	0-2%		Yes
1	Landscape - Other landscape restriction or prohibition	Percentage	0-1%	Prohibit landscape irrigation during and within 48 hours after a quarter inch or more rain event	Yes
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Percentage	0-1%		Yes
1	Landscape - Limit landscape irrigation to specific times	Percentage	0-2%	Prohibit landscape irrigation between 10:00 am and 5:00 pm	Yes
2	Increase Water Waste Patrols	Percentage	0-3%		Yes
2	Landscape - Limit landscape irrigation to specific days	Percentage	0-10%	Prohibit landscape irrigation on consecutive days, except for needs of newly planted	Yes
2	Other water feature or swimming pool restriction	Percentage	0-2%	Prohibit draining and refilling of pools or decorative ponds unless needed for repair	Yes
2	CII - Restaurants may only serve water upon request	Percentage	0-1%		Yes
2	CII - Lodging establishment must offer opt out of linen service	Percentage	0-1%		Yes
3	Landscape - Limit landscape irrigation to specific days	Percentage	5-20%	Landscape irrigation limited to two days per week	Yes
3	Implement or Modify Drought Rate Structure or Surcharge	Percentage	10-20%	If determined necessary and set by City Council	Yes
3	Pools and Spas - Require covers for pools and spas	Percentage	0-1%		Yes
4	Landscape - Limit landscape irrigation to specific days	Percentage	15-25%	Landscape irrigation limited to one day per week	Yes
4	Other	Volume	TBD	Maximum bimonthly water use allocations for customers, if determined necessary and set by City Council	Yes
4	Other	Volume	1-5 million gallons per month	Interruptible-Surplus Agricultural Water services suspended	Yes
4	Other - Prohibit use of potable water for construction and dust control	Percentage	0-1%		Yes
4	Other water feature or swimming pool restriction	Percentage	0-1%	Prohibit filling of any decorative lakes or ponds	Yes
4	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Percentage	0-1%		Yes
5	Landscape - Prohibit all landscape irrigation	Percentage	15-35%		Yes
5	Landscape - Other landscape restriction or prohibition	Percentage	1-4%	Prohibit installation of new or replacement turf	Yes
5	CII - Other CII restriction or prohibition	Percentage	1-2%	Prohibit use of water for street cleaning, line flushing, fire sprinkler testing, firefighter training	Yes
5	Other	Percentage	2-5%	Implement special water conservation plans for largest water users, if determined necessary	Yes
6	Landscape - Prohibit all landscape irrigation	Percentage	5-10%	Remove previous exceptions for drip and micro-spray, hand watering, irrigation system testing	Yes
6	Other water feature or swimming pool restriction	Percentage	0-2%	Prohibit draining and refilling of all pools or spas, or filling new pools. No exceptions.	Yes
6	Other	Percentage	1-2%	Prohibit all agricultural irrigation	Yes
NOTES: Actions introduced in a lower shortage level will also be used in higher shortage levels unless otherwise noted.					

Submittal Table 10-1 Retail: Notification to Cities and Counties Water Code Section 10621(b) and 10642		
City Name	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
City of Napa	Yes	Yes
City of American Canyon	Yes	Yes
Town of Yountville	Yes	Yes
City of St. Helena	Yes	Yes
City of Calistoga	Yes	Yes
County Name **Drop Down List**	60 Day Notice **Drop Down (yes/no)**	Notice of Public Hearing **Drop Down (yes/no)**
Napa County	Yes	Yes
NOTES: For Napa County, the Planning and Public Works Departments were each notified. In addition, the Napa Sanitation District (NapaSan) was notified, as it is the local recycled water purveyor. The Veterans Home of California was also notified, as it occasionally receives water deliveries from the City.		

Appendix D

DWR 2025 Urban Water Management Plan Checklist

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	n/a	Executive Summary
x	Chapter 1	10630.5	Each plan shall include a simple description of the Supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a Supplier may also choose to include a simple description at the beginning of each chapter.	Plan Preparation	n/a	Executive Summary
x	Section 2.1	10620(b)	Every person that becomes a Supplier shall adopt UWMP within one year after it has become a Supplier.	Plan Preparation	n/a	n/a
x	Section 2.5	10644	Supplier shall report the Public Water Systems number, volume of delivered water, and number of connections that are included in this UWMP.	Plan Preparation	2-1R	Section 2.1
x	Section 2.5	10644	Supplier shall report if this UWMP is an individual UWMP and whether the Supplier belongs to a regional UWMP or regional alliance.	Plan Preparation	2-2	Section 2.2 and 2.3
x	Section 2.5	10644	Supplier shall report whether the data is in fiscal or calendar years and the units of measure used for reporting water volumes.	Plan Preparation	2-3R	Section 2.4
x	Section 2.4	10642	Provide supporting documentation that the Supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	n/a	Section 2.5
x	Section 2.4.2	10620(d)(3)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other Suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	n/a	Section 2.5.2; Appendix E

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 2.4.1	10631(h)	Retail Suppliers will include documentation that they have provided their Wholesale Supplier(s)—if any—with water use projections from that source.	Plan Preparation	2-4R	Section 2.5.1
n/a	Section 2.4.1	10631(h)	Wholesale Suppliers will provide their Suppliers with identification and quantification of the existing and planned sources of water available from the Wholesale Supplier to the Supplier during various water year types.	Plan Preparation	2-4 W	n/a
x	Chapter 3.0	10631(a)	Describe the Supplier service area.	System Description	n/a	Sections 3.1 and 3.2
x	Section 3.3	10631(a)	Describe the climate of the Supplier's service area.	System Description	n/a	Section 3.5
x	Section 3.4.1	10631(a)	Provide the current and projected service area populations for 2030, 2035, 2040, 2045 and optionally 2050.	System Description	3-1R	Section 3.6.1
x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the Supplier's water management planning.	System Description	n/a	Section 3.6.2
x	Section 3.5	10631(a)	Describe the land uses within the service area… include the current and projected land uses within the existing or anticipated service area affecting the Supplier's water management planning. Describe the land uses within the service area.	System Description and Baselines	n/a	Section 3.7
x	Sections 4.2.3 and 4.2.4	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	4-1R and 4-2R	Section 4.2
x	Section 4.3.1	10631(d)(3)(A)	Report the distribution system water loss for each of the five years preceding the plan update.	System Water Use	4-5R	Section 4.3
x	Section 4.3.2	10631(d)(3)(C)	Retail Suppliers shall provide data to show the distribution loss standards were met.	System Water Use	4-6R	Section 4.3
x	Section 4.2.5.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the Supplier.	System Water Use	4-3R	Sections 4.4 and 4.5

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 4.2.5.3	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System Water Use	4-3R	Section 4.4
x	Section 4.2.5.3	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	4-3R	Section 4.4
x	Section 4.2.5.3	10631(d)(4)(B)(ii)	To the extent that a Supplier reports the information described in subparagraph (A), an urban water Supplier shall… 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.	System Water Use	4-3R	Section 4.4
x	Section 4.2.5.6	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	n/a	Section 4.6
n/a	Section 5.1	10608.36	Wholesale Suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their Retail Suppliers achieve targeted water use reductions.	Baselines and Targets	n/a	n/a
x	Section 5.2	10608.4	Retail Suppliers shall report on their compliance in meeting their water use targets. Reporting requirements will vary depending on whether the Supplier: • Was considered an urban retail water supplier in 2020, • Met its 2020 target in 2020, or • Was part of a merger or consolidation since 2020. Chapter 5 Subsections 5.2.1, 5.2.2, and 5.2.3 address each of these situations.	Baselines and Targets	5-1R	Section 5.2; Appendix G
x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	n/a	Chapter 6; Sections 6.1, 6.2 and 6.3

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change.	System Supplies	n/a	Section 6.10 (normal years); Chapter 7 (dry years)
x	Section 6.2.2	10631(b)(4)(C)	Indicate whether groundwater is an existing or planned source of water available to the Supplier. If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	Water Supplies and Recycled Water	6-1R	Section 6.4 ; groundwater is not currently or planned to be used by the City
x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the Supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	n/a	Section 6.4 ; groundwater is not currently or planned to be used by the City
x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	n/a	Section 6.4 ; groundwater is not currently or planned to be used by the City
x	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the Supplier has the legal right to pump.	System Supplies	n/a	Section 6.4 ; groundwater is not currently or planned to be used by the City
x	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… (include) information as to whether DWR has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin…	Water Supplies and Recycled Water	n/a	Section 6.4 ; groundwater is not currently or planned to be used by the City

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 6.2.2	10631(b)(4)(B)	For unadjudicated basins… describe efforts by the Supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	Water Supplies and Recycled Water	n/a	Section 6.4 ; groundwater is not currently or planned to be used by the City
x	Section 6.2.2.	10631(b)(4)(C)	If groundwater is identified as an existing or planned source of water… (include) a detailed description and analysis of the location, amount and sufficiency of groundwater pumped by the Supplier for the past five years.	System Supplies	n/a	Section 6.4 ; groundwater is not currently or planned to be used by the City
x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	6-9R	Sections 6.4 and 6.9; groundwater is not currently or planned to be used by the City
x	Section 6.1	10631(b)	Identify and quantify the existing and planned sources of water available for 2025, 2030, 2035, 2040, 2045 and optionally 2050.	System Supplies	6-8R and 6-9R	Section 6.10
x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	n/a	Section 6.8
x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the Supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	6-2R	Section 6.6.2
x	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	6-3R	Section 6.6.2
x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the Supplier's service area.	System Supplies (Recycled Water)	6-4R	Section 6.6.3

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	6-4R	Sections 6.6.3 and 6.6.4
x	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the Supplier's service area at the end of 5, 10, 15, and 20 years, and describe the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	6-4R and 6-5R	Section 6.6.3
x	Section 6.2.5	10633(f)	Describe the actions that may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	6-6R	Section 6.6.4
x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the Supplier's service area.	System Supplies (Recycled Water)	n/a	Section 6.6.4
x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	6-7R	Section 6.7
x	Section 6.2.10	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water Supplier to address water supply reliability in average, single-dry, and for a period of drought lasting five consecutive water years.	System Supplies	6-7R	Section 6.9
x	Section 6.3 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a Supplier can readily obtain.	System Suppliers, Energy Intensity	O-1B	Section 6.12
x	Section 7.1	10634	Provide information on the quality of existing sources of water available to the Supplier and the manner in which water quality affects water management strategies and supply reliability.	Water Supply Reliability Assessment	n/a	Section 7.1.1
x	Section 7.2	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water	Water Supply Reliability Assessment	7-2R, 7-3R, and 7-4R	Section 7.1.3

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
			supply sources available to the Supplier with the total projected water use over the next 20 years.			
x	Section 7.2.3	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	n/a	Section 7.1.4
x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	n/a	Section 7.2
x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive years.	Water Supply Reliability Assessment	n/a	Section 7.2.1
x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	n/a	Section 7.2.2
x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the Supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	7-5 R	Section 7.2.3
x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	n/a	Section 7.2.1
x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	n/a	Appendix J
x	Chapter 8	10632(a)(1)	Provide an analysis of water supply reliability (from Guidebook Chapter 7) in the WSCP.	Water Shortage Contingency Planning	n/a	Chapter 8; Appendix J (Section 1)

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the Supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	n/a	Appendix J (Section 2)
x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the Supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	n/a	Appendix J (Section 2)
x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10%, 20%, 30%, 40%, 50% shortage, and greater than 50% shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	n/a	Section 8.2; Appendix J (Section 3)
x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing WSCP that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	8-1 R	Appendix J (Section 3)
x	Section 8.4	10632(a)(4)(A)	Suppliers with WSCPs that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	8-2 R	Appendix J (Section 4.1)
x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	8-3 R	Appendix J (Section 4.2)
x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	8-2 R	Appendix J (Section 4.3)
x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to State-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	8-3 R	Appendix J (Section 4.4)

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	8-2 R and 8-3 R	Appendix J (Sections 4.1 and 4.2)
x	Section 8.4.6	10632.5	The UWMP shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	n/a	Section 8.4; Appendix J (Section 4.6)
x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	n/a	Appendix J (Section 5)
x	Section 8.5	10632(a)(5)(B), 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	n/a	Appendix J (Section 5)
x	Section 8.6	10632(a)(6)	Retail Supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	n/a	Appendix J (Section 6)
x	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the Supplier to enforce shortage response actions.	Water Shortage Contingency Planning	n/a	Appendix J (Section 7)
x	Section 8.7	10632(a)(7)(B)	Provide a statement that the Supplier will declare a water shortage emergency per Water Code Chapter 3. Water Shortage Emergencies.	Water Shortage Contingency Planning	n/a	Appendix J (Section 7)
x	Section 8.7	10632(a)(7)(C)	Provide a statement that the Supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	n/a	Appendix J (Section 7)
x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	n/a	Appendix J (Section 8)

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	n/a	Appendix J (Section 8)
x	Section 8.8	10632(a)(8)(C)	Retail Suppliers must describe the cost of compliance with Water Code Chapter 3.3, Excessive Residential Water Use During Drought.	Water Shortage Contingency Planning	n/a	Appendix J (Section 8)
x	Section 8.9	10632(a)(9)	Retail Suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data are collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	n/a	Appendix J (Section 9)
x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the WSCP to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	n/a	Section 8.5; Appendix J (Section 10)
x	Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	n/a	Appendix J (Section 11)
x	Section 8.12	10632(c)	Make available the WSCP to customers and any city or county where it provides water within 30 days after adoption of the plan.	Water Shortage Contingency Planning	n/a	Section 8.5; Appendix J (Section 12)
x	Sections 9.1	10631(e)(1)	Retail Suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	n/a	Chapter 9
n/a	Sections 9.2	10631(e)(2)	Wholesale Suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and Supplier assistance program.	Demand Management Measures	n/a	n/a

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Chapter 10	10608.26(a)	Retail Suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	n/a	Section 10.3.1
x	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the Supplier provides water that the Supplier will be reviewing the UWMP and considering amendments or changes to the plan.	Plan Adoption, Submittal, and Implementation	10-1	Section 10.2.1
x	Section 10.4	10621(f)	Each urban water Supplier shall update and submit its 2025 plan to DWR by July 1, 2026.	Plan Adoption, Submittal, and Implementation	n/a	Section 10.4
x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the Supplier made the UWMP and WSCP available for public inspection, published notice of the public hearing, and held a public hearing about the UWMP and WSCP.	Plan Adoption, Submittal, and Implementation	n/a	Sections 10.2 and 10.3; Appendix E
x	Section 10.2.2	10642	The Supplier is to provide the time and place of the hearing to any city or county within which the Supplier provides water.	Plan Adoption, Submittal, and Implementation	10-1 R	Section 10.3; Appendix E
x	Section 10.3.2	10642	Provide supporting documentation that the UWMP and WSCP has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	n/a	Section 10.3.2; Appendix K
x	Section 10.4	10644(a)	Provide supporting documentation that the Supplier has submitted their UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	n/a	Section 10.4
x	Section 10.4	10644(a)(1)	Provide supporting documentation that the Supplier has submitted their UWMP to any city or county within which the Supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	n/a	Section 10.4

Retail x = required	2025 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	Relevant Submittal Table	2025 UWMP Location
x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The UWMP, or amendments to the UWMP, submitted to DWR shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	n/a	Section 10.4
x	Section 10.7.2	10644(b)	If revised, submit a copy of the WSCP to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	n/a	Section 10.7
x	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its UWMP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	n/a	Section 10.5
x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its WSCP with DWR, the Supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	n/a	Section 10.5
x	Section 10.6	10621(c)	If Supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	n/a	n/a

Appendix E

Agency and Public Notices

CITY OF NAPA
www.cityofnapa.org

UTILITIES DEPARTMENT
WATER | SOLID WASTE | RECYCLING
1700 Second Street, Suite 100
Mailing Address:
P.O. Box 660
Napa, California 94559-0660
Phone: (707) 257-9521
Fax: (707) 258-7831
California Relay Service (CRS) Dial 7-1-1

March 17, 2026

Erica Ahmann Smithies
Public Works Director
City of American Canyon
4381 Broadway Street, Suite 201
American Canyon, CA 94503

Subject: **City of Napa Urban Water Management Plan Preparation**

Dear Ms. Smithies:

This letter is official notification that the City of Napa is in the process of preparing its 2025 Urban Water Management Plan (UWMP) update, pursuant to the Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Sections 10610-10657). The City's UWMP was last updated in December 2021. The City will simultaneously update its Water Shortage Contingency Plan (WSDP) in accordance with California Water Code Section 10632.

The City will make any proposed revisions to the UWMP and WSCP available for public review and comment prior to adoption and your agency is invited to be a part of this process. The City of American Canyon will be given notice of the Napa City Council meeting in which the UWMP and WSCP updates will be considered (tentatively June 2).

Questions on the City of Napa UWMP and WSCP preparation and adoption process may be directed to me at (707) 257-9309 or pcostello@cityofnapa.org.

Sincerely,

Patrick Costello
Water Resources Analyst

www.cityofnapa.org

UTILITIES DEPARTMENT
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March 17, 2026

John Ferons
Public Works Director
Town of Yountville
6550 Yount Street
Yountville, CA 94599

Subject: **City of Napa Urban Water Management Plan Preparation**

Dear Mr. Ferons:

This letter is official notification that the City of Napa is in the process of preparing its 2025 Urban Water Management Plan (UWMP) update, pursuant to the Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Sections 10610-10657). The City's UWMP was last updated in December 2021. The City will simultaneously update its Water Shortage Contingency Plan (WSDP) in accordance with California Water Code Section 10632.

The City will make any proposed revisions to the UWMP and WSCP available for public review and comment prior to adoption and your agency is invited to be a part of this process. The Town of Yountville will be given notice of the Napa City Council meeting in which the UWMP and WSCP updates will be considered (tentatively June 2).

Questions on the City of Napa UWMP and WSCP preparation and adoption process may be directed to me at (707) 257-9309 or pcostello@cityofnapa.org.

Sincerely,

Patrick Costello
Water Resources Analyst

www.cityofnapa.org

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March 17, 2026

Joseph Leach
Director of Public Works
City of St. Helena
1088 College Avenue
St. Helena, CA 94574

Subject: **City of Napa Urban Water Management Plan Preparation**

Dear Mr. Leach:

This letter is official notification that the City of Napa is in the process of preparing its 2025 Urban Water Management Plan (UWMP) update, pursuant to the Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Sections 10610-10657). The City's UWMP was last updated in December 2021. The City will simultaneously update its Water Shortage Contingency Plan (WSDP) in accordance with California Water Code Section 10632.

The City will make any proposed revisions to the UWMP and WSCP available for public review and comment prior to adoption and your agency is invited to be a part of this process. The City of St. Helena will be given notice of the Napa City Council meeting in which the UWMP and WSCP updates will be considered (tentatively June 2).

Questions on the City of Napa UWMP and WSCP preparation and adoption process may be directed to me at (707) 257-9309 or pcostello@cityofnapa.org.

Sincerely,

Patrick Costello
Water Resources Analyst

www.cityofnapa.org

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California Relay Service (CRS) Dial 7-1-1

March 17, 2026

Derek Rayner
Public Works Director
City of Calistoga
414 Washington Street
Calistoga, CA 94515

Subject: **City of Napa Urban Water Management Plan Preparation**

Dear Mr. Rayner:

This letter is official notification that the City of Napa is in the process of preparing its 2025 Urban Water Management Plan (UWMP) update, pursuant to the Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Sections 10610-10657). The City's UWMP was last updated in December 2021. The City will simultaneously update its Water Shortage Contingency Plan (WSDP) in accordance with California Water Code Section 10632.

The City will make any proposed revisions to the UWMP and WSCP available for public review and comment prior to adoption and your agency is invited to be a part of this process. The City of Calistoga will be given notice of the Napa City Council meeting in which the UWMP and WSCP updates will be considered (tentatively June 2).

Questions on the City of Napa UWMP and WSCP preparation and adoption process may be directed to me at (707) 257-9309 or pcostello@cityofnapa.org.

Sincerely,

Patrick Costello
Water Resources Analyst

www.cityofnapa.org

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March 17, 2026

Steven Lederer
Director of Public Works
County of Napa
1195 Third Street, Suite 101
Napa, CA 94559

Subject: **City of Napa Urban Water Management Plan Preparation**

Dear Mr. Lederer:

This letter is official notification that the City of Napa is in the process of preparing its 2025 Urban Water Management Plan (UWMP) update, pursuant to the Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Sections 10610-10657). The City's UWMP was last updated in December 2021. The City will simultaneously update its Water Shortage Contingency Plan (WSDP) in accordance with California Water Code Section 10632.

The City will make any proposed revisions to the UWMP and WSCP available for public review and comment prior to adoption and your agency is invited to be a part of this process. The County of Napa will be given notice of the Napa City Council meeting in which the UWMP and WSCP updates will be considered (tentatively June 2).

Questions on the City of Napa UWMP and WSCP preparation and adoption process may be directed to me at (707) 257-9309 or pcostello@cityofnapa.org.

Sincerely,

Patrick Costello
Water Resources Analyst

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March 17, 2026

Brian D. Bordona
Director of Planning, Building & Environmental Services
County of Napa
1195 Third Street, 2nd floor
Napa, CA 94559

Subject: **City of Napa Urban Water Management Plan Preparation**

Dear Mr. Bordona:

This letter is official notification that the City of Napa is in the process of preparing its 2025 Urban Water Management Plan (UWMP) update, pursuant to the Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Sections 10610-10657). The City's UWMP was last updated in December 2021. The City will simultaneously update its Water Shortage Contingency Plan (WSDP) in accordance with California Water Code Section 10632.

The City will make any proposed revisions to the UWMP and WSCP available for public review and comment prior to adoption and your agency is invited to be a part of this process. The County of Napa will be given notice of the Napa City Council meeting in which the UWMP and WSCP updates will be considered (tentatively June 2).

Questions on the City of Napa UWMP and WSCP preparation and adoption process may be directed to me at (707) 257-9309 or pcostello@cityofnapa.org.

Sincerely,

Patrick Costello
Water Resources Analyst

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March 17, 2026

Andrew Damron
General Manager
Napa Sanitation District
1515 Soscol Ferry Road
Napa, CA 94558

Subject: **City of Napa Urban Water Management Plan Preparation**

Dear Mr. Damron:

This letter is official notification that the City of Napa is in the process of preparing its 2025 Urban Water Management Plan (UWMP) update, pursuant to the Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Sections 10610-10657). The City's UWMP was last updated in December 2021. The City will simultaneously update its Water Shortage Contingency Plan (WSDP) in accordance with California Water Code Section 10632.

The City will make any proposed revisions to the UWMP and WSCP available for public review and comment prior to adoption and your agency is invited to be a part of this process. NapaSan will be given notice of the Napa City Council meeting in which the UWMP and WSCP updates will be considered (tentatively June 2).

Questions on the City of Napa UWMP and WSCP preparation and adoption process may be directed to me at (707) 257-9309 or pcostello@cityofnapa.org.

Sincerely,

Patrick Costello
Water Resources Analyst

www.cityofnapa.org

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California Relay Service (CRS) Dial 7-1-1

March 17, 2026

Donald Callison
Research Data Specialist
Veterans Home of California
190 California Drive
Yountville, CA 94599

Subject: **City of Napa Urban Water Management Plan Preparation**

Dear Mr. Callison:

This letter is official notification that the City of Napa is in the process of preparing its 2025 Urban Water Management Plan (UWMP) update, pursuant to the Urban Water Management Planning Act (California Water Code, Division 6, Part 2.6, Sections 10610-10657). The City's UWMP was last updated in December 2021. The City will simultaneously update its Water Shortage Contingency Plan (WSDP) in accordance with California Water Code Section 10632.

The City will make any proposed revisions to the UWMP and WSCP available for public review and comment prior to adoption and your agency is invited to be a part of this process. The Veterans Home will be given notice of the Napa City Council meeting in which the UWMP and WSCP updates will be considered (tentatively June 2).

Questions on the City of Napa UWMP and WSCP preparation and adoption process may be directed to me at (707) 257-9309 or pcostello@cityofnapa.org.

Sincerely,

Patrick Costello
Water Resources Analyst

Appendix F

Distribution System Water Loss Audits

AWWA Free Water Audit Software v5.0

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

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

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

Please begin by providing the following information

Name of Contact Person:	Patrick Costello
Email Address:	pcostello@cityofnapa.org
Telephone | Ext.:	707-257-9309
Name of City / Utility:	City of Napa
City/Town/Municipality:	Napa
State / Province:	California (CA)
Country:	USA
Year:	2020 Calendar Year
Audit Preparation Date:	
Volume Reporting Units:	Million gallons (US)
PWSID / Other ID:	CA2810003

The following guidance will help you complete the Audit

All audit data are entered on the ***Reporting Worksheet***

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

Use of Option (Radio) Buttons: Pcnt: 0.25% Value:

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

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

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

Instructions
The current sheet. Enter contact information and basic audit details (year, units etc)

Reporting Worksheet
Enter the required data on this worksheet to calculate the water balance and data grading

Comments
Enter comments to explain how values were calculated or to document data sources

Performance Indicators
Review the performance indicators to evaluate the results of the audit

Water Balance
The values entered in the Reporting Worksheet are used to populate the Water Balance

Dashboard
A graphical summary of the water balance and Non-Revenue Water components

Grading Matrix
Presents the possible grading options for each input component of the audit

Service Connection Diagram
Diagrams depicting possible customer service connection line configurations

Definitions
Use this sheet to understand the terms used in the audit process

Loss Control Planning
Use this sheet to interpret the results of the audit validity score and performance indicators

Example Audits
Reporting Worksheet and Performance Indicators examples are shown for two validated audits

Acknowledgements
Acknowledgements for the AWWA Free Water Audit Software v5.0

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

AWWA Free Water Audit Software: Reporting Worksheet

? Click to access definition
+ Click to add a comment

Water Audit Report for: City of Napa (CA2810003)
Reporting Year: 2020 1/2020 - 12/2020

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

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

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

<---------- Enter grading in column 'E' and 'J' ----------> Master Meter and Supply Error Adjustments

WATER SUPPLIED

					Pcnt:	Value:	
Volume from own sources:	7	4,855.141	MG/Yr	4		-0.015	MG/Yr
Water imported:	n/a	0.000	MG/Yr				MG/Yr
Water exported:	6	384.209	MG/Yr	5	0.60%		MG/Yr

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

WATER SUPPLIED: 4,473.239 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	8	4,126.790	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	11.183	MG/Yr		11.183	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: ? 4,137.973 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 335.265 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		11.183	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	6	41.685	MG/Yr	1.00%		MG/Yr
Systematic data handling errors:		10.317	MG/Yr	0.25%		MG/Yr

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

Apparent Losses: ? 63.185 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 272.081 MG/Yr

WATER LOSSES: 335.265 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 346.449 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	359.9	miles
Number of active AND inactive service connections:	8	25,892	
Service connection density:		72	conn./mile main

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

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

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

Average operating pressure:	9	70.0	psi

COST DATA

Total annual cost of operating water system:	10	$30,869,446	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$6.31	$/1000 gallons (US)	
Variable production cost (applied to Real Losses):	8	$1,839.88	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 74 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

1: Volume from own sources
2: Customer metering inaccuracies
3: Unauthorized consumption

AWWA Free Water Audit Software: Reporting Worksheet

? Click to access definition
+ Click to add a comment

Water Audit Report for: City of Napa (CA2810003)
Reporting Year: 2021 1/2021 - 12/2021

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

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

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

<---------- Enter grading in column 'E' and 'J' ----------> Master Meter and Supply Error Adjustments

WATER SUPPLIED

					Pcnt:	Value:	
Volume from own sources:	7	4,373.685	MG/Yr	4		-1.084	MG/Yr
Water imported:	n/a	0.000	MG/Yr				MG/Yr
Water exported:	6	365.400	MG/Yr	5	0.82%		MG/Yr

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

WATER SUPPLIED: 4,012.341 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	8	3,632.093	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	10.031	MG/Yr		10.031	MG/Yr

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

AUTHORIZED CONSUMPTION: ? 3,642.124 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 370.217 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		10.031	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	7	19.353	MG/Yr	0.53%		MG/Yr
Systematic data handling errors:		9.080	MG/Yr	0.25%		MG/Yr

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

Apparent Losses: ? 38.464 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 331.753 MG/Yr

WATER LOSSES: 370.217 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 380.248 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	361.1	miles
Number of active AND inactive service connections:	8	25,978	
Service connection density:		72	conn./mile main

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

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

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

Average operating pressure: 9 70.0 psi

COST DATA

Total annual cost of operating water system:	10	$30,684,179	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$6.73	$/1000 gallons (US)	
Variable production cost (applied to Real Losses):	8	$1,866.50	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 75 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

1: Volume from own sources
2: Unauthorized consumption
3: Systematic data handling errors

AWWA Free Water Audit Software: Worksheet

Water Audit Report for: City of Napa
Audit Year: 2022 | Jan 01 2022 - Dec 31 2022 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

WATER SUPPLIED

Water Supplied Error Adjustments — choose entry option:

VOS	Volume from Own Sources:	n	g	7	4,169.097	MG/Yr	n g 4	volume	0.432	MG/Yr	over-registration VOSEA
WI	Water Imported:	n	g	n/a	0.000	MG/Yr					WIEA
WE	Water Exported:	n	g	6	325.097	MG/Yr	n g 5	0.47%	percent		under-registration WEEA
	WATER SUPPLIED:				3,842.033	MG/Yr					

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	8	3,533.725	MG/Yr			
BUAC	Billed Unmetered:	n	g	n/a	0.000	MG/Yr			
UMAC	Unbilled Metered:	n	g	n/a	0.000	MG/Yr			
UUAC	Unbilled Unmetered:	n	g	3	8.834	MG/Yr	0.25%	default	
	AUTHORIZED CONSUMPTION:				3,542.559	MG/Yr			

Default option selected for Unbilled Unmetered, with automatic data grading of 3

WATER LOSSES

299.474 MG/Yr

Apparent Losses

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	8.834	MG/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	7	34.613	MG/Yr	0.97%	percent	under-registration
UC	Unauthorized Consumption:	n	g	3	8.834	MG/Yr	0.25%	default	
	Apparent Losses:				52.282	MG/Yr			

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Real Losses

	Real Losses:				247.192	MG/Yr
	WATER LOSSES:				299.474	MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 308.308 MG/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	360.2	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	26,114		(active *and* inactive)
	Service connection density:				72	conn./mile main	

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

Lp: n g 10

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

AOP	Average Operating Pressure:	n	g	9	70.0	psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	9	$6.56	$/1000 gallons (US)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	8	$2,609.66	$/Million gallons	$28,828,378	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

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

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

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

1: Volume from Own Sources (VOS)
2: Billed Metered (BMAC)
3: Unauthorized Consumption (UC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:	6.3	gal/conn/day
Unit Real Losses[A]:	17.9	gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

Water Audit Report for: City of Napa
Audit Year: 2023 | Jan 01 2023 - Dec 31 2023 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

		n	g				n	g					
VOS	Volume from Own Sources:	n	g	7	4,176.125	MG/Yr	n	g	8	volume	0.722	MG/Yr	over-registration VOSEA
WI	Water Imported:	n	g	n/a	0.000	MG/Yr							WIEA
WE	Water Exported:	n	g	6	425.269	MG/Yr	n	g	9	1.95%	percent		under-registration WEEA

WATER SUPPLIED: 3,741.676 MG/Yr

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	8	3,362.313	MG/Yr		
BUAC	Billed Unmetered:	n	g	n/a	0.000	MG/Yr		
UMAC	Unbilled Metered:	n	g	n/a	0.000	MG/Yr		
UUAC	Unbilled Unmetered:	n	g	3	8.406	MG/Yr	0.25%	default

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 3,370.719 MG/Yr

WATER LOSSES

370.958 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	8.406	MG/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	7	50.510	MG/Yr	1.48%	percent	under-registration
UC	Unauthorized Consumption:	n	g	3	8.406	MG/Yr	0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 67.321 MG/Yr

Real Losses

Real Losses: 303.636 MG/Yr

WATER LOSSES: 370.958 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 379.363 MG/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	359.7	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	26,974		(active *and* inactive)
	Service connection density:				75	conn./mile main	

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

Lp: n g 10

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

AOP	Average Operating Pressure:	n	g	9	70.0	psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	9	$6.76	$/1000 gallons (US)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	8	$1,595.09	$/Million gallons	$31,941,161	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

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

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

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

1: Volume from Own Sources (VOS)
2: Billed Metered (BMAC)
3: Unauthorized Consumption (UC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:	6.3	gal/conn/day
Unit Real Losses[A]:	17.9	gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

AWWA Free Water Audit Software: Worksheet

Water Audit Report for: City of Napa
Audit Year: 2024 | Jan 01 2024 - Dec 31 2024 | Calendar

Click 'n' to add notes
Click 'g' to determine data validity grade

To edit water system info: go to start page

To access definitions, click the input name

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

WATER SUPPLIED

choose entry option:

		n	g				n	g				
VOS	Volume from Own Sources:	n	g	7	4,370.262	MG/Yr	n	g	8	volume 0.886	MG/Yr	under-registration VOSEA
WI	Water Imported:	n	g	n/a	0.000	MG/Yr						WIEA
WE	Water Exported:	n	g	6	426.807	MG/Yr	n	g	9	4.31% percent		under-registration WEEA

WATER SUPPLIED: 3,925.117 MG/Yr

AUTHORIZED CONSUMPTION

choose entry option:

BMAC	Billed Metered:	n	g	8	3,585.817	MG/Yr		
BUAC	Billed Unmetered:	n	g	n/a	0.000	MG/Yr		
UMAC	Unbilled Metered:	n	g	n/a	0.000	MG/Yr		
UUAC	Unbilled Unmetered:	n	g	3	8.965	MG/Yr	0.25%	default

Default option selected for Unbilled Unmetered, with automatic data grading of 3

AUTHORIZED CONSUMPTION: 3,594.782 MG/Yr

WATER LOSSES

330.336 MG/Yr

Apparent Losses

Default option selected for Systematic Data Handling Errors, with automatic data grading of 3

choose entry option:

SDHE	Systematic Data Handling Errors:	n	g	3	8.965	MG/Yr	0.25%	default	
CMI	Customer Metering Inaccuracies:	n	g	7	97.233	MG/Yr	2.64%	percent	under-registration
UC	Unauthorized Consumption:	n	g	3	8.965	MG/Yr	0.25%	default	

Default option selected for Unauthorized Consumption, with automatic data grading of 3

Apparent Losses: 115.162 MG/Yr

Real Losses

Real Losses: 215.174 MG/Yr

WATER LOSSES: 330.336 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 339.300 MG/Yr

SYSTEM DATA

Lm	Length of mains:	n	g	10	360.3	miles	(including fire hydrant lead lengths)
Nc	Number of service connections:	n	g	8	26,362		(active *and* inactive)
	Service connection density:				73	conn./mile main	

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

Lp: n g 10

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

AOP	Average Operating Pressure:	n	g	9	70.0	psi

COST DATA

CRUC	Customer Retail Unit Charge:	n	g	9	$7.87	$/1000 gallons (US)	Total Annual Operating Cost	
VPC	Variable Production Cost:	n	g	8	$1,635.18	$/Million gallons	$37,565,866	$/yr (optional input)

WATER AUDIT DATA VALIDITY TIER:

***** The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. *****

go to dashboard

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

PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:

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

1: Volume from Own Sources (VOS)
2: Billed Metered (BMAC)
3: Unauthorized Consumption (UC)

KEY PERFORMANCE INDICATOR TARGETS:

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:		gal/conn/day
Unit Apparent Losses:	6.3	gal/conn/day
Unit Real Losses[A]:	26.8	gal/conn/day
Unit Real Losses[B]:		gal/mile/day

If entered above by user, targets will display on KPI gauges (see Dashboard)

Appendix G

SB X7-7 Compliance Tables

SB X7-7 Table 0: Units of Measure Used in 2025 UWMP Water Code Section 10608.20 (e) and 10608.20(h)(1)(2) (select one from the drop down list)
Acre Feet
The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.
NOTES:

SB X7-7 Table 2: Method for 2025 Population Estimate Water Code Section 10608.20 (e) and 10608.20(h)(1)(2)	
Method Used to Determine 2025 Population (may check more than one)	
☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☑	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**3. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2025 Service Area Population Water Code Section 10608.20 (e) and 10608.20(h)(1)(2)	
2025 Compliance Year Population	
2025	85,366
NOTES:	

SB X7-7 Table 4: 2025 Gross Water Use
Water Code Section 10608.20 (e) and 10608.20(h)(1)(2)

Compliance Year 2025	2025 Volume Into Distribution System This column will remain blank until SB X7-7 Table 4-A is completed.	2025 Deductions					2025 Gross Water Use
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water This column will remain blank until SB X7-7 Table 4-B is completed.	Water Delivered for Agricultural Use	Process Water This column will remain blank until SB X7-7 Table 4-D is completed.	
	12,211	731		-	77	-	**11,403**

DWR NOTES: Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.

NOTES: Volumes are in AF. In 2025, the City exported water to the City of St. Helena, the Town of Yountville, and the California Veterans Home.

SB X7-7 Table 4-A: 2025 Volume Entering the Distribution System(s), Meter Error Adjustment
Water Code Section 10608.20 (e) and 10608.20(h)(1)(2)
Complete one table for each source.

Name of Source	Local Surface Water
This water source is (check one)**:**	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2025	Volume Entering Distribution System	Meter Error Adjustment Optional (+/-)	Corrected Volume Entering Distribution System
	8,885	-	8,885

DWR NOTES: Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.
Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Lake Hennessey only. Milliken Reservoir source not used in 2025.

SB X7-7 Table 4-A: 2025 Volume Entering the Distribution System(s), Meter Error Adjustment
Water Code Section 10608.20 (e) and 10608.20(h)(1)(2)
Complete one table for each source.

Name of Source	State Water Project

☐	The supplier's own water source
☑	A purchased or imported source

Compliance Year 2025	Volume Entering Distribution System	Meter Error Adjustment Optional (+/-)	Corrected Volume Entering Distribution System
	3,326		3,326

DWR NOTES: Units of measure (AF, MG , or CCF) must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.
Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document

NOTES: Excludes American Canyon and Calistoga State Water Project deliveries

SB X7-7 Table 5: 2025 Gallons Per Capita Per Day (GPCD)
Water Code Section 10608.20 (e) and 10608.20 (h)(1)(2)

2025 Gross Water Fm SB X7-7 Table 4	**2025 Population** Fm SB X7-7 Table 3	**2025 GPCD**
11,403	85,366	**119**

NOTES:

SB X7-7 Table 9: 2025 Compliance
Water Code Section 10608.24(d)

Actual 2025 GPCD	Optional Adjustments to 2025 GPCD (Enter "0" if Adjustment Not Used)			TOTAL Adjustments	Adjusted 2025 GPCD (Adjusted if applicable)	2020 Target	**Did Supplier Achieve Targeted Reduction for 2025?**
	Extraordinary Events (GPCD)	Weather Normalization (GPCD)	Economic Adjustment (GPCD)				
119		-	-	-	119.2505487	132	**YES**

DWR NOTES: All values are reported in GPCD
Suppliers that had a merger or consolidation since 2020 may use a population weighted average 2020 target. See Section P.1.2.1 of Appendix P.

NOTES:

Appendix H

Recycled Water Sales Agreement

City Agreement #7247
Budget Account #_____

AGREEMENT BETWEEN CITY OF NAPA AND NAPA SANITATION DISTRICT FOR SALE OF RECYCLED WATER WITHIN CITY OF NAPA WATER SERVICE AREA

This Agreement is made this 4th day of Aug; 1998, by and between the City of Napa ("City"), a Charter City incorporated under the laws of the State of California, and Napa Sanitation District ("NSD"), a public district formed and governed by California Health and Safety Code section 4700 et seq.

WHEREAS, under its municipal powers CITY acquires water supplies and treats and delivers potable water to inhabitants and businesses within its water service area:

WHEREAS, NSD treats the wastewater generated by the inhabitants and businesses within the CITY's water service area and thus has a ready supply of recycled water available for non-potable uses:

WHEREAS, both the CITY and NSD desire to utilize the water supplies which they each have available to maximize the efficiency and minimize the costs of water supply for various purposes to the inhabitants and businesses within the CITY's water service area.

NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISES CONTAINED HEREIN, THE PARTIES DO HEREBY AGREE AS FOLLOWS:

1. CITY Water Service Area Defined

a. The CITY's water service area covers the area generally shown on the map attached hereto as Exhibit A.

b. CITY is the sole purveyor of water within its water service area, provided however, that during the term of this Agreement, CITY agrees that NSD may provide and deliver recycled water within the CITY's water service area to the extent provided herein.

2. Service area for Recycled Water Delivery Designated:

a. Upon execution of this Agreement, and during its term, CITY shall permit NSD to solicit customers for its recycled water and to deliver recycled water to

customers within the portion of the CITY's water service area shown on Exhibit A as the ReUse Area, being;

(1) The area east of the Napa River, south of Imola Avenue, west of Highway 221, and north of the City of American Canyon water service area, and;

(2) The properties known as "Stanley Ranch", "South Napa Market Place", and "Napa State Hospital", and the NSD property north of and adjacent to Imola Avenue east of the Napa River.

b. Delivery of recycled water within additional portions of the CITY's water service area shall require the prior written approval of the CITY notwithstanding any approval or authority from SWRCB to convey recycled water within the entire area set forth on Exhibit A.

c. The area within which NSD may deliver recycled water pursuant to this Agreement or any amendment thereof shall be referred to as the "ReUse Area."

d. CITY shall not agree to or approve of the delivery of recycled water within the ReUse Area other than by NSD during the term of this Agreement.

3. Recycled Water Facilities:

a. Construction of facilities, including without limitation pipelines, meters and pumps, for treatment, conveyance and delivery of recycled water within the ReUse Area shall be subject to all applicable regulatory approvals and procedures, and subject further to the CITY's review and imposition of conditions designed to avoid conflicts with other facilities and utilities to the extent they are within the CITY rights-of-way.

b. NSD shall own, construct, maintain, operate and repair all facilities necessary for the treatment, conveyance, delivery, and measurement of recycled water.

c. NSD shall notify CITY of new recycled water customers within the reuse area at least 60 days prior to connection to NSD recycled water facilities.

4. Reimbursement for Loss of Revenue:

a. NSD shall reimburse CITY for CITY's loss of potable water sales revenue due to CITY's existing customers ("prior CITY customers") taking delivery of recycled water from NSD in lieu of purchasing potable water supplies from the CITY. The amount of reimbursement shall be calculated for the aggregate total of all prior CITY customers, as set forth below:

(1) Within 30 days of [the end of the calendar year], NSD shall report to CITY the identities and addresses of all recycled water customers within the ReUse Area, and the date that each customer connected to the recycled water system.

(2) The CITY shall determine whether each such recycled water customer is a prior CITY customer. For all such prior CITY customers, CITY shall determine the aggregate net revenue CITY would have received from the sale of potable water based on:

a. The quantity of potable water each prior CITY customer consumed the average of three year's prior to conversion to recycled water, and

b. The applicable potable water rates during the current calendar year that the prior CITY customer would have paid if remaining on CITY's potable system, less the costs of energy and chemicals required to produce and treat such water. Costs of producing and treating potable water shall be determined on a proportional basis with the cost of producing and treating all potable water delivered by CITY during the same period.

(3) CITY shall notify NSD in writing of its determination of the amount of reimbursement due CITY from NSD pursuant to this Article, together with the costs and calculations supporting its determination, and within 30 days of such notification NSD shall pay to CITY the amount of reimbursement owed (see Exhibit "B" for example calculation). If NSD disagrees with CITY's determination of the amount of reimbursement due, NSD shall notify CITY within 20 days of NSD's receipt of notice and pay any undisputed amount within 30 days of CITY's original notice to NSD. Thereafter, the parties shall meet as soon as possible to discuss the disagreement and attempt to resolve the matter within 60 days of CITY's original notice to NSD. If no resolution is achieved, the matter shall be arbitrated pursuant to the provisions of Section 10, below.

b. NSD's reimbursement obligation shall continue from year to year until the amount of CITY potable water sales, measured in gallons, has regained its previous level prior to such conversion. For purposes of calculating the amount of reimbursement due the CITY for conversion to recycled water by a prior CITY customer.

(1) The rate of increase of CITY potable water sales, measured in gallons, is deemed by the parties to be three-quarters of one percent (0.75%) per year, and

(2) The year from which growth in CITY's potable water sales is to be measured in gallons is the last preceding year in which NSD's reimbursement obligation was zero, and

(3) CITY's increase of .75% per year shall be subtracted from CITY's net lost potable water sales measured in gallons as defined in Section 4 a. (2) above (See Exhibit "B" for example calculation).

c. Reimbursement obligations shall apply only to customers which, prior to taking delivery of recycled water from NSD, purchased potable water supplies from CITY.

d. For purposes of water conservation reporting, NSD shall provide CITY with quantities of recycled water delivered to each recycled water customer within the ReUse Area.

5. Disclosure of Recycled Water Costs:

So that potential customers in the ReUse Area understand the cost factors associated with determining the price of recycled water, NSD shall advise all potential customers of the various components of the recycled water rate in advance of obtaining a service commitment including, but not limited to:

a. Capital Costs of Delivery Facilities (Pipelines, Pumps, Meters, etc.)

b. Operating and Maintenance Costs of Delivery Facilities

c. Capital Costs of Wastewater Treatment Facilities

d. Energy and Chemical Costs of Wastewater Treatment

6. Reciprocal Rights to Water Service:

a. NSD shall make available at no cost up to 16,300,000 gallons (approximately 50 acre feet) of recycled water per year to CITY for irrigation of Kennedy Park, not including the Kennedy Golf Course, for irrigation purposes. NSD shall make available at no cost up to 16,300,000 gallons (approximately 50 acre feet) of recycled water per year to Napa Valley College for irrigation purposes. Any water used by CITY's Kennedy Park in excess of 16,300,000 gallons per year shall be billed to CITY at NSD's recycled water rate charged to other comparable recycled water customers. Any water used by the Napa Valley College in excess of 16,300,000 gallons per year shall be billed to Napa Valley College at NSD's recycled water rate charged to other comparable recycled water customers.

b. CITY shall make available to NSD at no cost up to 3,600,000 gallons (approximately 11 acre feet) of potable water per year for use at NSD's wastewater treatment plants on Imola Avenue and Soscol Ferry Road and for flushing of sewer mains, but not for filling recycled water reservoir at NSD's Soscol Treatment Facility to allow delivery to NSD's recycled water customers for irrigation use. All potable water used by NSD in excess of 3,600,000 gallons per year or for filling recycled water reservoir for irrigation water deliveries, shall be billed to NSD at the rates which CITY then imposes on other potable water customers within CITY's incorporated boundaries.

c. All recycled water use provided for in this Agreement shall be metered and reported to the CITY. In addition, NSD shall meter separately and report to CITY the amount of all potable water used for filling recycled water reservoir for irrigation water deliveries to NSD customers.

d. NSD and City agree to execute the attached Agreement for Supply of Recycled Water to Kennedy Park (Exhibit "C") obligating NSD to provide and City to utilize NSD recycled water in place of City potable water to irrigate the Kennedy Golf Course and Park. NSD and City agree to treat the Kennedy Golf Course as a "prior City customer" pursuant to Section 4 hereof for purposes of NSD reimbursing City for its "loss of revenues" attributable to the use of reclaimed water for irrigation on the Kennedy Golf Course. NSD shall supply the recycled water to Kennedy Golf Course upon the same favorable rates and terms offered other users; provided, however, that should NSD impose a monthly surcharge on its recycle rates in order to recoup the monies paid to City under the reimbursement requirement of Section 4 hereof, the amount of the monthly surcharge to City together with NSD's regular rates charged for recycled water shall not exceed eighty percent (80%) of the rates charged by City to its customers within the City of Napa for potable water. The surcharge shall cease when NSD has recouped the reimbursement to City under Section 4.

In the event City chooses to directly bill recycled water costs to an operator, lessee, etc., of the Kennedy Golf Course, City agrees that such billings shall not exceed the rates charged by NSD plus such reasonable charges necessary to cover City's administrative costs in connection therewith. The City agrees not to utilize the well water on City property for irrigation of the Golf Course except in the event that NSD is unable to deliver sufficient reclaimed water to the City and use is in compliance with all applicable federal and state laws.

NSD and City agree to execute an Agreement for Sale of Recycled Water in substantially the form as attached hereto as Exhibit "C", within 30 days of this Agreement becoming effective as specified in Section 8 and Section 11, below.

7. Indemnification and Hold Harmless:

NSD shall indemnify CITY and hold harmless the CITY, its officers, officials, agents, and employees from and against any and all claims, damages, demands,

liability, costs, losses and expenses, including without limitation court costs and reasonable attorneys' fees arising out of or in connection with the treatment, conveyance, delivery of NSD's recycled water for subsequent use, except such loss or damage which was caused by the active negligence or willful misconduct of CITY.

8. Term of Agreement:

This Agreement shall become effective upon the later of the dates of approval and adoption of the Agreement by the Napa City Counsel and the NSD Board of Directors.

The Agreement shall remain effective until twenty years from its effective date, and may be renewed for successive terms upon conditions acceptable to both parties. The parties agree that NSD may continue to serve properties receiving recycled water pursuant to the terms of this Agreement on the termination date whether or not the Agreement is renewed. The parties also agree that Napa Sanitation District shall continue to supply recycled water to the City for Kennedy Park and to Napa Valley College and that the City will in return provide potable water to the District for main flushing and use at Districts treatment plants pursuant to Section 6 after the termination date of this Agreement whether or not this Agreement is renewed. District agrees that, if by virtue of changes in its treatment process and regulatory requirements, its recycled water is deemed "potable" pursuant to state law, it will not deliver said water to its recycled water customers within City's service area as "potable" water unless City grants written permission.

9. Miscellaneous:

a. This Agreement constitutes the entire agreement and under standing between the parties, and supersedes all offers, negotiations and other agreements concerning the subject matter contained herein. Any amendments to this Agreement must be in writing and duly authorized and executed by both parties.

b. If any provision of this Agreement is invalid or unenforceable with respect to any party, the remainder of this Agreement or the application of such provision to persons other than those as to whom it is held invalid or unenforceable, shall not be affected and each provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

c. This Agreement shall be binding on and inure to the benefit of the successors of the respective parties.

d. Any notice of demand required to be given herein shall be made by certified or registered mail, return receipt requested, or reliable overnight courier to the address of the respective parties set forth below:

CITY:
Mike O'Bryon, Public Works Director
City of Napa, Public Works Department
1600 First Street
P. O. Box 660
Napa, CA 94559

NSD:
Manager
Napa Sanitation District
950 Imola Avenue, West
Post Office Box 2480
Napa, CA 94558

Either party may, from time to time, designate any other address for this purpose by written notice to the other party. All notices hereunder shall be deemed received upon actual receipt.

e. This Agreement shall be governed by the laws of the State of California.

f. In any case where the approval or consent of one party hereto is required, requested or otherwise to be given under this Agreement, such party shall not unreasonably delay or withhold is approval or consent.

g. All Exhibits annexed hereto form material parts of this Agreement.

h. This Agreement may be executed in duplicate counterparts, each of which shall be deemed an original.

10. Arbitration:

Any dispute or claim in law or equity between the parties arising out of this Agreement which is not settled through mediation shall be decided by neutral, binding arbitration and not by court action, except as provided by California Law for judicial review of arbitration proceedings. The arbitration shall be conducted in accordance with the rules of the American Arbitration Association. The parties may agree in writing to use different rules and/or arbitrators. In all other respects, the arbitration shall be conducted in accordance with Part 3, Title 9 of the California Code of Civil Procedure. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. The parties have the right to discovery in accordance with the Code of Civil Procedure Section 1283.05.

11. Effective Date:

NSD has filed a Petition for Change with the State Water Resources Control Board to permit it to convey recycled water within the area specified in the petition which is attached hereto as Exhibit C. This Agreement shall only become effective when NSD secures a permit from the State Water Resources Control Board permitting the change and obtains the required permissions from the Regional Water Quality

Control Board necessary to sell recycled water within the area encompassed by this Agreement.

Executed the day and year first above written, by the parties as follows:

CITY OF NAPA:

Ed Henderson

NAPA SANITATION DISTRICT

By:

ATTEST:

CITY CLERK

ATTEST:

SECRETARY
NAPA SANITATION DISTRICT

COUNTERSIGNED:

FINANCE DIRECTOR

APPROVED AS TO FORM:

CITY ATTORNEY

APPROVED AS TO FORM:

Date: 7-8-98

DISTRICT LEGAL COUNSEL

EXHIBIT A

ATTACHMENT 3

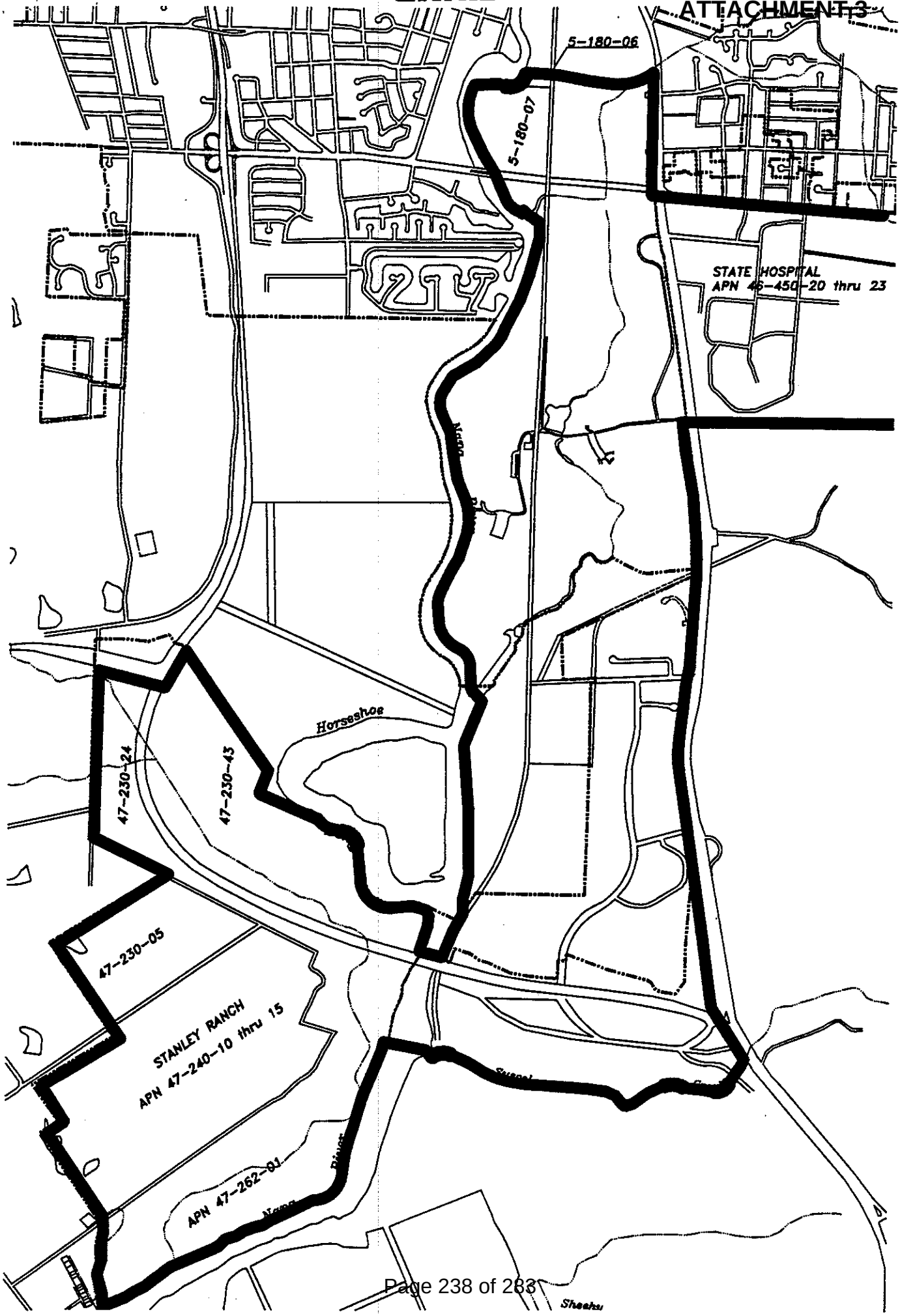


EXHIBIT "B"

Example of Reimbursement to the City for Conversion to NSD Recycled Water

Notes:

1. Reimbursement for each customer is calculated independently from other customers converted to NSD Recycled Water.
2. The First year is the full calendar year following the date the potable water customer connects to NSD Recycled Water.
3. The First Year net potable water sales is used for revenue reimbursement calculations until reimbursement obligations are fulfilled.
4. The City of Napa's net potable water sales growth is determined to be 0.75% for the purpose of calculating the City's revenue reduction do to lost customers.
5. Potable annual water consumption is determined to be the average potable water use for the previous three years from the date of connection to NSD Recycled Water. Average annual water consumption will be based on less than three years of water use information if water use history is not available.
6. The current year potable water rate shall be used for calculating revenue loss to the City.

Example One:

Existing City of Napa water customer with the following characteristics:
Water Consumption = 50,000,000 gallons per year (prior 3 year average)
Current Water Rate (year 2000) = $3.00 per thousand gallons
Annual Revenue to City from Customer = $150,000
City Chemical and Energy Costs for Treatment = $0.20/ thousand gallons
City Revenue Reduction from Conversion to NSD = $140,000.00
Net Potable Water Sales (year 2000) = $11,500,000.00

Customer switches to NSD Recycled Water April 1, 1999. NSD notifies City of customer switch to recycled water and reimbursement begins with the following calendar year (for this example the year 2000). In January of 2001 the City bills NSD for Revenue lost due to conversion to Recycled Water for full calendar year.

First Year:

Reimbursement the first year equals the total revenue loss by the City.
City Revenue Reduction from Conversion to NSD:
$150,000 - ($0.20 x 50,000 units) = $140,000.00

Reimbursement to the City for January 1 through December 31, 2000 = $140,000.00.

Second Year:

Reimbursement is reduced by City's net potable water sales growth for year (0.75%). Use First Year as base year net potable water sales:

Revenue Growth = $11,500,000.00 x 0.0075 = $86,250.00
Current Water Rate (year 2001) = $3.25 per thousand gallons
Annual Revenue Loss to City from Customer = $162,500.00
City Chemical and Energy Costs for Treatment = $0.22/ thousand gallons
City Revenue Reduction from Conversion to NSD:
$162,500 - $86,250 - ($0.22 x 50,000 units) = $65,250.00

Reimbursement to the City for January 1 through December 31, 2001 = $65,250.00.

Third Year:

Reimbursement is reduced by City's net potable water sales growth for year (0.75%). Use First Year as base year net potable water sales:

Revenue Growth = $86,250 + ($11,586,250 x 0.0075) = $173,146.88
Current Water Rate (year 2002) = $3.35 per thousand gallons
Annual Revenue Loss to City from Customer = $167,500.00
City Chemical and Energy Costs for Treatment = $0.24/ thousand gallons
City Revenue Reduction from Conversion to NSD:
$167,500 - $173,146.88 - ($0.24 x 50,000 units) = $0.00

Reimbursement to the City for January 1 through December 31, 2002 = $0.00. **Reimbursement obligation for customer is complete.**

Example Two:

Existing City of Napa water customer with the following characteristics:

Water Consumption = 3,500,000 gallons per year (prior 3 year average)
Current Water Rate (year 2003) = $3.55 per thousand gallons
Annual Revenue to City from Customer = $12,425
City Chemical and Energy Costs for Treatment = $0.26/ thousand gallons
City Revenue Reduction from Conversion to NSD = $11,515.00
Net Potable Water Sales (year 2003) = $12,500,000.00

Customer switches to NSD Recycled Water July 25, 2002. NSD notifies City of customer switch to recycled water and reimbursement begins with the following calendar year (for this example the year 2003). In January of 2004 the City bills NSD for Revenue lost due to conversion to Recycled Water for full calendar year.

First Year:

Reimbursement the first year equals the total revenue loss by the City.

City Revenue Reduction from Conversion to NSD:
$12,425 - ($0.26 x 3,500 units) = $11,515.00

Reimbursement to the City for January 1 through December 31, 2003 = $11,515.00.

Second Year:

Reimbursement is reduced by City's net potable water sales growth for year (0.75%). Use First Year as base year net potable water sales:

Revenue Growth = $12,500,000.00 x 0.0075 = $93,750.00
Current Water Rate (year 2004) = $3.61 per thousand gallons
Annual Revenue Loss to City from Customer = $12,635.00
City Chemical and Energy Costs for Treatment = $0.27/ thousand gallons
City Revenue Reduction from Conversion to NSD:
$12,635 - $93,750 - ($0.27 x 3,500 units) = $ 0.00

Reimbursement to the City for January 1 through December 31, 2004 = $0.00. **Reimbursement obligation for customer is complete.**

C:/NSD Agreement Exhibit B.doc

Exhibit C

AGREEMENT FOR THE SUPPLY OF RECYCLED WATER TO KENNEDY PARK

This Agreement is made and entered into in Napa, California, as of this _____ day of _____, 199_, between NAPA SANITATION DISTRICT, a special district of the State of California (Producer), and the CITY OF NAPA, a Charter City incorporated under the laws of the State of California (User), and provides as follows:

RECITALS:

A. Producer owns and operates a wastewater treatment plant in Napa County, California, which is in the San Francisco Bay Region of the California Regional Water Quality Control Board (the Regional Board), and collects and treats wastewater, discharges treated wastewater to the Napa River and recycles wastewater generated within Producer's service area.

B. User owns approximately 340 acres of land in Napa County, California, more particularly described in Exhibit "1" attached hereto and incorporated herein by reference, which land has been improved for park and recreation purposes("Property") composed of Kennedy Park and Kennedy Golf Course.

C. Producer employs wastewater reclamation as a means of reducing the discharge of treated wastewater to the Napa River.

D. Producer is authorized to sell recycled water, pursuant to Order 96-011 adopted by the Regional Board on January 17, 1996, together with all attachments thereto.

E. User is interested in purchasing recycled water from Producer for use in irrigating its landscaping, to be used and applied only in such ways as are specifically permitted.

F. Producer desires to sell to User, and User desires to purchase from Producer, recycled water on the terms and conditions hereinafter set forth.

G. Producer and User entered into an Agreement for the Sale of Recycled Water within City of Napa Water Service Area dated _____ (hereinafter "Master Agreement")

AGREEMENT:

1. Term. This Agreement shall become effective on the date first above written and shall remain in effect through the term of the Master Agreement except that the provisions of Section 2, A and B below, shall be modified effective November 1, 2015 to render User's payment terms consistent with those of other users being served by Producer at that time.

2. Purchase Price; Payment.

A. From the commencement of delivery of recycled water through the year ending December 2001, the cost of recycled water shall be $.75 per one thousand (1000) gallons. Beginning January 1, 2002, and each calendar year thereafter during the term of this Agreement, the cost of "unrestricted use" recycled water shall be established by the annual CPI adjustment described below.

B. After December 31, 2001, the rates for recycled water shall be subject to adjustment as of the first day of January every year of the term (the adjustment date) beginning with the year 2002 according to the following computation. The basis for the adjustment is the index figure for the month of January, 2001, as

shown for the Consumer's Price Index for all Urban Consumers, San Francisco-Oakland Metropolitan Area (1982-84 = 100), published by the U. S. Department of Labor's Bureau of Labor Statistics (CPI), which is referred to as the "Beginning Index." The CPI index figure published for the month preceding the adjustment date in question, which is referred to as the "Adjustment Index," shall be utilized in determining the amount of adjustment.

If the Adjustment Index is different than the Beginning Index, the adjusted rates for the period beginning on each adjustment date and continuing to the next adjustment date shall be computed by multiplying the rates for 1000 gallons of recycled water provided in subparagraph B by a fraction, the numerator of which is the Adjustment Index and the denominator of which is the Beginning Index; provided, however, that in no year shall the cost of the recycled water as determined by the Annual CPI Adjustment increase or decrease from the cost for the previous year by more than 5%. For illustrative purposes only, examples of calculations of the cost of "unrestricted use" recycled water in accordance with the Annual CPI Adjustment are set forth in Exhibit "2" hereto.

If the CPI is changed so that the base year differs from that in effect in January, 2001, the index shall be converted in accordance with the conversion factor published by the United States Department of Labor, Bureau of Labor Statistics. If the CPI is discontinued or revised during the term, such other governmental index or computation with which it is replaced shall be used in order to obtain substantially the same result as would be obtained if the CPI had not been discontinued or revised.

C. Maximum cost of water provided to the City shall as be provided in Section 6 of Master Agreement.

D. Notwithstanding subparagraphs A through B above, if Producer is providing recycled water to any user (other than a federal, state or local agency whose use of the recycled water is for the creation, enhancement or restoration of

intermittent wetlands, wetlands or marshes) at a lower cost at any time during the term of this Agreement, that same lower cost shall be charged to User for the period of time during which said lower cost is in effect.

E. User shall be billed monthly for water delivered to the meter which serves the golf course and payment shall be due and payable within thirty (30) days of the date of the bill. Interest shall accrue on any amount not paid within thirty (30) days of the date of the bill at the rate of one (1%) percent per month. If User shall fail to pay any amount due within ninety (90) days of the date of a bill therefor, Producer may at its option suspend deliveries of recycled water until the account is brought current. Except as provided in the Master Agreement, User shall not be billed for Recycled Water supplied to Kennedy Park.

3. Compliance With Water Quality Control Board Order 96-011; Compliance With Requirements of Producer.

A. Producer and User shall comply with all of the provisions and requirements of Order 96-011 adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on January 17, 1996, and all attachments thereto (the Order), as it may subsequently be amended. A copy of the Order is attached hereto as Exhibit "3" and incorporated herein by this reference. User acknowledges to Producer that User is aware that the water sold pursuant to this Agreement is recycled water to be used for only specified and limited uses, that User has received a copy of the Order attached as Exhibit "3" to this Agreement, that User is familiar with and understands all of the provisions and requirements contained in the Order and that those provisions and requirements are reasonable, and that User covenants and warrants that it shall comply with all the provisions and requirements of the Order in the purchase and use of the recycled water.

B. User also shall comply with all of the additional provisions and requirements established by Producer, in the purchase and use of the recycled

water, which are set forth in the Producer's Water Reuse Program Manual, Exhibit "4", attached hereto and incorporated herein by this reference.

C. User shall use the recycled water delivered hereunder only for those uses authorized in the Recycled Water User permit and consistent with the Order and the requirements of Producer set forth in Exhibit "4".

4. Quality of Recycled Water Sold.

A. User understands that the recycled water that will be delivered to User hereunder has undergone a tertiary treatment process at Producer's Soscol Water Recycling Facility and is commonly referred to as "Unrestricted Use Recycled Water."

B. User understands that the recycled water to be purchased and used by User is wastewater that has been reclaimed as a result of sewerage treatment operations, and is suitable only for these uses, and in those areas specified in the permit granted User by Producer. The quality of the recycled water sold pursuant to this Agreement shall comply in all respects with the quality criteria established by the Order, although the recycled water's quality may vary within those criteria. Producer shall test the recycled water as required by the Regional Board to ensure that it meets the quality criteria set forth in the Order. The results of this testing program shall be available to User for its review upon request at any time during Producer's normal business hours. In addition to the monitoring and testing requirements of the Regional Board, Producer will test the recycled water delivered to User for the following parameters listed in Table 1.

(The rest of this page left intentionally blank)

TABLE 1

Parameter	Desired Agronomic Range	Typical Maximum Values	Testing Frequency
pH (pH units)	6.5 - 8.0	9.0	Daily
EC (mmhos/cm.)	<0.75	1.4	Monthly
Total Dissolved	<500	800	Monthly
Calcium	<60	100	Monthly
Magnesium	No agronomic value	35	Monthly
Sodium	<30	200	Monthly
Carbonates	8	15	Monthly
Bicarbonates	75	240	Monthly
Chloride	30	260	Monthly
Ammonium-N plus	<3.0	<20	Monthly
Nitrate-N			Monthly
Boron	<0.5	0.7	Monthly
SAR	<6.0	6.0	Monthly
Adjusted SAR	<6.0	6.0	Monthly
Phosphorous	3.0	7.0	Monthly
Potassium	5.0	20	Monthly
Sulfur	<40	<40	Monthly
Iron	<1.0	<1.0	Monthly
Zinc	<2.0	<2.0	Monthly
Aluminum	<5.0	<1.0	Monthly
Arsenic	<0.1	<0.1	Monthly
Barium	No agronomic value established	<0.05	Semi-annual
Beryllium	<0.1	<0.1	Semi-annual
Cadmium	<0.01	<0.01	Monthly
Chromium (VI)	<0.1	<0.1	Monthly
Cobalt	<0.05	<0.05	Semi-annual
Copper	<0.2	<0.1	Monthly
Fluoride	<1.0	<1.0	Semi-annual
Lead	<5.0	<0.5	Monthly
Lithium	<2.5	<1.0	Semi-annual

Manganese	<0.2	<0.2	Semi-annual
Molybdenum	<0.01	<0.01	Monthly
Nickel	<0.2	<0.1	Monthly
Selenium	<0.02	<0.02	Monthly
Silver	No agronomic value established	<0.005	Monthly
Strontium	Same as above	<1.0	Semi-annual
Tin	Same as above	<1.0	Semi-annual
Titanium	Same as above	<1.0	Semi-annual
Tungsten	Same as above	<1.0	Semi-annual
Zirconium	Same as above	<1.0	Semi-annual
Vanadium	<0.1	<0.1	Semi-annual

Results in Table 1 in mg/l unless noted.

The tests shall be performed according to the "Standards For The Examination of Water And Wastewater" as published jointly by APHA, AWWA, and WEF latest edition.

The results of said tests shall be maintained at Producer's treatment plant and may be reviewed or a copy obtained by User by telephoning Producer. Each February an annual report of the test values will be sent by mail to User. When the test results consistently exceed any of the maximum ranges set forth in Table 1 above, Producer will notify User by telephone or facsimile by the close of the next business day following the day of Producer's receipt of any such test results.

If test results are consistently outside the Maximum Range set forth in Table 1 above, User may, at its option, do the following:

(1) Continue receiving the recycled water, as is;

(2) Continue receiving the recycled water as is and request in writing that Producer increase the frequency of testing for the item outside the Maximum Range; or

(3) Temporarily refuse to accept the recycled water. In this case, User shall notify Producer in writing of its intention to discontinue use and the date on which use will stop. The notice shall include reference to the test results in question (type, test date, etc.).

Upon User having notified Producer as provided for in 3. above, and temporarily refusing to accept the recycled water, User shall be under no obligation to later increase its use to make-up for the water not used. User shall resume acceptance of recycled water within fourteen (14) days after receipt of written notification by Producer that the quality of the recycled water is within the Maximum Ranges set forth in Table 1.

5. Delivery and Availability of Recycled Water; Interruption of Service.

A. Producer will deliver the recycled water to User through a pipeline extension from Producer's reclamation site, located at the end of Soscol Road, Napa, California, to the "Delivery Point" on User's Property shown on the site plan at Exhibit "5" attached hereto and incorporated herein by this reference. The recycled water shall be delivered to the Delivery Point between 100 and 150 pounds per square inch and at a rate of between 2,150 and 2,200 gallons per minute. User shall install at its own expense, as necessary, a pressure regulator at the Delivery Point. User may have its own irrigation pump stations and reservoirs located on the Property, to be paid for by User. User shall be responsible for the operation, maintenance and repair of any pressure regulator and the pipeline transporting the recycled water and for the recycled water from the Delivery Point to User's places of use. Producer shall be responsible for the operation, maintenance and repair of the pipeline transporting recycled water and for the recycled water to the Delivery Point.

B. User acknowledges and understands that Producer's delivery of recycled water during the winter discharge period is subject to the Order and the waste discharge requirements imposed by the Regional Board, as such may be amended from time to time.

C. User agrees to cooperate with Producer, at Producer's request, in the establishment of reasonable and mutually agreeable delivery schedules for the recycled water. User recognizes that the requests of various users may overload the capacity of Producer's Water Recycling Facility and delivery system and that Producer therefore may need to reduce the rates at which recycled water is delivered to the various users from time to time. In the event that the Producer reduces User's requested rate of delivery, Producer shall use its best efforts to restore the rate of delivery as soon as possible and provide User with that amount of water it would have received had its rate of delivery not been reduced.

D. Producer shall insure that the number of new customers and volume of water committed does not exceed the capacity of the plant to supply recycled

water consistently to the City. In the event Producer creates a system of user priorities for use of recycled water, Producer agrees that User shall be in the highest level for water delivered to the golf course.

E. Producer shall use its best efforts to ensure that service to User is provided consistent with the established delivery schedules, and User shall use its best efforts to accept recycled water as provided herein. However, both parties acknowledge that Producer's supply and delivery of recycled water and User's ability to take delivery of said water may occasionally be interrupted or curtailed due to Acts of God, power failures, accident, fire, strikes, riots, war, facility failures, facility improvements, inspection, maintenance and repairs of plant and equipment, actions or decisions by a governmental agency, or any condition outside of a party's control. Each party shall not be liable to the other for damages arising out of interruption or curtailment of service for these reasons. Insofar as feasible, the party whose performance hereunder is affected by such condition shall give the other party at least 72 hours advance notice of a temporary discontinuance or reduction in its delivery (in the case of Producer) or in its acceptance (in the case of User) of recycled water, except in the case of emergency, in which case notice need not be given. In the event of such discontinuance or reduction, the parties shall deliver or accept, as appropriate, upon resumption of service and as nearly as may be feasible, the quantity of recycled water that would have been delivered or accepted in the absence of such discontinuance or reduction.

F. Producer agrees to cooperate with user in delivering water before May 1 and after November 1 if climatic conditions require irrigation to landscaping during those periods.

G. In the event Producer is unable to deliver a sufficient quantity and pressure of water to User, User may utilize alternative sources of water for its Property. Use of alternative sources of water may continue until such time as Producer is able to deliver recycled water in accordance with the terms of this Agreement. User may also utilize alternative sources of water to irrigate the greens of the golf course to supplement its use of recycled water.

6. Measurement of Delivered Recycled Water. All recycled water delivered pursuant to this Agreement shall be measured by the Producer at the meter located at the Delivery Point. Producer shall own, inspect operate, maintain, repair and replace the measuring equipment. All determinations relative to the measuring of recycled water shall be made by the Producer. Upon request by User, the accuracy of a measurement shall be investigated by the Producer and any error appearing therein shall be adjusted. User may inspect such measuring equipment for the purpose of determining the accuracy thereof.

7. Monitoring Reports. User shall fill out monitoring reports on the form prescribed by the District on a weekly basis or as otherwise required by the Producer and submit them to Producer by the fifth (5th) day of each month with respect to the immediately preceding month. Any loss of recycled water off-site by spray or runoff shall be fully reported by User in such reports stating what corrective action(s) have been taken to prevent the violation from occurring again.

8. User's Rights to Recycled Water Nontransferable. User's rights to recycled water deliveries hereunder are not transferable or assignable. User shall not sell, give, transfer or distribute any of the recycled water purchased by it pursuant to this Agreement to any other party for any use, and User shall be the sole party using the recycled water.

9. Hold Harmless and Indemnification. Each party hereto agrees to release, indemnify, defend and hold harmless the other party and its directors, officers, employees, agents, successors and assigns from and against any and all actual or potential claims, liabilities, damages, losses, fines, penalties, judgments, awards, costs and expenses (including without limitation reasonable attorneys' fees and costs and all foreseeable, unforeseeable and consequential damages) asserted against, resulting to, imposed upon or incurred by said other party by reason of the first party's breach of any provisions of this Agreement or the Order. This indemnification shall survive the termination of this Agreement.

10. Notices. Any notice, action, or demand by either party to the other in connection with this Agreement shall be deemed to have been fully given or made when such notice, action, or demand is written and deposited in a sealed envelope postage prepaid, and addressed as designated at the end of this Agreement. Either party may change its address by giving the other party written notice of its new address as herein provided.

11. Entire Agreement. This Agreement and the Master Agreement shall constitute the entire agreement between the parties relating to the rights granted and obligations assumed in this Agreement. Any oral representations or modifications concerning this Agreement shall be of no force and effect unless contained in a subsequent written modification signed by both parties.

12. Amendments. This Agreement may not be amended except by a written instrument that is signed by both parties.

13. Interpretation. This Agreement shall be construed, interpreted, and applied according to the laws of the State of California.

14. Attorneys' Fees. If either party commences an action at law or in equity, arbitration or other proceeding against the other party to enforce or interpret this Agreement, the prevailing party shall be entitled to recover from the losing party reasonable attorneys' fees and costs of such proceeding, in addition to any other amounts which may be awarded.

15. Severability. If any clause or provision of the Agreement is or becomes illegal, invalid, or unenforceable because of present or future laws, or any rules or regulations of any governmental body or entity, effective during its term, the intention of the parties is that the remaining parts of this Agreement shall remain in full force and effect if the fundamental purpose of the Agreement is not destroyed.

Executed the day and year first above written, by the parties as follows:

CITY OF NAPA

MAYOR

ATTEST:

CITY CLERK

NAPA SANITATION DISTRICT

CHAIRMAN

ATTEST:

SECRETARY
NAPA SANITATION DISTRICT

COUNTERSIGNED:

FINANCE DIRECTOR

APPROVED AS TO FORM:

CITY ATTORNEY

APPROVED AS TO FORM:

DISTRICT LEGAL COUNSEL

DATED: 4 August 1998

C:\AGREEMNTS\RECWATERCITY

AMENDMENT NO. 1 TO CITY AGREEMENT NO.7247
AGREEMENT FOR SALE OF RECYCLED WATER WITHIN CITY OF NAPA WATER SERVICE AREA

City Budget Code: _____

This Amendment No. 1 ("**Amendment**") to City Agreement No. 7247, entitled "Agreement between City of Napa and Napa Sanitation District for Sale of Recycled Water" ("**Agreement**"), by and between the City of Napa, a California charter city ("**City**"), and the Napa Sanitation District, a public district formed and governed by California Health and Safety Code section 4700 et seq. ("NSD") is effective on the Effective Date identified on the signature page.

RECITALS

A. On or about August 4, 1998, the City and NSD entered into the Agreement, which describes the terms by which the City authorizes NSD to sell recycled water within a portion of the City's water service area, as identified as the "Original ReUse Area" depicted on Exhibit "A," attached hereto and incorporated herein by reference.

B. NSD has constructed recycled water pipelines to serve areas outside the City's water service area to the east of the City limits, and those pipelines have capacity to serve additional properties that are outside the Original ReUse Area but within the City's water service area, generally located along Coombsville Road, in the areas as identified as the "Additional ReUse Area" ("Tulocay Cemetery" and "Silverado Middle School") depicted on Exhibit "D," attached hereto and incorporated herein by reference.

C. NSD has requested approval from the City, in accordance with the terms of this Amendment, to allow the sale of recycled water within the Additional ReUse Area.

NOW, THEREFORE, the City and NSD, for the mutual consideration described herein, agree as follows:

1. INCORPORATION BY REFERENCE. This Amendment incorporates the Agreement by reference, except and only to the extent that any terms or conditions of the Agreement are specifically modified by this Amendment. All terms and conditions in the Agreement that are not specifically modified by this Amendment remain in full force and effect.

2. AMEND AGREEMENT SECTION 1. Agreement Section 1 is hereby deleted in its entirety and replaced with the following:

> "1. "City is the sole purveyor of water within its water service area; provided however, City agrees that NSD may provide and deliver recycled water within a portion of the City's water service area designated herein as the ReUse Area, in accordance with the terms of this Agreement."

3. AMEND AGREEMENT SECTION 2. Agreement Section 2 is hereby deleted in its entirety and replaced with the following:

> "2. Service area for Recycled Water Delivery Designated:
>
> a. Upon execution of this Agreement, and during its term, City shall permit NSD to solicit customers for its recycled water and to deliver recycled water to customers within the portion of the City's water service area defined and referred to herein as the "ReUse Area." The ReUse Area shall include the "Original ReUse Area" (as shown on Exhibit "A") and the "Additional ReUse Area" (as shown on Exhibit "D"). The ReUse Area includes:

(1) The portion of the Original ReUse Area shown on Exhibit "A" as the area east of the Napa River, south of Imola Avenue, west of Highway 221, and north of the City of American Canyon water service area, and;

(2) The portion of the Original ReUse Area shown on Exhibit "A" as the properties known as "Stanley Ranch", "South Napa Market Place", "Napa State Hospital," and the former NSD property north of and adjacent to Imola Avenue east of the Napa River, and;

(3) The Additional ReUse Area shown on Exhibit "D" as the properties on Coombsville Road designated as "Tulocay Cemetery" and "Silverado Middle School".

b. Delivery of recycled water within any portions of the City's water service area that are outside the ReUse Area shall require the prior written approval of the City.

c. City shall not agree to or approve of the delivery of recycled water within the ReUse Area other than by NSD during the term of this Agreement."

4. ENTIRE AGREEMENT. The Agreement, as modified by this Amendment, constitutes the entire integrated understanding between the parties concerning the delivery of recycled water service within the ReUse Area. This Amendment supersedes all prior negotiations, agreements and understandings regarding the delivery of recycled water service within the ReUse Area, whether written or oral. The documents incorporated by reference into this Amendment are complementary; what is called for in one is binding as if called for in all, except and only to the extent otherwise specified. If any provision in an exhibit to this Amendment conflicts with or is inconsistent with a provision in the body of this Amendment, the provisions in the body of this Amendment will control over any such conflicting or inconsistent provisions.

5. SIGNATURES. The individuals executing this Amendment represent and warrant that they have the right, power, legal capacity, and authority to enter into and to execute this Amendment on behalf of the respective legal entities of NSD and City. This Amendment shall inure to the benefit of and be binding upon the parties hereto and their respective successors and authorized assigns.

IN WITNESS WHEREOF, the Parties have executed this Amendment to be effective on the Effective Date set forth below.

CITY:
CITY OF NAPA, a California charter city

By: _____
Jacques R. LaRochelle, Public Works Director

ATTEST:

_____
Dorothy Roberts, City Clerk

Date: 6/18/18
("**Effective Date**")

COUNTERSIGNED:

_____
Desiree Brun, City Auditor

APPROVED AS TO FORM:

_____
Michael W. Barrett, City Attorney

NSD:
Napa Sanitation District, a public district formed and governed by California Health and Safety Code Sections 4700, *et seq.*

By: _____
Timothy B. Healy, General Manager

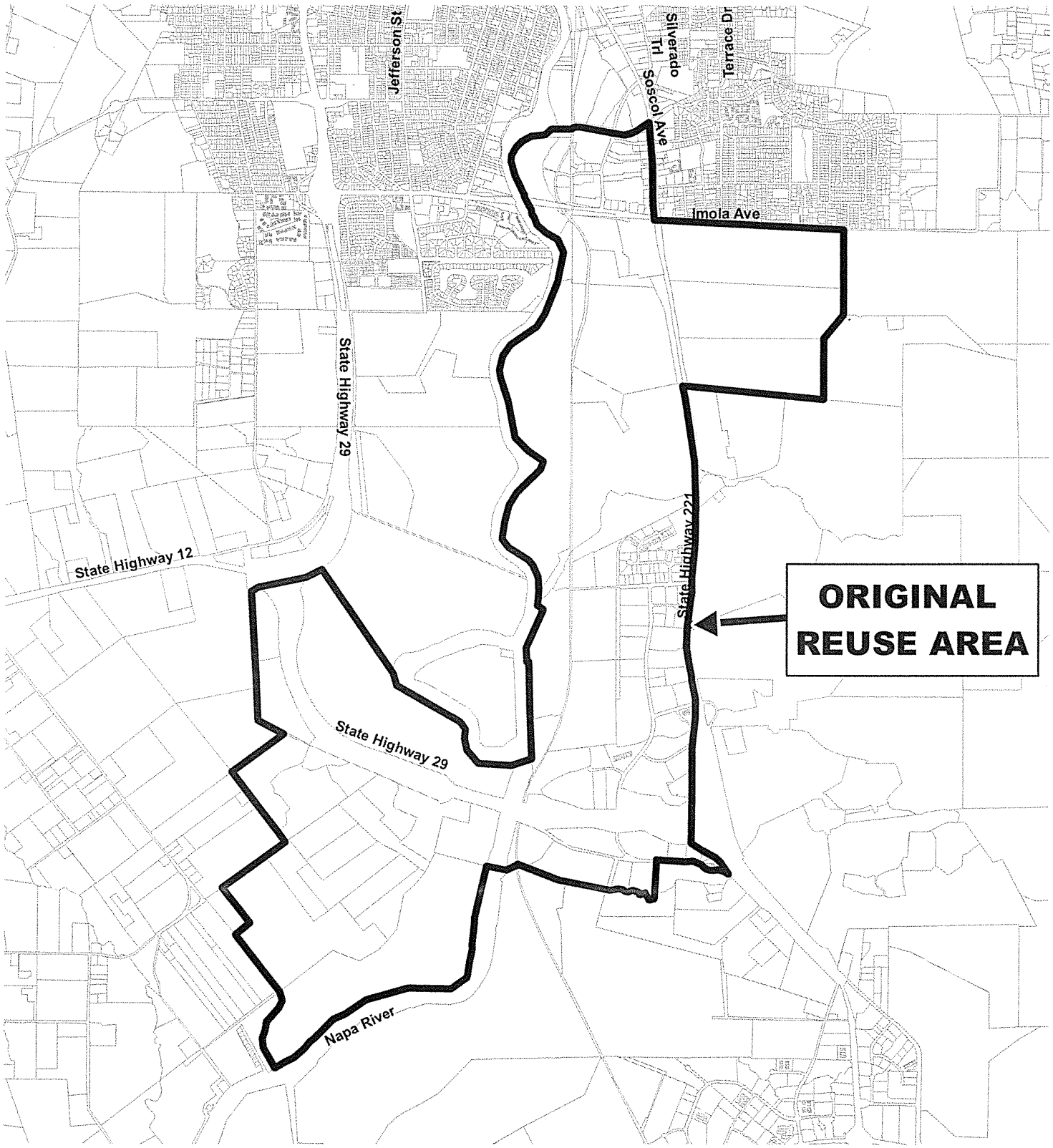
ATTEST:

_____
Cheryl Schuh, NSD Clerk of the Board

APPROVED AS TO FORM:

_____
John Bakker, NSD Legal Counsel

EXHIBIT A



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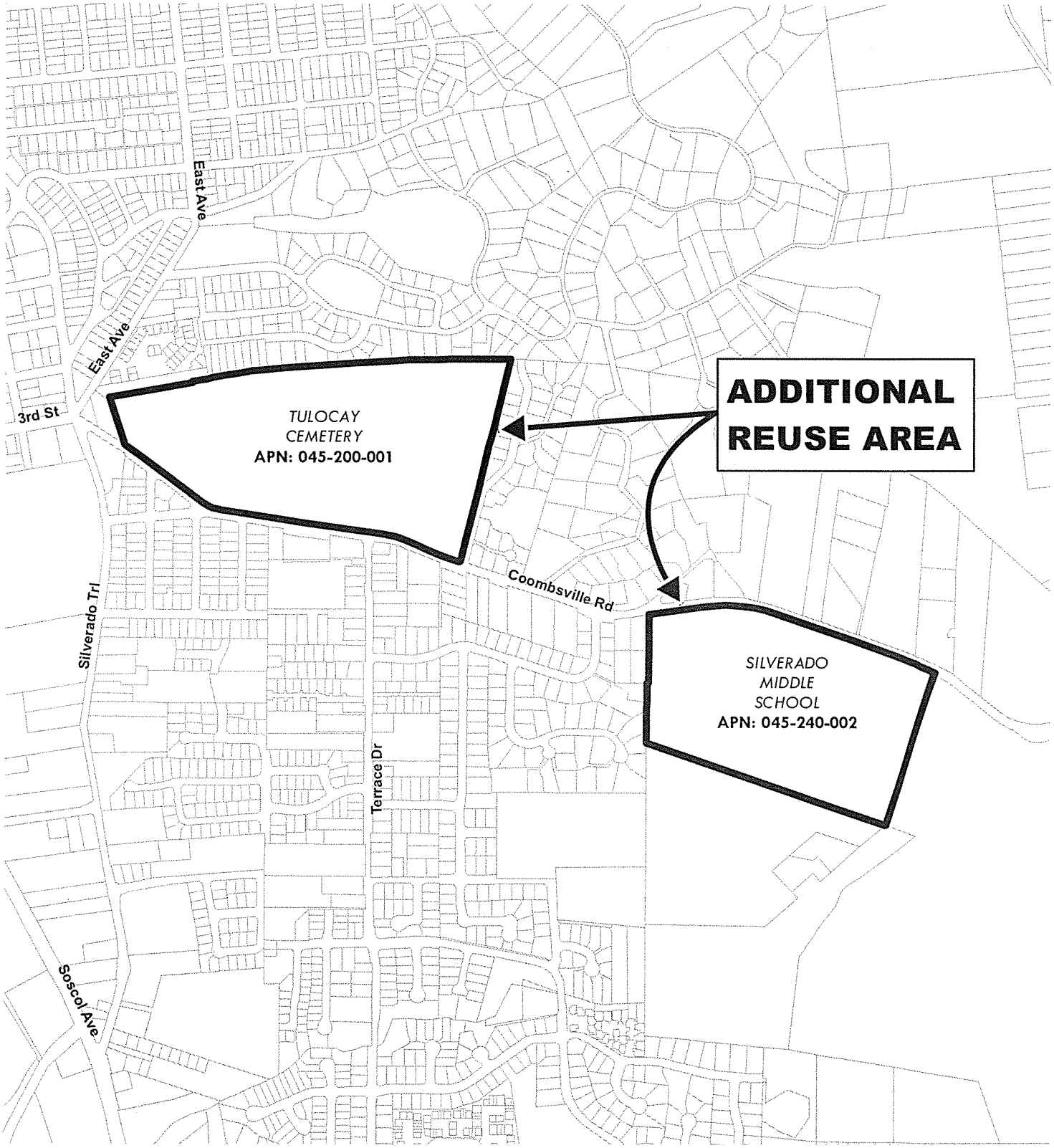
ORIGINAL PARCELS SERVED BY NAPASAN RECYCLED WATER

EXHIBIT D



ADDITIONAL PARCELS SERVED BY NAPASAN RECYCLED WATER

Appendix I

Napa Sanitation District Recycled Water Policy (Resolution No. 22-020)

RESOLUTION NO. 22-020

RESOLUTION OF THE BOARD OF DIRECTORS OF THE NAPA SANITATION DISTRICT ADOPTING A POLICY ALLOCATING RECYCLED WATER SUPPLY

WHEREAS, the Napa Sanitation District (NapaSan) Board of Directors adopted a Resolution to provide a policy for future activities associated with the recycled water program on April 6, 2011 (Resolution 11-004); and

WHEREAS, The Board of Director's adoption of this resolution will replace Resolution 11-004; and

WHEREAS, Resolution 11-004 allocated 3,700 acre-feet per year of recycled water during the months of May-October to existing and future customers; and

WHEREAS, since 2011, average dry-weather wastewater flow into NapaSan's treatment plant has decreased due to water conservation measures; and

WHEREAS, NapaSan completed a Wastewater Treatment Plant Master Plan in October 2022 which determined that the maximum supply of recycled water during the months of May-October is 3,400 acre-feet per year; and

WHEREAS, the Board of Directors desires to adopt a revised policy to allocate recycled water to existing and future customers during the months of May-October;

NOW, THEREFORE BE IT RESOLVED that the Board of Directors of the Napa Sanitation District hereby authorizes and directs the implementation of the following policy for allocation of recycled water:

1. The allocation of recycled water during the months of May-October is set based on the information contained in Table 1, attached.

2. Recycled water is available to customers during the months of November-April and customers' acceptance of recycled water during November-April will not count against recycled water allocated to the customer or customer group as listed in Table 1. Recycled water availability during the months of November-April is not guaranteed by NapaSan but can be used by customers when available.

3. Recycled water that is not used by customers in Table 1 can be made available for truck hauling from NapaSan's two truck fill stations. Recycled water is not specifically allocated for truck hauling during May-October but recycled water allocation not used by existing or future customers will be available for truck hauling.

4. To maximize the availability of recycled water during May-October, NapaSan may require users to store recycled water where practical. NapaSan may utilize pricing to encourage storage, discourage wasteful usage, and stretch water supply.

I hereby certify that the foregoing Resolution was duly and regularly adopted by the Board of Directors of the Napa Sanitation District, at its regularly scheduled meeting on the 19th day of October, 2022, by the following vote:

AYES:	GRAVES, GREGORY, MOTT, SEDGLEY
NOES:	NONE
ABSENT:	LUROS
ABSTAIN:	NONE

Chair, Board of Directors

ATTEST:

Secretary, Board of Directors

Table 1. Allocation of Recycled Water during May-October

Customer or Customer Group	May-October Allocation (acre-feet per year)
MST (Coombsville)	700
LCWD (Carneros)	450
Stanly Ranch (resort and vineyards)	200
Napa State Hospital	200
NapaSan Beneficial Reuse	150
Other Existing Customers	1,400
Infill Customers (Future)	300
TOTAL	**3,400**

Definitions of customers and customer groups:

MST (Coombsville)
The Milliken-Sarco-Tulocay (MST) customers include existing and future customers connected to NapaSan's recycled water pipeline north and east of Napa State Hospital, including properties within the City of Napa city limits located on Coombsville Road.

LCWD (Carneros)
The Los Carneros Water District (LCWD) customers include existing and future customers connected to NapaSan's recycled water pipeline west of the Stanly Ranch area, west of the Napa River, and outside the City of Napa city limits.

Stanly Ranch (resort and vineyards)
Stanly Ranch customers include existing and future customers located west of the Napa River, within the City of Napa city limits, and within the area annexed into NapaSan's sewer service area in 2011. The properties must be connected to NapaSan's recycled water pipeline to be eligible for this allocation.

Napa State Hospital
Properties located at the southeast quadrant of the intersection of Imola Avenue and Napa Vallejo Highway (APNs 046-450-020, 046-450-069, 046-450-070).

NapaSan Beneficial Reuse
NapaSan's Jameson Ranch and Somky Ranch where recycled water is used beneficially as part of NapaSan's biosolids program to grow feed and fodder crops.

Other Existing Customers
Existing recycled water customers connected to NapaSan's recycled water pipelines that are not included in the five previous categories.

Infill Customers (Future)
Properties located within NapaSan's recycled water benefit zone and outside the five areas defined above. NapaSan's recycled water benefit zone is consistent with the Dissolution Agreement with the City of American Canyon (dated 1994) which defines recycled water

service areas for both NapaSan and the City of American Canyon. Generally the infill (future) customers are located in the airport area industrial parks, the Napa County Airport, North Kelly Road area (west of North Kelly Road), Devlin Road area, parcels between State Route 29 and South Kelly Road and north of Fagan Creek, areas within the City of Napa City limits near NapaSan's recycled water pipelines described in the agreement between NapaSan and the City of Napa (dated 1998, amended 2018) including Napa Pipe, Napa Valley Commons, and South Napa Marketplace.

Appendix J

Water Shortage Continency Plan

City of Napa
Water Shortage Contingency Plan

JOINTLY PREPARED BY

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Table of Contents

LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AF	Acre-Feet
AWSDA	Annual Water Supply and Demand Assessment
City	City of Napa
County	Napa County
CRMM	Community Relations & Media Manager
CWC	California Water Code
Delta	Sacramento-San Joaquin Delta
DWR	Department of Water Resources
ERP	Emergency Response Plan
FEMA	Federal Emergency Management Agency
GPCD	Gallons Per Capita Per Day
HMP	Hazard Mitigation Plan
MGD	Million Gallons Per Day
NMC	Napa Municipal Code
PIO	Public Information Officer
RRA	Risk and Resilience Assessment
SB	Senate Bill
SEMS	Standardized Emergency Management System
Supervisor	Water Treatment Facility Supervisor
SWP	State Water Project
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant

City of Napa
Water Shortage Contingency Plan

Water shortages occur whenever the available water supply cannot meet the normally expected customer water demand. This can be due to several reasons, such as climate change, drought, and catastrophic events. Drought, regulatory action constraints, and natural and manmade disasters may occur at any time. In 2018, the California State Legislature (Legislature) enacted two policy bills (Senate Bill (SB) 606 [Hertzberg] and Assembly Bill (AB) 1668 [Friedman]) (2018 Water Conservation Legislation) to establish a new foundation for long-term improvements in water conservation and drought planning to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning.

This Water Shortage Contingency Plan (WSCP) describes the City of Napa's (City) strategic plan for preparing for and responding to water shortages, including defining water shortage stages and associated shortage response actions. This WSCP provides a guide for the City to proactively prevent catastrophic service disruptions and addresses the 2018 Water Conservation Legislation requirements. As part of this WSCP, the City's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting are described. Chapter 13.10 of the Napa Municipal Code (NMC) describes the City's WSCP actions.

The City intends for this WSCP to be dynamic so that it may assess response action effectiveness and adapt to emergencies and catastrophic events. Refinement procedures to this WSCP are provided to allow the City to modify this WSCP outside of the Urban Water Management Plan (UWMP) process.

1.0 WATER SUPPLY RELIABILITY ANALYSIS

The City's water supply planning analysis and reliability are documented in the most recent UWMP. The UWMP provides a comprehensive assessment of existing and projected water demands (Chapter 4), existing and planned water supplies by source (Chapter 6), water supply reliability assessment and the Drought Risk Assessment (Chapter 7), and seismic risk assessment and mitigation planning (Chapter 8).

To proactively manage for a potential water shortage, the City conducts an annual water supply and demand assessment as described in Section 2.0.

2.0 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

Beginning July 1, 2022, California Water Code (CWC) Section 10632.1 required water suppliers to submit an Annual Water Supply and Demand Assessment (AWSDA) and an Annual Water Shortage Assessment Report to the Department of Water Resources (DWR). This section provides the procedures for the City to conduct its AWSDA, which informs the City's Annual Water Shortage Assessment Report and assists the City with planning for potential water supply shortages. The objective of the AWSDA is to forecast near-term supply conditions so that the City can prepare logistically and financially for any anticipated water supply constraints, as well as enact appropriate shortage response actions in a timely manner.

This section provides the decision-making process, key data inputs, and methodology necessary for the City to produce its AWSDA. This includes steps the City may take to declare a water shortage emergency and associated water shortage stage (see Section 3.0) and implement water shortage response actions (see Section 4.0).

2.1 Decision-Making Process

The City will use the decision-making process described below to consistently produce its AWSDA. The City may adjust and improve this process as needed.

The Deputy Utilities Director (or designee) is responsible for preparing the City's AWSDA and Annual Water Shortage Assessment Report and submitting them to DWR by July 1st of each year. Their team will gather key data inputs described in Section 2.2 and conduct the assessment in accordance with Section 2.3. In May of each year, the Deputy Utilities Director will finalize the AWSDA based on that year's final SWP allocation. The AWSDA and Annual Water Shortage Assessment Report will be presented to the Utilities Director for review and approval.

To conduct the AWSDA, the Deputy Utilities Director (or designee) will follow the schedule of activities shown in Table 1. for conducting the AWSDA and decision making. Due to variations in climate and hydrologic conditions, the timeframes shown in the table are approximate and may be adjusted as needed. The City intends to implement shortage response actions to effectively address anticipated water shortage conditions in a timely manner while complying with the State's reporting requirements.

Table 1. Schedule of AWSDA and Decision-Making Activities

Schedule	Task	Activity or Decision	Responsible Party
AWSDA Activities			
April	Determine available water supply for current year and one subsequent dry year. Describe sources and quantities considering factors affecting supply as described in Section 2.2.	Activity	Deputy Utilities Director or designee
April	Determine water demands for current year and one subsequent dry year. Describe demand types and quantities considering factors affecting demands as described in Section 2.2.	Activity	Deputy Utilities Director or designee
Early May	Using the methodology described in Section 2.3, calculate the City's water supply reliability for the current year and one subsequent dry year.	Activity	Deputy Utilities Director or designee
Mid-May	Complete the AWSDA and Annual Water Shortage Assessment Report based on expected water deliveries, including the year's final SWP allocation. Submit to Utilities Director for review.	Activity	Deputy Utilities Director or designee
Mid-May	Review the AWSDA and Annual Water Shortage Assessment Report and provide comments, if needed.	Activity	Utilities Director
Late May	Finalize the AWSDA and Annual Water Shortage Assessment Report. Prepare City Council agenda item.	Activity	Deputy Utilities Director or designee
June	Receive the final AWSDA and Annual Water Shortage Assessment Report.	Activity	City Council

Table 1. Schedule of AWSDA and Decision-Making Activities			
Schedule	Task	Activity or Decision	Responsible Party
Decision-Making Activities If the AWSDA Shows Available Supply May Not Meet Expected Demands			
Mid-May	Based on finalized determinations of the AWSDA regarding water shortage condition and recommended actions, prepare recommendations on water shortage condition determination and actions.	Decision	Deputy Utilities Director
Mid-May	Prepare ordinances or resolutions approving determinations and actions.	Decision	Deputy Utilities Director
Mid-May	Coordinate interdepartmentally, with the region's water service providers, and with Napa County for the possible proclamation of a local emergency.	Decision	Utilities Director
Late May/Early June	Present finalized determinations and recommendations to the City Council, along with ordinances or resolutions approving determinations and actions.	Activity	Utilities Director
June	Receive presentation of finalized determinations and recommendations. Make determination of degree of emergency and act on resolutions that declare a water shortage emergency condition. Authorize water shortage response actions for implementation.	Decision	City Council
June	Revise the AWSDA and Annual Water Shortage Assessment Report to include City Council determinations and approved actions.	Activity	Deputy Utilities Director or designee
After City Council Meeting	If a water shortage emergency condition is declared, implement the WSCP and the water shortage response actions as approved by the City Council.	Decision	Utilities Director
AWSDA and Report Submittal			
On or before July 1	Submit the final AWSDA and Annual Water Shortage Assessment Report to DWR.	Activity	Deputy Utilities Director or designee

2.1.1 AWSDA Finding: Sufficient Water Supply to Meet Expected Demands

If the AWSDA finds that available water supply will be sufficient to meet expected demands for the current year and one subsequent dry year, no further action is required. City staff will submit the Annual Water Shortage Assessment Report to DWR by July 1st of each year.

2.1.2 AWSDA Finding: Available Water Supply Will Not Meet Demands

Should the AWSDA find that available supply will not meet expected demands, the City will coordinate internally, with the region's other water service providers, and with Napa County (County) for the possible proclamation of a local emergency. The Utilities Director will present the finalized assessment to the City Council, along with recommendations on water shortage condition determination and actions. Recommended actions may include declaration of a water shortage emergency, declaration of a water shortage stage, and water shortage actions.

Based on the findings of the AWSDA, the City Council will determine if a water shortage condition exists and, if needed, adopt a resolution declaring a water shortage emergency and an associated water shortage stage and authorizing water shortage actions. The Deputy Utilities Director (or designee) will then update the City's Annual Water Shortage Assessment Report, incorporating City Council determinations and approved actions.

2.2 Key Data Inputs

The State requires that the AWSDA evaluate supplies and demands for, at a minimum, the current year and one subsequent dry year. The planned water supply and demand for the current year and a subsequent dry year will be used to evaluate the City's water supply reliability.

In planning for water supplies, the following factors are considered as applicable and appropriate:

1. SWP annual supply allocation
2. Lake Hennessey and Milliken Reservoir storage levels
3. Options for supplemental water purchases
4. Hydrological conditions
5. Regulatory conditions
6. Contractual constraints
7. Surface water quality
8. Infrastructure capacity constraints or changes
9. Capital improvement project implementation

Planned water supply sources and quantities will be described and be reasonably consistent with the supply projections in Chapter 6 (Normal-Year Water Supply Characterization) of the City's most recent UWMP. Should supply sources and projections differ significantly between the AWSDA and the UWMP, the City will explain the difference.

The AWSDA will examine unconstrained water demands, which are customer demands where no water conservation measures are in effect. In planning for water demands, the following factors are considered as applicable and appropriate:

1. Weather conditions
2. Water year type
3. Population changes (e.g., due to development projects)
4. Demand trends and anticipated new demands (e.g., changes to land use)
5. Pending policy changes that may impact demands
6. Infrastructure operations

Planned water demand types and quantities will be described and should be reasonably consistent with the demand projections in Chapter 4 (Water Use Characterization) of the City's most recent UWMP. Should demand projections deviate significantly between the AWSDA and the UWMP, the City will explain the difference.

2.3 Assessment Methodology

In preparing the AWSDA, the City will use the following assessment methodology and criteria to evaluate the City's water supply reliability for the current year and following one dry year.

The City uses a spreadsheet to plan for current year and future year supplies and demands. Planned supply and demand inputs described in Section 2.2 will be entered in the spreadsheet in annual increments. As needed, the increments may be revised to monthly or seasonal periods to more closely evaluate specific conditions and needs.

Supply and demand will be compared to determine the City's water supply reliability in the current year and the following one dry year. The City's water supply will be deemed reliable if it can meet planned water demands in both the current year and the following dry year. If water supply cannot meet planned water demands in the current year or the following dry year, the extent of the water shortage condition will be determined, and the City will prepare response actions in accordance with this WSCP.

Findings from the AWSDA will be presented to the City Council for consideration, along with recommendations for action.

3.0 SIX STANDARD WATER SHORTAGE LEVELS

To provide a consistent regional and statewide approach for conveying the relative severity of water supply shortage conditions, the 2018 Water Conservation Legislation mandates that water suppliers plan for six standard water shortage levels that correspond to progressive reductions of up to 10, 20, 30, 40, 50 percent, and greater than 50 percent from the normal reliability condition. Each shortage condition should correspond to additional actions water suppliers would implement to meet the severity of the impending shortages.

For each of the State's standard shortage levels (also called "stages"), Table 2 summarizes the water shortage range (i.e., percent shortage from normal supplies) for each stage. These water shortage stages apply to both foreseeable and unforeseeable water supply shortage conditions.

As described in Section 2.0, the City will conduct an AWSDA to determine its water supply condition for the current year and the following one dry year. Preparing the AWSDA helps the City ascertain the need to declare a water shortage emergency and water shortage condition. In other cases, the City may need to declare a water shortage emergency due to unforeseen water supply interruptions. When the City anticipates or identifies that water supplies may not be adequate to meet the normal water demands of its customers, the City Council may determine that a water shortage exists and consider a resolution to declare a water shortage emergency and associated stage. The shortage stage provides direction on shortage response actions.

Table 2. Water Shortage Contingency Plan - Shortage Levels			
Shortage Level	Percent Shortage Range	Water Shortage Condition Definition	Shortage Response Actions
1	Up to 10%	Insufficient carryover storage and supplemental water to provide for 90% of normal supplies.	Voluntary conservation; implement actions per Table 4
2	Up to 20%	Insufficient carryover storage and supplemental water to provide for 80% of normal supplies.	Voluntary or mandatory conservation; implement actions per Table 4
3	Up to 30%	Insufficient carryover storage and supplemental water to provide for 70% of normal supplies.	Mandatory conservation; implement actions per Table 4
4	Up to 40%	Insufficient carryover storage and supplemental water to provide for 60% of normal supplies.	Mandatory conservation; implement actions per Table 4
5	Up to 50%	Insufficient carryover storage and supplemental water to provide for 50% of normal supplies.	Mandatory conservation; implement actions per Table 4
6	>50%	Insufficient carryover storage and supplemental water to provide for less than 50% of normal supplies.	Mandatory conservation; implement actions per Table 4

4.0 SHORTAGE RESPONSE ACTIONS AND EFFECTIVENESS

CWC Section 10632 (a)(4) requires shortage response actions that align with the defined shortage levels. The City's shortage response actions consist of a combination of supply augmentation, demand reduction, and operational changes. The specific suite of response actions implemented depends on the event that precipitates a water shortage condition, the time of the year the event occurs, the water supply sources available, and the condition of the City's water system infrastructure. In general, the City plans to use a balanced and dynamic approach, adapting its response actions to meet the water use goals associated with the declared water shortage condition.

The City will track progress toward water use reduction goals by analyzing weekly or monthly water production. The analysis will compare the drought production with the previous non-drought production to obtain a percent reduction. The City will increase or decrease its public outreach efforts based on observed usage reduction.

The shortage response actions discussed below may be considered tools that allow the City to respond to water shortage conditions. These actions are in addition to State mandated water conservation requirements at any water shortage stage. The City will implement both State-mandated prohibitions and its own actions.

Because the City may continuously monitor and adjust its response actions to reasonably equate demands with available supply, the extent to which implementation of each action reduces the gap between water supplies and water demand is difficult to quantify and thus only estimated. Certain response actions, such as public outreach and enforcement, boost the effectiveness of other response actions and do not have a quantifiable effect on their own.

4.1 Supply Augmentation and Other Actions

Chapter 6 of the City's most recent UWMP describes the City's normal-year water supply portfolio, which includes local surface water and imported water through the SWP. In emergencies, the City can receive water via intertie connections with the Cities of American Canyon, St. Helena, and Calistoga, and the Town of Yountville. In dry years, the City may participate in the DWR Dry Year Transfer Program or the Yuba Accord Dry Year Water Purchase Program to bolster supplies. Table 3 summarizes the City's supply augmentation and other actions.

Table 3. Supply Augmentation and Other Actions (DWR Table 8-2 Retail)

Yes	Is the Supplier completing this table using the standard six levels? (yes/no)			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)	
Add additional rows as needed				
1				No action at this shortage level
2				No action at this shortage level
3	Implement or Modify Drought Rate Structure or Surcharge	Percentage	10-15%	If determined necessary by City Council and set by resolution
4	Transfers	Volume	Market-dependent	SWP Dry Year Transfer Program
5	Other Purchases	Volume	Market-dependent	Yuba Accord Dry Year Purchase Program
6	Other Actions (describe)	Volume	Market-dependent	Intertie connections with other Napa County cities

4.2 Demand Reduction

Using lessons learned from the 2021-2023 drought, the City codified its Water Shortage Contingency Plan in NMC Chapter 13.10, while also clarifying and updating its permanent water waste prohibitions in NMC Chapter 13.09. During water shortage conditions, the City plans to reduce demand by implementing the actions described in NMC Chapters 13.09 and 13.10, shown here in Table 4. Demand reduction actions are organized by the triggering water shortage stage, and each action includes an estimate of how much its implementation will reduce the shortage gap. For each demand reduction action, Table 4 also indicates if the City uses compliance actions such as penalties, charges, or other enforcement. Demand reduction actions are only listed in Table 4 in the stage when they are first implemented. The City will continue to use these actions in higher stages unless otherwise noted.

Table 4. Demand Reduction Actions (DWR Table 8-3 Retail)

Yes	Is the Supplier completing this table using the standard six levels? (yes/no)				
Shortage Level	Demand Reduction Actions **Drop down list** These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.	How much is this going to reduce the shortage gap?		Additional Explanation or Reference (OPTIONAL)	Penalty, Charge, or Other Enforcement? **For Retail Suppliers Only** Drop Down List
		Volume or Percentage Drop down	Shortage Gap Reduction Value (May be a range) (AF)		
Add additional rows as needed					
1	Expand Public Information Campaign			Boosts effectiveness of other, quantifiable actions	No
1	Offer Water Use Surveys	Percentage	0-2%	Standard offering for water customers	No
1	Provide Rebates on Plumbing Fixtures and Devices	Percentage	0-2%	Standard offering for water customers	No
1	Provide Rebates for Landscape Irrigation Efficiency	Percentage	0-2%	Standard offering for water customers	No
1	Provide Rebates for Turf Replacement	Percentage	0-5%	Standard offering for water customers	No
1	Other - Require automatic shut of hoses	Percentage	0-1%		Yes
1	Other - Prohibit use of potable water for washing hard surfaces	Percentage	0-1%		Yes
1	Landscape - Restrict or prohibit runoff from landscape irrigation	Percentage	0-2%		Yes
1	Landscape - Other landscape restriction or prohibition	Percentage	0-1%	Prohibit landscape irrigation during and within 48 hours after a quarter inch or more rain event	Yes
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Percentage	0-1%		Yes
1	Landscape - Limit landscape irrigation to specific times	Percentage	0-2%	Prohibit landscape irrigation between 10:00 am and 5:00 pm	Yes
2	Increase Water Waste Patrols	Percentage	0-3%		Yes
2	Landscape - Limit landscape irrigation to specific days	Percentage	0-10%	Prohibit landscape irrigation on consecutive days, except for needs of newly planted	Yes
2	Other water feature or swimming pool restriction	Percentage	0-2%	Prohibit draining and refilling of pools or decorative ponds unless needed for repair	Yes
2	CII - Restaurants may only serve water upon request	Percentage	0-1%		Yes
2	CII - Lodging establishment must offer opt out of linen service	Percentage	0-1%		Yes
3	Landscape - Limit landscape irrigation to specific days	Percentage	5-20%	Landscape irrigation limited to two days per week	Yes
3	Implement or Modify Drought Rate Structure or Surcharge	Percentage	10-20%	If determined necessary and set by City Council	Yes
3	Pools and Spas - Require covers for pools and spas	Percentage	0-1%		Yes
4	Landscape - Limit landscape irrigation to specific days	Percentage	15-25%	Landscape irrigation limited to one day per week	Yes
4	Other	Volume	TBD	Maximum bimonthly water use allocations for customers, if determined necessary and set by City Council	Yes
4	Other	Volume	1-5 million gallons per month	Interruptible-Surplus Agricultural Water services suspended	Yes
4	Other - Prohibit use of potable water for construction and dust control	Percentage	0-1%		Yes
4	Other water feature or swimming pool restriction	Percentage	0-1%	Prohibit filling of any decorative lakes or ponds	Yes
4	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Percentage	0-1%		Yes
5	Landscape - Prohibit all landscape irrigation	Percentage	15-35%		Yes
5	Landscape - Other landscape restriction or prohibition	Percentage	1-4%	Prohibit installation of new or replacement turf	Yes
5	CII - Other CII restriction or prohibition	Percentage	1-2%	Prohibit use of water for street cleaning, line flushing, fire sprinkler testing, firefighter training	Yes
5	Other	Percentage	2-5%	Implement special water conservation plans for largest water users, if determined necessary	Yes
6	Landscape - Prohibit all landscape irrigation	Percentage	5-10%	Remove previous exceptions for drip and micro-spray, hand watering, irrigation system testing	Yes
6	Other water feature or swimming pool restriction	Percentage	0-2%	Prohibit draining and refilling of all pools or spas, or filling new pools. No exceptions.	Yes
6	Other	Percentage	1-2%	Prohibit all agricultural irrigation	Yes
NOTES: Actions introduced in a lower shortage level will also be used in higher shortage levels unless otherwise noted.					

The City will monitor water production, water demands, and changing conditions to determine the intensity of its public outreach, the extent of its enforcement actions, and the need to adjust its water shortage condition declaration as discussed in Section 9.0.

4.3 Operational Changes

The City can make several operational changes to address a water shortage, including increasing water waste patrols and decreasing line flushing and flow testing (e.g., for fire sprinkler design or training of firefighting personnel). While the City always seeks to reduce water losses, these actions will further those efforts during a shortage. These operational changes are included in Table 4, as they either directly or indirectly reduce demands. Capital improvement projects can also be delayed or accelerated as needed.

4.4 Emergency Response Plan

As stated in Section 3.0, the City's water shortage stages outlined in Table apply to both foreseeable and unforeseeable water supply shortage conditions. The latter includes catastrophic water shortage conditions, which are addressed in the City's Emergency Response Plan (ERP). The ERP, updated in 2025 for compliance with America's Water Infrastructure Act, outlines preparation, response, and recovery procedures associated with unforeseeable incidents such as water supply contamination, earthquakes, infrastructure failure, and other events. Due to the confidential nature of the ERP, the document is not included with this plan, but some key provisions are discussed below.

For significant disasters, the City uses the Standardized Emergency Management System (SEMS) to allow rapid and effective coordination in the field. For example, in a major earthquake event, all Water Division employees fall under the Utilities Department's direction, the Operations section as defined by SEMS. The ERP includes these chain-of-command details for incidents, along with mutual aid agreements, emergency resources, emergency water supply calculations, and public notification procedures.

The South Napa Earthquake of August 24, 2014 provided a real-life exercise for the City's ERP. None of the three water treatment plants (WTPs) were significantly damaged or forced offline during that event, but main breaks caused customer outages.

The Water Division has developed a redundant system in the event of a disaster. The main points of this redundant system are:

1. The City has two major WTPs, each capable of producing 20 million gallons per day (MGD).
2. Each WTP has its own auxiliary power supply.
3. Each WTP has its own raw water source.
4. The two WTPs are more than 20 miles apart, which reduces the risk of a single event affecting both plants simultaneously.
5. Both WTPs were designed with redundant process components.

In the extremely unlikely event that the City loses all its water sources at once, the system's tank storage capacity of approximately 29 million gallons can help the City respond to the emergency. The City's best security in an extreme emergency may be the ability to deliver raw water to its customers from both Lake Hennessey and Milliken Reservoir. That allows the City to provide water for fire protection even if the pipelines have numerous leaks. The raw water would also be available for human consumption as long as it was boiled or treated with iodine.

With some events, it could be necessary for the City to use an emergency supply source to maintain system pressure. The City has intertie connections with the Cities of American Canyon, St. Helena, and Calistoga, and the Town of Yountville. The City of American Canyon can supply the City with approximately 4 MGD for a limited time.

Overall, the ERP points out the flexible design of the water system and the City's ability to minimize service disruptions in the worst of emergencies. For all conceivable emergencies, a specific plan is in place to rapidly restore water service, ensure water for firefighting, and minimize adverse impacts on public health and safety.

4.5 Seismic Risk Assessment and Mitigation Plan

CWC Section 10632.5(a) requires that UWMPs include a seismic risk assessment and mitigation plan to assess and mitigate a water system's seismic vulnerabilities. Seismic risks that may affect water supply reliability are evaluated in Chapter 8 of the City's most recent UWMP and are incorporated into the City's overall water shortage response planning.

5.0 COMMUNICATION PROTOCOLS

In the event of a water shortage, the City must inform its customers, the general public and interested parties, and local, regional, and state entities. Communication protocols for foreseeable and unforeseeable events are provided in this section. In any event, timely and effective communication must occur for appropriate response to the event. Key City staff communicate via radio or cell phones, and all City staff are provided email accounts to communicate internally and externally.

5.1 Communication for Foreseeable Events

A water shortage may be foreseeable when the City prepares its AWSDA, as described in Section 2.0. When the City determines the potential of a water shortage event, the City Council may declare a water shortage emergency.

If a water shortage emergency is anticipated, City staff will coordinate interdepartmentally, with the region's water service providers, and with the County for the possible proclamation of a local emergency. If needed, City staff will communicate with the appropriate State agencies regarding the water shortage emergency.

In a duly noticed meeting, the City Council will receive a presentation of the current or predicted shortage as determined by the AWSDA. The City Council will determine if a water shortage emergency condition exists and the degree of the emergency, while considering the shortage response actions triggered or anticipated to be triggered by the shortage level. As necessary, the City Council will act on the water shortage emergency declaration, associated water shortage stage, and shortage response actions.

If the City Council declares a water shortage emergency, the Community Relations & Media Manager (CRMM) and City staff will coordinate to communicate with its customers and the public to inform them about the declared water shortage emergency, water shortage level, and authorized water use restrictions. The City may use any combination of the following outreach formats: newspaper publications, mailers, bill stuffers, door hangers, newsletters, social media, its website, local radio, public event appearances, mobile lighted message signs, and press releases.

5.2 Communication for Unforeseeable Events

A water shortage may occur during unforeseeable events such as earthquakes, fires, infrastructure failures, civil unrest, and other catastrophic events. The City's ERP provides specific communication protocols and procedures to convey water shortage contingency planning actions during these events. The City may trigger any of these communication protocols at any water shortage stage, depending on the event.

In general, communications and notifications should proceed along the chain of command. Notification decisions will be made under the direction of the Director of Emergency Services, with external communications managed by the CRMM. The ERP provides a list of relevant contacts to notify at the local, regional, and state level.

The CRMM is the official spokesperson for the City and is responsible for establishing an information center and providing information for news media. In addition, the CRMM maintains a list of contacts to disseminate information to the public, typically via electronic media, radio, television, or newspapers.

6.0 COMPLIANCE AND ENFORCEMENT

After the City Council declares a water shortage emergency and adopts a water shortage condition, customers will be notified as described in Section 5.0. NMC Chapter 13.10 includes demand reduction actions and compliance and enforcement measures the City may implement when a water shortage is declared.

The Utilities Director is authorized to issue administrative citations for violations of demand reduction actions as noted in Table . After an initial educational warning, escalating fines may be imposed for repeated violations. Exceptions to demand reduction actions may be requested in writing, with the customer providing sufficient information, documentation, and verification, which establishes that the requested exception is necessary in order to: (1) protect the public health or safety, or (2) avoid undue hardship (including adverse economic impacts such as loss of production or jobs). The request shall also document that all feasible conservation measures are being used, and that there are no alternative available sources of water. The request shall be subject to the review and approval of the Utilities Director, whose decision will be final.

7.0 LEGAL AUTHORITIES

NMC Chapter 2.89 includes provisions related to the preparation and implementation of plans in the event of local emergencies. NMC Chapters 13.09 and 13.10 support the City's water shortage contingency actions. These chapters include provisions for declaring a water shortage emergency, determining customer use reductions, water use regulations and restrictions, and compliance and enforcement.

When a water shortage is determined, the City will coordinate with the region's other water service providers and the County for the possible proclamation of a local emergency in accordance with California Government Code, California Emergency Services Act (Article 2, Section 8558).

In a duly noticed meeting, the City Council will determine whether a water shortage emergency condition exists and, if so, the degree of the emergency and what regulations and restrictions should be enforced in response to the shortage. The City shall declare a water shortage emergency in accordance with CWC Chapter 3 of Division 1.

> *California Water Code Division 1, Section 350*
> *…The governing body of a distributor of a public water supply…shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.*

The water shortage emergency declaration triggers communication protocols described in Section 5.0 and compliance and enforcement actions described in Section 6.0.

8.0 FINANCIAL CONSEQUENCES OF WSCP

Pursuant to CWC Section 10632(a)(8)(C), the City complies with CWC Section 366 by prohibiting excessive residential water use during declared drought emergencies through the allocation and excess water use charge provisions of NMC Chapter 13.10. During water shortages, revenue is expected to decrease due to reduced customer consumption. Implementation of these provisions requires administrative, billing system, monitoring, enforcement, and appeal procedures, which generate compliance-related costs in addition to the broader financial impacts of drought conditions. To compensate for lost revenue and possible increase in expenditures, the City may need to use drought rates or financial reserves to maintain fiscal health. Both components are discussed in this section.

8.1 Drought Rate Structures and Surcharges

Current standard water rates are available on the City's website.[1] Standard rates consist of a fixed service charge based on meter size and a water quantity charge. For single-family residential customers, the water quantity charge is tiered, with higher rates charged for greater amounts of water consumed. The City reserves the right to change the water rate structure during a declared water shortage to more strongly encourage customers to reduce water use, to help cover water system costs, and to protect the financial stability of the water system as water demands are reduced.

Beginning with water shortage Stage 3, the City shall implement a drought rate structure or surcharge on water sales as set by a resolution of the City Council, in accordance with Proposition 218, if determined to be necessary (NMC Chapter 13.10).

8.2 Use of Financial Reserves

As part of the Water Fund, the City maintains an Emergency Reserve, a Water Supply Reserve, and a Stabilization Reserve. In the event of a significant drop in revenue during a drought, these funds are available to maintain operations and potentially augment supplies to reduce the water shortage. To compensate for loss of revenue from reduced water sales and increased staffing for the water shortage response effort, the reserves may be employed in water shortage Stages 4 through 6.

[1] https://www.cityofnapa.org/606/Rate-Schedules

9.0 MONITORING AND REPORTING

The City's water system is fully metered, from its water supply sources to individual customer meters. Meters may be used as monitoring tools for compliance and reporting purposes. Production meters at the three WTPs provide a systemwide overview of water supply and demand.

In normal-year water supply conditions, production figures are recorded daily. Production totals are reported daily to the Water Treatment Manager and weekly to the Deputy Utilities Director. During a Stage 1, 2, or 3 water shortage, the Supervisor compares the weekly production to the target to verify that the demand reduction goal is being met. If reduction goals are not met, the Deputy Utilities Director will notify the City Council so that corrective action can be taken. The City Council receives monthly production reports during Stage 1, 2, or 3 water shortages. In Stage 4 and higher, the same procedure is followed, with the addition of a daily production report to the Deputy Utilities Director.

Customer meters are used to determine adherence to any water allocations implemented at Stage 4 of a water shortage. This metered usage data will allow the City to adjust public outreach, enforcement, and other water shortage response actions as needed to meet available supplies.

The State Water Resources Control Board requires monthly reporting of water production and demand reduction measures, along with associated enforcement metrics. The City regularly records its water meter readings, along with enforcement actions, ensuring that the City is able to comply with these reporting requirements.

10.0 WSCP REFINEMENT PROCEDURES

This WSCP is an adaptive management plan. It is subject to refinements as needed to ensure that the City's shortage response actions and mitigation strategies are effective and produce the desired results. Based on monitoring described in Section 9.0 and the need for compliance and enforcement actions described in Section 6.0, the City may adjust its response actions and modify its WSCP. The City will also seek input from staff and the public regarding the effectiveness of its WSCP and ideas for improvements. When a revised WSCP is proposed, the revised WSCP will undergo the process described in Section 12.0 for adoption by the City Council and distribution to the County and the general public.

11.0 SPECIAL WATER FEATURE DISTINCTION

The City distinguishes special water features, such as decorative lakes and ponds, differently from pools and spas. Special water features are regulated separately. Regulations under NMC Chapter 13.10 prohibit the use of potable water to fill decorative lakes or ponds.

12.0 PLAN ADOPTION, SUBMITTAL, AVAILABILITY, AND AMENDMENT

This WSCP is adopted concurrently with the City's 2025 UWMP, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. An electronic copy of this WSCP will be submitted to DWR within 30 days of adoption.

No later than 30 days after submittal to DWR, copies of this WSCP will be available at the Utilities Department, City Hall, and at the Napa County Library. A copy will also be provided to the County. An electronic copy of this WSCP will also be available for public review and download on the City's website.

Appendix K

UWMP and WSCP Adoption Resolutions

Not included with this submittal.

Concord

1001 Galaxy Way, Suite 310
Concord CA 95420
925-949-5800

Davis

2020 Research Park Drive, Suite 100
Davis CA 95618
530-756-5905

Irvine

25 Edelman, Suite 120
Irvine, CA 92618
949-420-3030

Lake Oswego

5 Centerpointe Drive, Suite 130
Lake Oswego OR 97035
503-451-4500

Medford

3235 Hillcrest Park Drive, Suite 106
Medford OR 97504
458-299-0843

Oceanside

804 Pier View Way, Suite 100
Oceanside CA 92054
760-795-0365

Phoenix

4505 E Chandler Boulevard, Suite 265
Phoenix AZ 85048
602-337-6110

Pleasanton

6800 Koll Center Parkway, Suite 150
Pleasanton CA 94566
925-426-2580

Sacramento

100 Howe Avenue, Suite 110S
Sacramento CA 95825
916-306-2250

San Diego

11545 West Bernardo Court, Suite 209
San Diego CA 92127
858-505-0075

Santa Rosa

2235 Mercury Way, Suite 105
Santa Rosa CA 95407
707-543-8506