Olivehurst Public Utility District

Agenda Item Staff Report

Meeting Date: January 24, 2022

Item description/summary:

Adoption of the 2020 OPUD Urban Water Management Plan (UWMP). OPUD staff and our consultant, West Yost, have been working on the 2020 OPUD UWMP for the past several months and the final draft has been released for public review since January 3rd, 2022. It is the intention tonight to open a public hearing, field any public comments and subsequently close the public hearing for this draft of the 2020 OPUD UWMP. Once the public hearing is complete, the Board can then consider adoption of the 2020 UWMP and direct staff to submit the document to the State for approval. Not only is the plan required by State law, but it is also an application requirement of State grants and loans.

Fiscal Analysis:

Without a Board adopted and State approved Urban Water Management Plan, any State funding by grants or loans is very unlikely.

Employee Feedback

None

Sample Motion:

Move to approve the 2020 OPUD Urban Water Management Plan update.

Prepared by:

Swarnjit Boyal, Director of Public Works

DRAFT REPORT | JANUARY 2022

2020 Urban Water Management Plan

PREPARED FOR

Olivehurst Public Utility District

PREPARED BY

WEST YOST
Water. Engineered.

Urban Water Management Plan

Prepared for

Olivehurst Public Utility District

Project No. 749-60-21-02

Project Manager: Elizabeth Drayer, PE _____ Date

QA/QC Review: James Connell, PE _____ Date

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AC	Asbestos Cement
Act	Urban Water Management Planning Act
AF	Acre-Feet
AWWA	American Water Works Association
BE	Bookman-Edmonston Engineering

bgs	Below Ground Surface
CASGEM	California Statewide Groundwater Elevation Monitoring
ccf	One Hundred Cubic Feet
CCR	Consumer Confidence Report
CDP	Census Designated Places
CID	Cordua Irrigation District
CII	Commercial Industrial Institutional
CIMIS	California Irrigation Management Information System
CWC	California Water Code
District	Olivehurst Public Utility District
DMMs	Demand Management Measures
DRA	Drought Risk Assessment
DWR	Department of Water Resources
DWR *Methodologies*	DWR *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (2016)
ET_o	Evapotranspiration
GHG	Greenhouse Gas
GPCD	Gallons Per Capita Per Day
gpm	Gallons Per Minute
GSA	Groundwater Sustainability Agency
GSC	Groundwater Sustainability Committee
GSP	Groundwater Sustainability Plan
IRWMP	Integrated Regional Water Management Plan
kWh	Kilowatt Hour
MGD	Million Gallons per Day
MG	Million Gallons
NAICS	North American Industry Classification System
PG&E	Pacific Gas & Electric
PVC	Polyvinyl Chloride
RUWMP	Regional Urban Water Management Plan
SB X7-7	Senate's Seventh Extraordinary Session of 2009 / California Senate Bill X7-7 / Water Conservation Act of 2009
SCADA	Supervisory Control and Data Acquisition
SGMA	Sustainable Groundwater Management Act of 2014
UAFW	Unaccounted for Water
ULFT	Ultra-Low Flush Toilets
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan
WUE	Water Use Efficiency
YWA	Yuba Water Agency

INTRODUCTION

An Urban Water Management Plan (UWMP) helps water suppliers assess the availability and reliability of their water supplies and current and projected water use to help ensure reliable water service under different conditions. This water supply planning is especially critical for California currently, as climate change is resulting in changes in rainfall and snowfall, which in turn impact water supply availability. Development is occurring throughout the State resulting in increased needs for reliable water supplies.

The Urban Water Management Planning Act (Act) requires water suppliers providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually to develop UWMPs every five years. UWMPs evaluate conditions for the next 20 years, so these regular updates ensure continued long-term planning.

In 2020, the Olivehurst Public Utility District (District) provided water to 7,434 customer connections (includes single family and multi-family residential, commercial/institutional, industrial and landscape irrigation connections) and supplied 1,382 million gallons (MG) of water (equivalent to 4,241 AF) to its customers. Therefore, based on the number of connections and volume of water served, the District is required to prepare a UWMP. The District's last UWMP, the 2015 UWMP, was adopted by the District's Board of Directors on May 18, 2017.

This Executive Summary serves as a Lay Description of the District's 2020 UWMP, as required by California Water Code §10630.5.

CALIFORNIA WATER CODE REQUIREMENTS

The California Water Code documents specific requirements for California water suppliers. The Act is included in the California Water Code and specifies the required elements of a UWMP, including discussing the District's water system and facilities, calculating how much water its customers use (i.e., water demand) and how much water the District can supply, and detailing how the District would respond during a drought or other water supply shortage. Also, a 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 (California Senate Bill X7-7 [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 2020, retail agencies are required to report on their compliance with SB X7-7.

The 2012 to 2016 drought led to further revisions to the Act under the 2018 Water Conservation Legislation to improve water supply planning for long-term reliability and resilience to drought and climate change. Changes presented by the legislation include:

- Five Consecutive Dry Year Water Reliability Assessment: Analyze water supply reliability for five consecutive dry years over the planning period of this UWMP (see Chapter 7).
- Drought Risk Assessment: Assess water supply reliability from 2021 to 2025 assuming that the next five years are dry years (see Chapter 7).

- Seismic Risk: Identify the seismic risk to the water supplier's facilities and have a plan to address the identified risks; the region's Local Hazard Mitigation Plan may address this requirement (see Chapter 8 and Appendix J).
- Energy Use Information: Include reporting on the amount of electricity used to obtain, treat, and distribute water if data are available (see Chapter 6).
- Water Shortage Contingency Plan: Update the water supplier's plan to include an annual process for assessing potential gaps between planned 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 and Appendix J).
- Lay Description: Provide a lay description of the findings of the UWMP; this Executive Summary serves as the Lay Description for the District's 2020 UWMP.

The major components of the District's 2020 UWMP, including its findings, are summarized below.

DISTRICT WATER SERVICE AREA AND WATER SYSTEM FACILITIES

The District is located in California's Central Valley, in Yuba County, approximately 30 to 38 miles north of the City of Sacramento. Founded in 1948, the District currently provides potable water, wastewater, and recreation services for the communities of Olivehurst and Plumas Lake, and fire protection services for the community of Olivehurst (fire protection services for most of the community of Plumas Lake are provided by Linda Fire Protection District).

The District operates two separate water pumping and distribution systems for the Olivehurst and Plumas Lake communities.

The District's Olivehurst system is provided with water supply from six groundwater wells. The number of wells used at one time depends on the season. During the spring and summer, there are four active wells with two wells on standby. During the fall and winter, there are two active wells with four wells on standby. The Olivehurst system also has two storage tanks, two hydropneumatic tanks, eight filter vessels, three treatment facilities for the removal of iron and manganese, and a distribution system made up of steel, asbestos cement (AC) and C-900 polyvinyl chloride (PVC) pipelines. The Olivehurst system was constructed in 1951 and is currently undergoing improvements to increase efficiency. In the District's Capital Improvement Plan, the highest priority item is replacing the Olivehurst system's aging pipelines.

The District's Plumas Lake system was constructed between 2003 and 2007, so the system is relatively new and currently operates more efficiently than the Olivehurst system. The Plumas Lake system includes three active wells, one standby well, one storage tank, two treatment plants, and C-900 PVC distribution pipelines.

DISTRICT SERVICE AREA POPULATION AND WATER USE

The District currently serves a population of approximately 25,697. The District's Olivehurst service area is a mostly urbanized, well-established community, and little growth in the area is anticipated. Development in the District's Plumas Lake service area experienced significant growth from 2004 through 2010, and then slowed due to the economic downturn. However, in recent years development has

rebounded, particularly since 2018, although development slowed somewhat during 2020 due to the pandemic. Growth in the Plumas Lake service area is expected to continue with several new development projects currently in progress and planned for the future.

Thorough and accurate accounting of current and future water demands is critical for the District's planning efforts. To continue delivering safe and reliable drinking water, the District must know how much water its customers currently use and how much they expect to use in the future. Future water use projections have been developed based on population projections for the District's service area and current water use trends. Total water use within the District's service area was 1,382 MG in 2020 and is projected to increase to 2,693 MG by 2045.

The District's historical, current and projected water use is discussed in Chapter 4.

DISTRICT WATER SUPPLIES

Groundwater is currently the only source of potable water supply for the District. Groundwater is pumped from the South Yuba Groundwater Subbasin from six active wells in the Olivehurst system and three active wells in the Plumas Lake system.

The Yuba Subbasins (the North Yuba Subbasin and the South Yuba Subbasin) have a long history of successful groundwater management, and the water budget analysis conducted as part of the December 2019 Yuba Subbasins Groundwater Sustainability Plan estimates sustainable groundwater conditions into the future. The District's current groundwater supply is constrained by a filter capacity of 16,600 gallons per minute (gpm) (8,725 MG/year). However, new developments within the District's service area are required to install new wells and treatment facilities as necessary, with maintenance and ownership transferred to the District. Since water delivery and treatment infrastructure will be developed and funded by developers, it is assumed that adequate water service will be available for planned growth in the District's service area.

Regional groundwater quality in the Yuba Subbasins is considered good to excellent for municipal, domestic, and agricultural uses and does not have a significant adverse impact on the beneficial uses of groundwater in the subbasins. There is naturally occurring arsenic, iron, and manganese in some areas that may have concentrations that exceed the associated drinking water thresholds, although such occurrences are limited.[1]

Water delivered by the District to its customers meets all applicable drinking water standards. The District has several iron and manganese treatment plants within its water systems (three in the Olivehurst system and two in the Plumas Lake system) to address iron and manganese levels that exceed the respective secondary maximum contaminant levels.

Additional discussion on the District's water supplies is provided in Chapter 6 of this plan.

[1] Yuba Subbasins Groundwater Management Plan: A Groundwater Sustainability Plan, December 2019.

CONSERVATION TARGET COMPLIANCE

In accordance with the Water Conservation Act of 2009 (SB X7-7), the District must meet a gross per capita water use target of 167 gallons per person per day by 2020 for its water service area. Based on the District's water service area population and water use in 2020, the District met its water conservation target with a gross per capita water use of 147 gallons per person per day.

Additional discussion regarding the District's compliance with SB X7-7 is provided in Chapter 5 of this plan.

WATER SERVICE RELIABILITY

UWMP guidelines ask water suppliers 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.

The South Yuba Subbasin is not expected to become overdrafted in the future based on projected groundwater pumpage and surface water deliveries. Unlike many medium- and high-priority basins and subbasins managed under Groundwater Sustainability Plans, groundwater pumping in the Yuba Subbasins does not exceed the sustainable yield of the subbasins, and the average annual groundwater storage is stable or increasing under all scenarios, suggesting sustainable conditions. Therefore, the South Yuba Subbasin is expected to be reliable in all hydrologic conditions over the 25-year planning horizon of this 2020 UWMP.

The District will continue to invest in water system improvements and continues to support water conservation and the most efficient uses of water in the District's service area.

Additional discussion on the District's water supply reliability is provided in Chapter 7 of this plan.

WATER SHORTAGE CONTINGENCY PLAN

A Water Shortage Contingency Plan (WSCP) describes an agency's plan for preparing and responding to water shortages. The District updated its WSCP to include its process for assessing potential gaps between planned water supply and demands for the current year and the next potentially dry year. It aligned its water service area's water shortage levels with the State's standard stages for consistent messaging and reporting and planned for locally appropriate water shortage responses. The WSCP may be used for foreseeable and unforeseeable events.

The updated WSCP, which is described in Chapter 8 and provided in Appendix J of this plan, is adopted concurrently with this 2020 UWMP by separate resolution so that it may be updated as necessary to adapt to changing conditions.

UWMP PREPARATION, REVIEW, AND ADOPTION

While preparing its UWMP, the District notified other stakeholders (including Yuba County, the Yuba Water Agency and the general public) of its preparation, its availability for review, and the public hearing prior to adoption. The District encouraged community participation in the development of the 2020 UWMP using newspaper advertisements and web-based communication. These public notices included the time and place of the public hearing, as well as the location where the plan would be available for public inspection.

The public hearing provided an opportunity for District water users and the general public to become familiar with the 2020 UWMP and ask questions about the District's water supply, its continuing plans for providing a reliable and safe water supply, and its plans to address potential water shortages. Following the public hearing, the District Board of Directors adopted the 2020 UWMP on _____, 2022. A copy of the adopted Plan was provided to the Department of Water Resources and is available on the District's website.

Additional discussion on the District's 2020 UWMP preparation and adoption is provided in Chapters 2 and 10 of this plan.

CHAPTER 1
Introduction

This chapter provides an introduction and overview of Olivehurst Public Utility District (District) 2020 Urban Water Management Plan (UWMP) including the importance and extent of the District's water management planning efforts, changes since the preparation of the District's 2015 UWMP, and the organization of the District's 2020 UWMP. This plan has been prepared jointly by District 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. Passage of the Act was recognition by state legislators that water is a limited resource and a declaration that efficient water use and conservation would be actively pursued throughout the state. The primary objective of the Act is to direct "urban water suppliers" to develop a UWMP which provides a framework for long-term water supply planning, and documents how urban water suppliers are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future water demands. A copy of the current version of the Act, as incorporated in Sections 10610 through 10656 of the California Water Code, is provided in Appendix A of this plan.

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

The purpose of the UWMP is to provide a planning tool for the District for developing and delivering municipal water supplies to the District's water service area. This UWMP provides the District a water management action plan for guidance as water conditions change and management conditions arise.

Further, changes to the Act since 2015 require updates to the District's previously updated and adopted Water Shortage Contingency Plan (WSCP). The WSCP is part of this UWMP and provides a plan for response to various water supply shortage conditions.

The District has had a long history of providing clean and reliable water to its customers. The District's UWMP is a comprehensive guide towards planning for a safe and adequate water supply.

1.3 CHANGES FROM 2015 UWMP

The Urban Water Management Planning Act has been modified over the years in response to the State's water shortages, droughts and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This 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). This act required agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. The 2014 to 2017 drought has led to further amendments to the California Water Code to improve on water supply planning for long-term reliability and resilience to drought and climate change.

Summarized below are the major additions and changes to the California Water Code (CWC) since the District's 2015 UWMP was prepared:

- **Five Consecutive Dry-Year Water Reliability Assessment [CWC §10635(a)].** The Legislature modified the dry-year water reliability planning from a "multiyear" time period to a "drought lasting five consecutive water years" designation. This statutory change requires the urban water supplier to analyze the reliability of its water supplies to meet its water use over an extended drought period. This requirement is addressed in the water use assessment presented in Chapter 4; the water supply analysis presented in Chapter 6; and the water reliability determinations in Chapter 7 of this plan.
- **Drought Risk Assessment [CWC §10635(b)].** The California Legislature created a new UWMP requirement for drought planning because of the significant duration of recent California droughts and the predictions about hydrologic variability attributable to climate change. The Drought Risk Assessment (DRA) requires the urban water supplier to assess water supply reliability over a five-year period from 2021 to 2025 that examines water supplies, water uses, and the resulting water supply reliability under a reasonable prediction for five consecutive dry years. The DRA discussed in Chapter 7 is based on the water use information in Chapter 4; the water supply analysis is presented in Chapter 6; and the water reliability determinations are discussed in Chapter 7 of this plan.
- **Seismic Risk [CWC §10632.5].** The Water Code now requires urban water suppliers to specifically address seismic risk to various water system facilities and to have a mitigation plan. Water supply infrastructure planning is correlated with the regional hazard mitigation plan associated with the urban water supplier. The District's seismic risk is discussed in Chapter 8 of this plan.
- **Energy Use Information [CWC §10631.2].** The Water Code now requires Suppliers to include readily obtainable information on estimated amounts of energy for their water supply extraction, treatment, distribution, storage, conveyance, and other water uses. The reporting of this information was voluntary in 2015. The District's energy use information is provided in Chapter 6 of this plan.
- **Water Loss Reporting for Five Years [CWC §10608.34].** The Water Code added the requirement to include the past five years of water loss audit reports as part of this UWMP. The District's water loss reporting is provided in Chapter 4 of this plan.
- **Water Shortage Contingency Plan [CWC §10632].** In 2018, the Legislature modified the UWMP laws to require a WSCP with specific elements. The WSCP is a document that provides the urban water supplier with an action plan for a drought or catastrophic water supply shortage. Although the new requirements are more prescriptive than previous versions, many of these elements have long been included in WSCPs, other sections of UWMPs, or as part of the urban water supplier's standard procedures and response actions. Many of these actions were implemented by the urban water suppliers during the last drought to successfully meet changing local water supply challenges. The WSCP is used by DWR, the State Water Board, and the Legislature in addressing extreme drought conditions or statewide calamities that impact water supply availability. The District's WSCP is presented in Appendix J of this plan.

- **Groundwater Supplies Coordination [CWC §10631(b)(4)].** In 2014, the Legislature enacted the Sustainable Groundwater Management Act to address groundwater conditions throughout California. Water Code now requires 2020 UWMPs to be consistent with Groundwater Sustainability Plans in areas where those plans have been completed by Groundwater Sustainability Agencies. This requirement is addressed in Chapter 6 of this plan.
- **Lay Description [CWC §10630.5].** The Legislature included a new statutory requirement for the urban water supplier to include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead, and strategies for managing reliability risks. This section of the UWMP could be viewed as a synopsis for new staff, new governing members, customers, and the media, and it can ensure a consistent representation of the Supplier's detailed analysis. This requirement is addressed in the Executive Summary of this plan.
- **Water Loss Management [CWC §10608.34(a) (1)].** The Legislature included a requirement for urban water suppliers to report on their plan to meet the water loss performance standards in their 2020 UWMPs. This requirement is addressed in the Demand Management Measures (DMM) presented in Chapter 9 of this plan.

1.4 PLAN ORGANIZATION

This plan contains the appropriate sections and tables required per CWC Division 6, Part 2.6 (Urban Water Management Planning Act), included in Appendix A of this plan, and has been prepared based on guidance provided by the California Department of Water Resources (DWR) in their "2020 Urban Water Management Plans Guidebook for Urban Water Suppliers" (DWR Guidebook).

This plan is organized into the following chapters:

- Chapter 1: Introduction
- Chapter 2: Plan Preparation
- Chapter 3: System Description
- Chapter 4: Water Use Characterization
- Chapter 5: SB X7-7 Baselines, Targets and 2020 Compliance
- Chapter 6: 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 related to the District's 2020 UWMP:

- Appendix A: Legislative Requirements
- Appendix B: DWR 2020 Urban Water Management Plan Tables
- Appendix C: DWR 2020 Urban Water Management Plan Checklist
- Appendix D: Agency and Public Notices
- Appendix E: Population Information
- Appendix F: AWWA Water Loss Audits
- Appendix G: SB X7-7 Compliance Form
- Appendix H: Groundwater Information
- Appendix I: 2020 Consumer Confidence Report
- Appendix J: Water Shortage Contingency Plan
- Appendix K: Water Conservation Ordinance
- Appendix L: Water Rate Schedule
- Appendix M: UWMP Adoption Resolution

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

DWR's Urban Water Management Plan Checklist, as provided in the 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 C.

CHAPTER 2
Plan Preparation

This chapter describes the preparation of the District's 2020 UWMP and WSCP, including the basis for the preparation of the plan, individual or regional planning, fiscal or calendar year reporting, units of measure, and plan coordination and outreach.

2.1 BASIS FOR PREPARING A PLAN

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

The District manages two Public Water Systems: the Olivehurst system (CA5810003) and the Plumas Lake system (CA5805001). As shown in Table 2-1, in 2020 the District provided water to 7,434 customer connections (includes single family and multi-family residential, commercial/institutional, industrial and landscape irrigation connections) and supplied 1,382 million gallons (MG) of water (equivalent to 4,241 AF) to its customers. Therefore, based on the number of connections and volume of water served, the District is required to prepare a UWMP. The District's last UWMP, the 2015 UWMP, was adopted by the District's Board of Directors on May 18, 2017.

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

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
CA5810003	Olivehurst System	4,765	802
CA5805001	Plumas Lake System	2,669	580
	TOTAL	7,434	1,382
NOTES: Volumes are in million gallons (MG).			

2.2 REGIONAL PLANNING

As described in Section 2.3 below, the District has prepared this 2020 UWMP on an individual reporting basis, not as part of a regional planning process.

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

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

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

Select Only One	Type of Plan		Name of RUWMP or Regional Alliance *if applicable*
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

The District is a water retailer.

The District's 2020 UWMP has been prepared on a calendar year basis, with the calendar year starting on January 1 and ending on December 31 of each year. Water use and planning data for the entire calendar year of 2020 has been included.

The water volumes in this plan are reported in units of million gallons (MG).

The District'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 wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
Units of measure used in UWMP *	
Unit	MG
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	

2.5 COORDINATION AND OUTREACH

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

2.5.1 Wholesale and Retail Coordination

The District does not rely upon a wholesale agency for water supply. Therefore, Table 2-4 is intentionally blank.

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 in accordance with Water Code Section 10631.
Wholesale Water Supplier Name

2.5.2 Coordination with Other Agencies and the Community

The District actively encourages community participation in water management activities and specific water-related projects. The District'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 District's website describes on-going projects and posts announcements of planned rate increases to fund these water projects.

As part of the 2020 UWMP update, the District 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 D of this plan. During the public comment period, the Draft UWMP was made available on the District's website and at the District office.

The District also coordinated the preparation of this plan with several agencies, including the following:

- Yuba County
- Yuba Water Agency
- Linda County Water District
- Marysville Joint Unified School District
- Plumas Lake School District

The public hearings provided an opportunity for all District water users and the general public to become familiar with this plan and ask questions about the District's water supply, in addition to the District's continuing plans for providing a reliable, safe, high-quality water supply.

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 plan is being updated and reviewed. In November 2021, a notice of preparation was sent to the county and other stakeholders, to inform them of the UWMP update process and schedule, and to solicit input for the 2020 UWMP. The notifications to the county and other agencies, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10 of this report.

CHAPTER 3
System Description

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

3.1 GENERAL DESCRIPTION

The District is located in Yuba County, approximately 30 to 38 miles north of the City of Sacramento. Founded in 1948, the District currently provides potable water, wastewater, and recreation services for the communities of Olivehurst and Plumas Lake, and fire protection services for the community of Olivehurst (fire protection services for most of the community of Plumas Lake are provided by Linda Fire Protection District). The District operates two separate water pumping and distribution systems for the Olivehurst and Plumas Lake communities.

The District's Olivehurst system is provided with water supply from six groundwater wells. The number of wells used at one time depends on the season. During the spring and summer, there are four active wells with two wells on standby. During the fall and winter, there are two active wells with four wells on standby. The District also has two storage tanks, two hydropneumatic tanks, eight filter vessels, three treatment facilities for the removal of iron and manganese, and a distribution system made up of steel, asbestos cement (AC) and C-900 polyvinyl chloride (PVC) pipelines. The Olivehurst system was constructed in 1951 and is currently undergoing improvements to increase efficiency. In the District's Capital Improvement Plan, the highest priority item is replacing the Olivehurst system's aging pipelines.

The District's Plumas Lake system was constructed between 2003 and 2007, so the system is relatively new and currently operates more efficiently than the Olivehurst system. The Plumas Lake system includes three active wells, one standby well, one storage tank, two treatment plants, and C-900 PVC distribution pipelines.

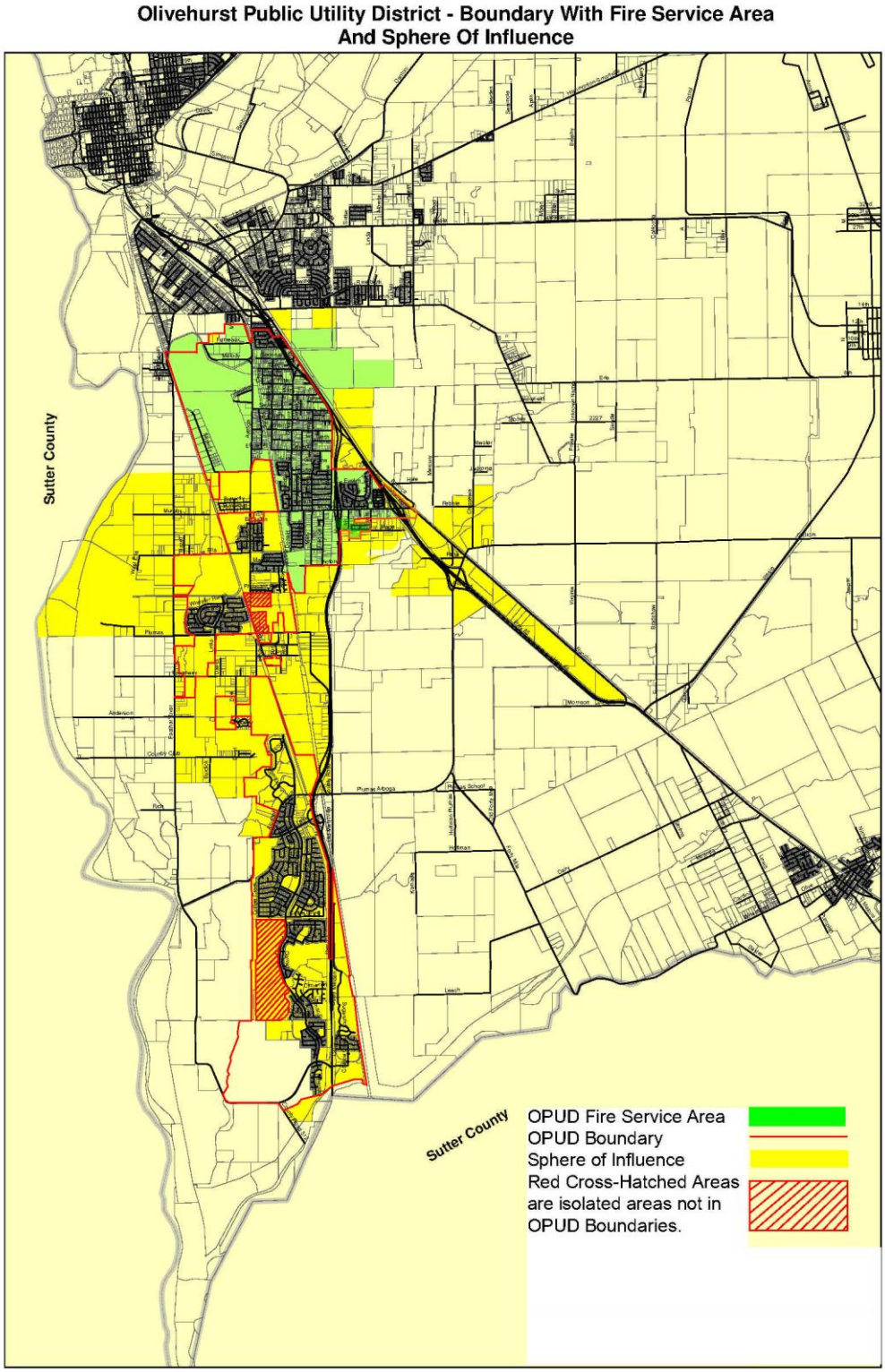
A description of the District's distribution system and groundwater well capacities is provided in Section 6.2.3 (Groundwater Well Capacity).

3.2 SERVICE AREA BOUNDARY

The District is located in California's Central Valley, approximately 30 to 38 miles north of the City of Sacramento. The District's Olivehurst system resides at approximately 66 feet above sea level and the District's Plumas Lake system resides at approximately 46 feet above sea level. As of 2020, the District's total service area boundary encompasses approximately 9 square miles and includes a total of 7,434 water service connections.

The District's service area boundaries and sphere of influence are shown on Figure 3-1.

Figure 3-1. District Service Area Boundary



3.3 SERVICE AREA CLIMATE

The District experiences an arid Mediterranean climate characterized by long, dry summers and cool, rainy winters. Summer weather trends extend from May through October. Average daily maximum temperatures for July are in the mid 90's with lows in the low 60's. Winter daytime temperatures are generally in the mid-60's to mid-50's, with average lows in the upper 30's and occasional freezing temperatures. The rainy season extends from late November to mid-April and the average rainfall is about 21 inches per year.

Water use within the District's service area is dependent on various climate factors such as temperature, precipitation, and evapotranspiration (ET_o). Climate data, including temperature and precipitation estimates, were obtained from the Western Regional Climate Center for Marysville, California. The period of record was from February 1, 1897 to October 31, 2007.

ET_o describes the combined water lost through evaporation from the soil and surface-water bodies and plant transpiration. In general, a reference ET_o is given for turf grass, and then corrected for a specific crop type. Local ET_o data was obtained from the California Irrigation Management Information System (CIMIS) monitoring station in Verona (Station #235), which is located in the Sacramento Valley just south of the District's service area.

The historical climate characteristics affecting water management in the District's service area are shown in Table 3-1.

Table 3-1. Monthly Average Climate Data Summary

Month	Standard Monthly Average ET_o, inches[a]	Average Total Rainfall, inches[b]	Average Temperature, Degrees Fahrenheit[b]	
			Maximum	Minimum
January	1.63	4.01	54.1	37.7
February	2.52	3.73	60.4	41.3
March	3.99	2.88	66	44
April	6.17	1.53	73	47.6
May	8.16	0.75	81.2	52.7
June	8.34	0.22	89.6	58.1
July	8.14	0.03	96.3	61.3
August	6.99	0.06	94.6	59.3
September	5.72	0.34	89.2	56.2
October	3.96	1.21	79	49.9
November	2.09	2.44	65.2	42.2
December	1.36	3.76	55.1	38
Total	**59.07**	**20.96**	**75.3**	**49.0**

(a) Source: California Irrigation Management Information System (CIMIS) data over October 2020 to September 2021 for Station #235: Verona (Downloaded October 28, 2021).

(b) Source: Western Regional Climate Center (www.wrcc.dri.edu) data for Marysville, California (period of record: February 1, 1897 to October 31, 2007)

3.4 SERVICE AREA POPULATION AND DEMOGRAPHICS

3.4.1 Service Area Population

The District's Olivehurst service area is a mostly urbanized, well-established community, and little growth in the area is anticipated. Development in the District's Plumas Lake service area experienced significant growth from 2004 through 2010, and then slowed due to the economic downturn. However, development in recent years has rebounded, particularly since 2018, although development slowed somewhat during 2020 due to the pandemic.

Land use planning and development approvals within the District's boundaries are the responsibility of Yuba County. Yuba County's most recent General Plan (Yuba County 2030 General Plan) was prepared in August 2010. The 2030 General Plan indicates the opportunity for up 48,000 additional residents in the unincorporated areas of Olivehurst and Plumas Lake. However, according to the Yuba County 2030 General Plan, these buildout estimates are not official growth projections and actual population may vary due to:

- The need to preserve the agricultural base, grazing lands, and other types of open space
- Infrastructure availability, including transportation facilities, public services, and facilities
- The need to limit development on steep slopes, flood risk, fire risk, geologic and soils constraints, presence of habitat and biological resources, and presence of other important natural resources
- Other factors, as described in the General Plan, community plans, specific plans, and County codes and ordinances

The District's service areas generally include the Census Designated Places (CDP) of Olivehurst and Plumas Lake. However, the District's service area for the Olivehurst system also includes approximately 291 houses in the Wheeler Ranch area that are outside of the Olivehurst CDP boundary, and does not include approximately 20 houses in the northwestern area of the Olivehurst CDP boundary. The District's service area for the Plumas Lake system is consistent with the Plumas Lake CDP boundary. In accordance with DWR's *Methodologies* document, the District has chosen the option of developing its population estimates using a person-per-connection methodology, as well as available Census data.

According to U.S. Census data, approximately 16,595 people were reported in the Olivehurst CDP in 2020. This equates to approximately 3.6 persons per residential connection (4,609 residential connections). Assuming approximately 3.6 persons per connection, there are about 1,048 people in the Wheeler Ranch area and about 72 people in the northwestern Olivehurst CDP boundary. Therefore, in 2020, the total population in the Olivehurst water service area is approximately 17,571 people (16,595 + 1,048 - 72 = 17,571 people).

As mentioned previously, the District's service area for Plumas Lake is consistent with the Plumas Lake CDP. According to U.S. Census data, approximately 8,126 people were reported in the Plumas Lake CDP in 2020. This equates to approximately 3.1 persons per residential connection (2,632 residential connections).

Based on the methodology discussed above, the District's 2020 water service area population was estimated to be approximately 25,697 people. Of which, there are approximately 17,571 people served by the Olivehurst system and 8,126 people served by the Plumas Lake system.

Additional discussion of the District's historical and 2020 service area population, for purposes of determining the District's SBX 7-7 2020 compliance, is provided in Chapter 5 (SBX 7-7 Baselines, Targets and 2020 Compliance). The District's population calculations separated for the Olivehurst and Plumas Lake systems are provided in Appendix E.

The District's projected population through 2045 was estimated based on recent development trends within the District's service area, particularly in the Plumas Lake service area. As noted above, development has rebounded in recent years, although development in 2020 slowed a bit due to the pandemic. Looking forward, approximately 450 new housing units are projected per year through 2030 and 225 new housing units are projected per year for 2030 through 2045. This equates to an additional population of approximately 7,000 people every five years through 2030 (450 housing units/year x 5 years x 3.1 people/housing unit = 6,975 people) and 3,500 people every five years from 2030 through 2045 (225 housing units/year x 5 years x 3.1 people/housing unit = 3,488 people), for a total projected service area population of approximately 50,200 people by 2045. This is less than the projected population provided in the Yuba County 2030 General Plan[1] which projected an additional 48,000 people from 2010 to 2030, for a total population of 68,300 people in 2030. However, the current projections presented below and in Appendix E of this 2020 UWMP are more consistent with the current development trends and plans within the District's service area.

The District's current (2020) and projected service area population is shown in Table 3-2.

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

Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	25,697	32,697	39,697	43,197	46,697	50,197
NOTES: 2020 population is generally based on U.S. Census data for the Olivehurst CDP and Plumas Lake CDP, with minor adjustments to account for some additional connections served outside of the Olivehurst CDP and some connections not served within the Olivehurst CDP. Projected population is based on recent and anticipated development trends within the District's service area. See Appendix E for additional detail.						

It is important to note that new developments within the District's service area are required to install new wells and treatment facilities as necessary, with maintenance and ownership transferred to the District. Development must be located within the District's boundaries to receive water service. The District has ample groundwater available to support the continued growth of residential uses, however, existing infrastructure cannot support the future development.

[1] Yuba County 2030 General Plan, Table Community Development-3: New Development under 2030 General Plan for Unincorporated County.

3.4.2 Other Social, Economic, and Demographic Factors

The State now requires the inclusion of service area socioeconomic information as part of the system description in UWMPs. However, differences in household water use across different socio-demographic groups in the District's service area has not been studied. Therefore, the following social, economic, and demographic information is being provided to comply with the new regulation. The information was derived from the US Census Bureau's Quick Facts for 2015-2019 for the Olivehurst CDP and the Plumas Lake CDP.

Olivehurst CDP:

- The average number of people per household from 2015 to 2019 was 3.07
- The median household income was $48,598, while 15.1 percent lived in poverty
- The owner-occupied housing unit rate was 60.0 percent, with a median home value of $173,100
- The median gross rent was $988 per month
- Of persons 25 years or older, 73.9 percent had earned at least a high school diploma or equivalent and 8.7 percent had earned a bachelor's degree or higher
- Of persons under 65 years of age, 12.4 percent had a disability and 9.0 percent did not have health insurance
- 89.6 percent of households had a computer, and 83.7 percent had a broadband internet subscription
- By race/ethnicity, 74.9 percent of people were White, 1.9 percent were Black, 1.4 percent were American Indian or Alaska Native, 6.6 percent were Asian, 0.3 percent were Hawaiian Native or Pacific Islander, 6.0 percent were two or more races, and 38.7 percent were Hispanic or Latino
- 16.2 percent of residents were foreign born, and 37.4 percent of people age five years and older spoke a language other than English at home

Plumas Lake CDP:

- The average number of people per household from 2015 to 2019 was 3.42
- The median household income was $101,995, while 4.7 percent lived in poverty
- The owner-occupied housing unit rate was 87.6 percent, with a median home value of $321,900
- The median gross rent was $1,872 per month
- Of persons 25 years or older, 91.8 percent had earned at least a high school diploma or equivalent and 25.2 percent had earned a bachelor's degree or higher
- Of persons under 65 years of age, 5.1 percent had a disability and 5.1 percent did not have health insurance
- 95.3 percent of households had a computer, and 94.8 percent had a broadband internet subscription

- By race/ethnicity, 73.3 percent of people were White, 4.2 percent were Black, 0.9 percent were American Indian or Alaska Native, 8.6 percent were Asian, 0.2 percent were Hawaiian Native or Pacific Islander, 9.9 percent were two or more races, and 21.4 percent were Hispanic or Latino
- 11.0 percent of residents were foreign born, and 16.7 percent of people age five years and older spoke a language other than English at home

3.5 LAND USES WITHIN SERVICE AREA

Land use planning within the unincorporated communities of Olivehurst and Plumas Lake is undertaken by Yuba County. Yuba County's 2030 General Plan envisions reinvestment in existing developed areas, along with new developments in designated specific plan and community plan areas. Along with development, the County has provided for conservation of important land-based natural resources.

Yuba County has a number of specific plan areas, which are required to be consistent with the General Plan. Typically, specific plans describe future land use, provide for major infrastructure and public facilities, present standards for development and conservation, and outline implementation measures to carry out the plan. The Yuba County 2030 General Plan assumes development consistent with the following adopted Specific Plans within the District's service area:

- Olivehurst Avenue Specific Plan
- Plumas Lake Specific Plan

Yuba County is currently in the process of updating its Housing Element, which is developed to provide the county with a coordinated and comprehensive strategy for promoting the production of safe, decent and affordable housing. The updated Housing Element is an eight-year plan for the 2021-2029 period.

CHAPTER 4
Water Use Characterization

This chapter describes and quantifies the District's past, current, and projected water use. Accurately tracking and reporting current water demands allows the District to properly analyze the use of their resources and conduct accurate water resource planning.

4.1 NON-POTABLE VERSUS POTABLE WATER USE

Potable water is water that is safe to drink and which typically has had various levels of treatment and disinfection. The District's potable water supply consists of only local groundwater.

Recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again. Recycled water usage is based on Title 22 designations. Currently, there is no infrastructure in place to deliver tertiary-treated recycled water to the District's customers. Because land use planning and development approvals within the District's service area are the responsibility of Yuba County, the District does not have the authority to approve the delivery of recycled water supplies to its customers.

Raw water is untreated water that is used in its natural state or with minimal treatment. The District does not currently provide any raw water supplies to its customers.

A complete description of the District's water supply is provided in Chapter 6.

4.2 WATER USE BY SECTOR

This section describes the District's past, current and projected water use by sector through the year 2045 in five-year increments. This section identifies the usage among water use sectors including single family residential, multi-family residential, commercial, industrial, institutional/governmental, landscape irrigation, agricultural, and others. These classifications were used to analyze current consumption patterns among various types of customers. The District uses similar definitions for each sector as outlined in the DWR Guidebook. The following definitions are from 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.
- **Agricultural:** Water used for commercial agricultural irrigation.
- **Other:** Any other water demand that is not adequately described by the water sectors defined above. Unlike previous UWMPs, system water losses are not to be reported in the "Other" category.

4.2.1 Historical Water Use

The District's past water use among water use sectors is presented in Table 4-1. These are the same values reported in the District's 2010 and 2015 UWMPs.

Table 4-1. Historical Water Use by Customer Type

Water Use Type	2010 Actual Volume, MG[a]	2015 Actual Volume[b]
Single Family Residential	908[c]	615
Multi-Family Residential	1	101
Commercial	20[d]	20
Industrial	--[d]	8
Institutional/Governmental	3	45
Landscape Irrigation	8	44
Unaccounted for Water (UAFW)/Losses[e]	47	63
Unmetered Accounts (Olivehurst System)	--[f]	116
Total	**987**	**1,012**

(a) Based on the District's 2010 UWMP, Table 7, converted to MG.
(b) Based on the District's 2015 UWMP, Table 4-3.
(c) 2010 Single Family Residential water use includes water use by metered and flat rate customers.
(d) The District's 2010 UWMP reported Commercial / Industrial combined water use.
(e) Losses in the District's 2010 UWMP were estimated to be 5 percent of total water demands. 2015 UAFW equals the sum of estimated losses and unbilled unmetered water use reported in the District's 2015 UWMP.
(f) The District's 2010 UWMP included unmetered account water use in the Single Family Residential water use.

4.2.2 Current Water Use

The District's actual 2020 water use for the Olivehurst system and the Plumas Lake system are presented in Table 4-2. Because the District's Olivehurst system is not yet fully metered, actual water losses are unknown.

Table 4-2. Actual 2020 Water Use by Customer Type

Water Use Type	Olivehurst System		Plumas Lake System	
	Volume, MG	Percentage of Total Supply	Volume, MG	Percentage of Total Supply
Single-Family[(a)]	483	60.2%	458	79.0%
Multi-Family[(a)]	46	5.7%	0	0.0%
Commercial / Institutional[(a)(b)]	71	8.9%	26	4.5%
Industrial[(a)]	10	1.2%	0	0.0%
Landscape Irrigation[(a)]	49	6.1%	34	5.9%
Unmetered[(c)]	59	7.4%	0	0.0%
Unbilled Unmetered[(c)]	2	0.2%	1	0.2%
Potable System Losses[(c)]	82	10.2%	60	10.4%
Total	**802**	**100%**	**580**	**100%**

(a) Volumes taken from the 2020 Electronic Annual Reports for the Olivehurst and Plumas Lake systems.
(b) The District tracks combined water use for Commercial and Institutional customers.
(c) Volumes taken from the 2020 American Water Works Association (AWWA) Water Loss Audits for the Olivehurst and Plumas Lake systems.

The District's total water use in 2020 is presented in Table 4-3. There are no existing or projected uses of saline barriers, groundwater recharge, or conjunctive use within the District's service area.

Table 4-3. Actual Demands for Potable and Non-Potable Water (DWR Table 4-1 Retail)

Use Type	2020 Actual		
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	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume[2]
Single Family		Drinking Water	941
Multi-Family		Drinking Water	46
Commercial	Includes Institutional demands.	Drinking Water	97
Industrial		Drinking Water	10
Landscape		Drinking Water	83
Other	Unmetered Accounts (Olivehurst system)	Drinking Water	59
Other	Unbilled Unmetered	Drinking Water	3
Losses		Drinking Water	142
		TOTAL	1,382

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.*
[2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: Volumes are in MG.

4.2.3 Projected Water Use

Water use projections in this plan are based on population projections and the current 2020 per capita water use for the District. Customer growth is assumed as the same rate as population growth. Customer growth in the District's service area will primarily come from the residential sector with small percentages of growth in commercial (retail) and industrial sectors to support the residential growth.

4.2.3.1 25-Year Planning Horizon

The water use projections for 2020 through 2045 assume that the District will continue its current 2020 per capita water use, equal to 147 gallons per capita per day (GPCD), through 2045. The District's projected water use is reported in Table 4-4.

The District is currently in the process of converting all its customers to meters, and the residential metering program is anticipated to be completed by the end of 2022. Therefore, there are no unmetered water uses in the District's service area from 2025 through 2045. Because the District's unmetered water accounts are all single family residential accounts, the District's unmetered water uses have been included in the District's projected single family accounts. The remaining projected water uses by use type are based on the 2020 percentages of total water use.

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

Use Type	Additional Description (as needed)	Projected 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		2025	2030	2035	2040	2045 (opt)
Single Family		1,270	1,542	1,678	1,814	1,950
Multi-Family		58	71	77	83	90
Commercial	Includes Institutional demands.	123	150	163	176	189
Industrial		13	15	17	18	19
Landscape		105	128	139	151	162
Other	Unbilled Unmetered	4	5	5	5	6
Losses		181	219	239	258	277
	TOTAL	1,754	2,130	2,318	2,506	2,693
NOTES: Volumes are in MG.						

4.2.3.2 Characteristic Five-Year Water Use

CWC Section 10635(b) requires urban suppliers to include a five-year DRA in their 2020 UWMP. A key component of the DRA is estimating demands for the next five years (2021-2025) without drought conditions (i.e., unconstrained demand). Chapter 7 details the DRA, but the five-year demand projections are summarized in Table 4-5 by customer sector. These projections were developed by linearly interpolating between actual 2020 demands presented in Table 4-2 and 2025 demand projections presented in Table 4-3. As noted previously, it was assumed that all currently unmetered services will be fully metered by 2025.

Table 4-5. Projected Water Demands for Drought Risk Assessment

Water Use Category	Projected Demand[(a)], MG				
	2021	2022	2023	2024	2025
Single Family Residential	1,007	1,073	1,139	1,204	1,270
Multi-family Residential	48	51	53	56	58
Commercial/Institutional	102	108	113	118	123
Industrial	11	11	12	12	13
Landscape Irrigation	87	92	96	101	105
Unmetered	47	35	24	12	0
Unbilled Unmetered	3	3	3	4	4
Potable System Losses	150	158	165	173	181
Total Water Demand	**1,456**	**1,531**	**1,605**	**1,680**	**1,754**

(a) Demand projections for 2021-2024 are based on linear interpolation of actual 2020 demands presented in Table 4-3 and 2025 demand projections presented in Table 4-4.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

System losses are the difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption. Such apparent losses are always present in a water system due to pipe leaks, unauthorized connections or use, faulty meters, unmetered services such as fire protection and training, and system and street flushing.

The estimated annual system losses for the District's water service area (i.e., the difference between the annual production and annual sales) for the most recent 12-month period available (beginning on January 1, 2020) are summarized in Table 4-6. The estimated system loss for the District's service area includes 82 MG of losses from the Olivehurst system and 60 MG of losses from the Plumas Lake system.

Actual water losses within the District's Olivehurst system cannot be confirmed until the District has completed its current efforts to implement metering throughout its service area. The District's meter retrofit program is expected to be completed by the end of 2022. The District's unmetered accounts are estimated to be approximately 7 percent of the Olivehurst system's total water production.

A copy of the District's Water Audit worksheets from 2016-2020 for the Olivehurst system and the Plumas Lake system are provided in Appendix F.

Table 4-6. 12-Month Water Loss Audit Reporting (DWR Table 4-4 Retail)

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
01/2016	140
01/2017	265
01/2018	138
01/2019	157
01/2020	142
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. *[2] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES: The water loss shown represents the combined water loss from the District's Olivehurst and Plumas Lake systems; volumes in MG; copies of the District's 2016-2020 Water Audits for the Olivehurst system and Plumas Lake system are provided in Appendix F.	

4.4 ESTIMATING FUTURE WATER SAVINGS

Water savings from codes, standards, ordinances, or transportation and land use plans (passive savings) can decrease the water use for new and future customers. The District has not independently calculated the impact of passive savings on future water use.

As indicated in Table 4-7, the water demands for the lower income households are included in the District's water demand projections.

Table 4-7. Inclusion in Water Use Projections (DWR Table 4-5 Retail)

Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	No
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.	
Are Lower Income Residential Demands Included In Projections?	Yes

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

SB 1087 (2006) requires that water providers give priority to development that includes affordable housing to low-income households. The projected water demands shown in Table 4-4 include water use for single family and multi-family residential housing needed for low-income households, as identified in the Yuba County Housing Element.

A lower income household has an income below 80 percent of an Area Median Income, adjusted for family size. According to the Yuba County 2021-2029 Housing Element, adopted by the Yuba County Board of Supervisors in September 2021, approximately 43.9 percent of households in Yuba County are classified as Low, Very Low or Extremely Low income[1].

Therefore, based on the Yuba County Housing Element, it is estimated that approximately 43.9 percent of the District's residential water demands are attributed to lower income households. Table 4-8 presents these projected water demands for 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)], MG				
	2025	2030	2035	2040	2045
Single Family	558	677	737	796	856
Multi-Family	26	31	34	37	39
Total	**583.2**	**708**	**771**	**833**	**895**

(a) Based on data from the Yuba County Housing Element (2021) indicating that 43.9 percent of households in the District's service area are classified as low, very low or extremely low income.

4.6 CLIMATE CHANGE CONSIDERATIONS

CWC now requires water suppliers to account for the impact of climate change on water supplies and supply reliability. The District's future water demand may be impacted by climate change, as increasing temperatures are expected to extend the growing season and increase landscaping and irrigation demand. In addition, climate change may increase the frequency and intensity of wildfires, which would increase the fire industry's water demands.

While future water demands presented in this plan do not specifically account for climate change impacts, the District is well positioned to mitigate the effects of climate change on its water demand. Water conservation remains integral to urban planning efforts.

Climate change may also impact the frequency of water shortages due to droughts. The effects of climate change on water supply and water supply reliability can be found in Chapter 6 and Chapter 7 of this plan, respectively.

[1] Table H-13: Household Income Distribution by Tenure in Unincorporated Yuba County. Yuba County Housing Element 2021-2029, adopted by the Yuba County Board of Supervisors on September 7, 2021.

CHAPTER 5
SB X7-7 Baselines, Targets, and 2020 Compliance

In November 2009, SB X7-7, the Water Conservation Act of 2009, was signed into law as part of a comprehensive water legislation package. The Water Conservation Act 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 methodology the District used to calculate its 2020 Urban Water Use Target (target), its baseline, and how the baseline was calculated. The District calculated baselines and 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 *Methodologies*).

In this Chapter, it is demonstrated that the District has achieved its 2020 target reduction. Compliance with the urban water use target requirement is verified in the SB X7-7 Compliance Form, which is included as Appendix G in this plan.

5.1 OVERVIEW AND BACKGROUND

The District's compliance with SB X7-7 was first addressed in the District's 2010 UWMP. The District's baseline per capita water use was determined, and urban water use targets for 2015 and 2020 were established and adopted. Actual 2020 District water use data and 2020 Census population estimates were used to calculate the 2020 GPCD water use.

SB X7-7 included a provision that an urban water supplier may update its 2020 urban water use target in its 2015 UWMP, and may use a different target method than was used in 2010. Also, the SB X7-7 methodologies developed by DWR in 2011 noted that water suppliers may revise population estimates for baseline years when the 2010 Census information became available. The 2010 Census data was not finalized until 2012. In its 2015 UWMP, the District updated its population, baselines, and targets to reflect 2010 Census data. Additional adjustments were made to population estimates, as the District's service area only overlapped with approximately 92 percent of the CDP boundaries. The District demonstrated that it successfully achieved its 2015 interim target and confirmed its 2020 target.

In this 2020 UWMP, the District verifies that it achieved its 2020 target per capita water use.

5.2 GENERAL REQUIREMENTS FOR BASELINE AND TARGETS

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. The 10-year baseline period is defined as a continuous 10-year period ending no earlier than December 31, 2004 and no later than December 31, 2010. SB X7-7 also defined that for those urban water retailers that met at least 10 percent of their 2008 water demand using recycled water, the urban water retailers can extend the baseline GPCD calculation for a maximum of a continuous 15-year baseline period, ending no earlier than December 31, 2004 and no later than December 31, 2010. In 2008, the District delivered no recycled water; therefore, the District's baseline GPCD was calculated over a 10-year period. In its 2015 UWMP, the 10-year baseline period that the District selected was 2001 through 2010. This is the same 10-year baseline period reported in the District's 2010 UWMP.

SB X7-7 and DWR provided four different methods for calculation of an urban water retailer's 2020 target. Three of these methods are defined in Water Code Section 10608.20(a)(1), and the fourth method was developed by DWR. The 2020 water use target may be calculated using one of the following four methods:

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

The District selected Method 3 to calculate its 2020 target in its 2015 UWMP.

The District's baselines and targets are summarized in Section 5.5. The District's 2020 compliance water use is provided in Section 5.6.

5.3 SERVICE AREA POPULATION

To correctly calculate its compliance year GPCD, the District must determine the population that it served in 2020. 2020 Census results for the Olivehurst CDP and Plumas Lake CDP were used to determine the population served by the District, as indicated in Table 5-1. As described in Section 3.4.1, approximately 291 homes in the Wheeler Ranch area are not included in the Olivehurst CDP but are served by the District. Conversely, approximately 20 houses in the northwestern area of the Olivehurst CDP boundary are not served by the District. To adjust the Olivehurst CDP population, the average 3.6 persons-per-connection estimated in Chapter 3 was multiplied by the number of connections and added/subtracted from the reported census population.

The 2020 census population for Olivehurst is 16,595 people, while the population of Plumas Lake is 8,126 people. There are approximately 1,048 people served in the Wheeler Ranch area (outside of the Olivehurst CDP boundary) and about 72 people not served inside the Olivehurst CDP boundary. Therefore, in 2020, the total population in the District's Olivehurst system water service area is approximately 17,571 people (16,595 + 1,048 – 72 = 17,571). Table 5-2 presents the District's 2020 combined service area population of 25,697 people.

Table 5-1. Method for Population Estimates (SB X7-7 Table 2)

☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☑	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES: Combined 2020 census results for Olivehurst CDP and Plumas Lake CDP, with adjustments for connections outside the Olivehurst CDP boundary that are served by the District and connections inside the Olivehurst CDP boundary that are not served by the District.	

Table 5-2. Service Area Population (SB X7-7 Table 3)

2020 Compliance Year Population	
2020	25,697

5.4 GROSS WATER USE

Annual gross water use, as defined in CWC §10608.12 (h), is the water that enters the District's distribution system over a 12-month period (calendar year) with certain exclusions. This section discusses the District's annual gross water use for 2020 in accordance with DWR's *Methodologies* document.

Annual gross water use for 2020 is summarized in Appendix G. The District's 2020 actual gross water use for Calendar Year 2020 is 1,382 MG as presented in Chapter 4 of this plan.

5.5 BASELINES AND TARGETS SUMMARY

Daily per capita water use is reported in GPCD. Annual gross water use is divided by annual service area population to calculate the annual per capita water use. As discussed in Section 5.1, the District updated its population data, adjusted its baselines, and confirmed its 2020 target in its 2015 UWMP. The District's 10-year baseline daily per capita water use is 178 GPCD. Using Method 3 for the 2020 water use target calculation as described in Section 5.2, the District's confirmed 2020 compliance target is 167 GPCD. The District's baseline and target are summarized in Table 5-3.

Table 5-3. Baseline and Targets Summary (DWR Table 5-1 Retail)

Baseline Period	Start Year	End Year	Average Baseline GPCD	Confirmed 2020 Target
10-15 year	2001	2010	178	167
5 Year	2003	2007	190	

5.6 2020 COMPLIANCE DAILY PER CAPITA WATER USE

In Sections 5.3 and 5.4, the District's 2020 population and gross water use are presented, respectively. The District calculated its actual 2020 water use for the 2020 calendar year in accordance with Methodology 4 of DWR's *Methodologies* document. As shown in Table 5-4, urban per capita water use in 2020 was 147 GPCD, which is well below the confirmed 2020 water use target of 167 GPCD. Therefore, the District has met its 2020 final water use target. The SB X7-7 tables used to document this compliance are included in Appendix G.

Table 5-4. 2020 Compliance (DWR Table 5-2 Retail)

2020 GPCD				
Actual 2020 GPCD	2020 TOTAL Adjustments	Adjusted 2020 GPCD *(Adjusted if applicable)*	2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020? Y/N
147			167	Y

As detailed in DWR's *Methodologies* document, adjustments are allowed that can be made to an agency's gross water use in 2020 for unusual weather, land use changes, or extraordinary institutional water use. The District has elected not to make the adjustments allowed by Water Code Section 10608.24 because these exceptions are not needed to demonstrate compliance with SB X7-7 for 2020. Water use in 2020 in the District's service area was significantly reduced as compared to baseline years as a result of increased and on-going water conservation efforts by the District and its customers.

5.7 REGIONAL ALLIANCE

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

CHAPTER 6
Water Supply Characterization

This chapter describes the water supplies currently available to the District, as well as future anticipated water supplies. Local groundwater from the South Yuba Subbasin is currently the only source of water supply for the District.

A description of this groundwater source, along with the limitations of other possible water supplies, are described in this chapter.

6.1 WATER SUPPLY CHARACTERIZATION

6.1.1 Purchased or Imported Water

The District currently does not receive any purchased or imported water supplies, nor does it expect to receive purchased supplies by the year 2045.

6.1.2 Groundwater

Groundwater is currently the only source of potable water supply for the District. The District's groundwater resource is further described in the sections below.

6.1.2.1 Groundwater Basin Description

The South Yuba Subbasin (Basin Number 5-21.61) is a subbasin of the Sacramento Valley Basin (Basin Number 5-21) contained within DWR Sacramento River Hydrologic Region. The Sacramento Valley Basin is the second largest in California and includes a total of 18 subbasins. The Sacramento Valley consists of a large northwest-trending, elongated, asymmetric structural trough that extends 150 miles north from the Sacramento-San Joaquin Delta to the City of Red Bluff. The valley is dominated by sedimentary water-bearing deposits that are thickest west of the Valley axis. These deposits thin in the eastern portion of the Valley where they overlie the crystalline rocks of the Sierra Nevada basement complex.

The South Yuba Subbasin is located in the southern portion of the Sacramento Basin Hydrologic Study Area and is described in the DWR's Bulletin 118 (see basin description in Appendix H). The subbasin encompasses about 107,000 acres and is bounded on the east by the Sierra Nevada, on the west by the Feather River, on the north by the Yuba River, and on the south by the Bear River. Prior to development, groundwater flowed to the west and southwest from the Sierra Nevada toward the Feather River. Water bearing alluvial deposits range in thickness from less than 300 feet near the Sierra Nevada in the east to approximately 1,000 feet along the Feather River in the west. Two geologic units provide the majority of water to wells: the Laguna Formation deposits and the overlying and more productive Older Alluvium deposits. Most domestic wells pump from the shallower Older Alluvium (100 to 150 feet below ground surface (bgs)), while irrigation and public supply wells tend to be deeper and may pump from both deposits for additional well yield.

This groundwater basin is not adjudicated, and DWR has not identified the South Yuba Subbasin as either in overdraft, or expected to be in overdraft.

6.1.2.1.1 Subbasin Geology

The South Yuba Subbasin is bounded to the east by the relatively impermeable Sierra Nevada complex. These rocks extend beneath the subbasin and are overlain by younger consolidated and unconsolidated rocks at a gradually increasing depth toward the Feather River and beyond to the Sacramento Valley

trough. The resulting wedge-shaped body of stratified alluvial deposits dips gently to the west and stores fresh groundwater to depths of up to 1,000 feet in the west and less than 300 feet in the east (Bookman-Edmonston Engineering (BE), 1992). Saline groundwater may exist in consolidated rocks beneath the alluvial deposits.

As indicated above, the Laguna Formation and the overlying Older Alluvium are the principal water-bearing formations in the South Yuba Subbasin. These formations are described below in order from oldest to youngest. Several geologic and hydrogeologic studies have been conducted in the area, including Bryan (1923), Olmstead and Davis (1961), DWR (1978), and BE (1992).

The geologic structure of the South Yuba Subbasin is relatively simple, with no faults or folds. The Sutter Buttes, located just west of Yuba County, consist of an intrusive volcanic plug, which caused the uplift and faulting of older marine sediments in the central portion of the Sacramento Valley. This intrusion may have resulted in slightly uplifted marine-deposited sediments in the vicinity of Marysville, but the magnitude of the deformation is minor. The principal geologic units that underlie the Subbasin are summarized below.

Sierra Nevada Bedrock: Metamorphic and igneous granitic rocks dominate the bedrock that forms the eastern boundary of the groundwater basin. Where exposed in the foothills, this sequence of rocks can supply small quantities of water from weathered and fractured zones. Metamorphic rocks contain volcanics with high manganese and iron content.

Eocene and Cretaceous Rocks: Cretaceous marine deposits that overlie the bedrock in most of the subbasin originally contained saline, connate water. Most of the saline water has been flushed out toward the valley trough (BE, 1992), but water quality is still poorer in the marine deposits. The marine deposits are overlain by Eocene non-marine deposits, including the Ione Formation, which also has poorer water quality than overlying formations.

Mehrten Formation: This Tertiary volcanic rock sequence is dominated by alluvial, andesitic sand and gravel intervals interbedded with clay and silt. These rocks include conglomerate, sandstone, and tuff-breccia of mud flow origin that extend westward from their exposure in the vicinity of Beale Air Force Base. Sand and gravel lenses in the Mehrtens are highly permeable and tapped by wells throughout the Sacramento Valley.

Laguna Formation: This Pliocene formation is the thickest and most extensive water-bearing unit in the South Yuba Subbasin. It is exposed along the foothills from Oroville south to Stockton and intermittently in the eastern portion of the Sacramento Valley. Detritus from the weathered Sierras was transported into the Valley by slow-flowing streams and deposited on low sloping broad alluvial fans, concentrating coarser grained materials in river and stream channels and depositing finer-grained materials laterally. This heterogeneous formation contains silt to sandy silt with abundant clay and minor lenticular gravel beds. The sand and gravel layers are thin, discontinuous, compact, and commonly cemented with calcium carbonate, reducing their overall permeability. Considerable amounts of coarse materials occur in the vicinity of the Yuba River at depths of 150 to 600 feet, but decrease north and south of the river. The thickness of the Laguna Formation is highly variable, from 400 feet near the Yuba River to up to 1,000 feet in the southwest portion of Yuba County (BE, 1992).

Older Alluvium and Victor Formation: In the early Pleistocene, uplift of the Sierra Nevada block resulted in increased erosive power and transport capacity of rivers and streams draining to the west. This higher-energy alluvial system increased the proportion of sand and gravel deposited in lenticular beds along with lesser amounts of silt and clay. The Older Alluvium unit is exposed over much of the South Yuba Subbasin with varying thicknesses from less than 100 feet to over 150 feet atop the highly eroded surface of the Laguna Formation. Gravels are located at shallower depths and are thickest near the foothills and the Yuba River. These deposits provide overall moderate permeability, with increased permeability in sand and gravel lenses and reduced permeability where hardpan soils have developed.

Older Floodplain Deposits: Along the Feather River and its tributaries, gravelly sand, silt, and clay were deposited from flood events during the Pleistocene. The thickness of this unit ranges from 5 to 15 feet. Its moderate permeability allows for infiltration of precipitation and irrigation water to the water table unless prevented by buried hardpan soils at its lower contact with the Older Alluvium.

Recent Stream Channel and Floodplain Deposits: These Holocene age alluvial deposits are found along Honcut Creek and the Yuba, Bear, and Feather Rivers. Dominated by coarse sand and gravels, these highly permeable deposits have a thickness of up to 110 feet. Grain size and thickness decrease as the distance from streams increases. This unit also occurs as abandoned overflow channels two to five miles south of the Yuba River. The greatest volume of these deposits is found along the channel of the Yuba River and is about 3.5 miles wide. The coarse-grained and highly permeable nature of these deposits allows for significant groundwater recharge, and the unit can yield large quantities of water to shallow wells.

Dredge Tailings: Tailings from hydraulic mining completely obscured the original channel of the Yuba River during the 1870s and 1880s. Several thousands of acres of the Yuba River floodplain upstream of Marysville were excavated by gold dredges, and parallel ridges of coarse gravel characterize the resulting topography. Piles of coarse gravel and cobbles up to 125 feet thick can be located in the upper reaches of the Yuba and Bear Rivers.

6.1.2.1.2 Aquifer Characteristics

Aquifer characteristics refer to the ability of aquifers to transmit and store groundwater. Calculations based on data from long-term, constant rate pumping tests are the preferred method for estimating aquifer characteristics. However, other methods can be used when aquifer test data are limited, as is the case in the South Yuba Subbasin.

6.1.2.1.2.1 Well Yields

Well yields and aquifer characteristics in Yuba County were summarized by BE (1992). A review of drillers' logs indicated that wells in the South Yuba Subbasin range in depth from a few hundred to over 700 feet. Most of the well yield is derived from the Older Alluvium, which is much more permeable than the underlying Laguna Formation. Well yields in the subbasin typically range from 1,000 to 3,000 gpm, with an average of 1,650 gpm. Wells in the western and northern portions of the subbasin near the Feather and Yuba River had the highest yields (1,500 to 3,000 gpm), and wells in the southern and eastern portions of the subbasin generally had lower yields (1,000 to 1,500 gpm).

6.1.2.1.2.2 Specific Capacity

Specific capacity is the ratio of well yield to drawdown and provides a measure of productivity for both the aquifer and the well. Specific capacity is calculated as Q/s, where Q is the yield of the well in gpm and s is the drawdown in feet. The BE (1992) report contains a summary of specific capacity in the South Yuba

Subbasin based on drillers logs and Pacific Gas & Electric (PG&E) pump efficiency tests. Specific capacities based on pump tests conducted immediately after wells are drilled tend to be lower because permanent pumps have not been installed and the wells may not be fully developed. Based on drillers reports, BE (1992) reported that specific capacities in the South Yuba subbasin range from 16 to 65 gpm/feet, with an average of 40 gpm/feet. Specific capacities calculated from PG&E tests in the subbasin ranged from 18 to 95 gpm/feet, with an average of 55 gpm/feet.

6.1.2.1.2.3 Transmissivity

The ability of an aquifer to transmit water is measured by the transmissivity, which can be defined as the permeability times the saturated thickness. The U.S. Geological Survey (USGS) estimated transmissivity in the central portion of the South Yuba Subbasin to be about 260,000 gallons per day per foot (gpd/feet) (Bloyd, 1978). Transmissivity estimates were higher (390,000 gpd/feet) along the Feather River due to the presence of over 100 feet of highly permeable stream channel sediments. Transmissivity estimates were lower (65,000 gpd/feet) for the southeastern portion of the subbasin because the primary aquifer in this area is comprised of the less permeable Laguna Formation.

Transmissivity estimates for the District's newest wells (Wells 29 and 30) are based on aquifer tests conducted by KASL Consulting Engineers (KASL, 2005). The estimated transmissivities were 127,000 and 239,000 gpd/feet at Wells 29 and 30, respectively. Aquifer test data are not available for the District's other wells, but transmissivity was estimated from specific capacity using an empirical equation for a confined aquifer: T = Q/s * 2000, where T is the transmissivity in gpd/feet and Q/s is the specific capacity in gpm/feet. In the subbasin, the transmissivities estimated from specific capacity range from 69,000 to 234,000 gpd/feet.

6.1.2.1.2.4 Storage Coefficient

The ability of an aquifer to store groundwater is measured by the storage coefficient, which is defined as the volume of water that is released from or added to storage per unit surface area and per unit change in hydraulic head. For unconfined aquifers, a change in head means a change in the elevation of the water table, and the storage coefficient is called the specific yield. Specific yields of common aquifer materials range from 3 percent for clay to 20 percent for unconsolidated sand or sand and gravel (Olmstead and Davis, 1961). BE (1992) estimated specific yield for the South Yuba Subbasin ranging from 8 percent for the shallowest zone (20-50 feet bgs) to 6.2 percent for the 100 to 200 feet depth zone, with an average of 6.8 percent (Grinnell, 2005).

In confined aquifers, storage coefficients are much smaller, and accurate estimates are only possible based on aquifer tests in which drawdown is measured in an observation well located at some distance from the pumped well. The District's monitoring well MW-1D was used as an observation well during the aquifer tests of the District's Wells 29 and 30 conducted in March 2005. The estimated storage coefficients are 3.7 x 10-4 and 8.6 x 10-4 for Wells 29 and 30, respectively (KASL, 2005). Data were not available to estimate storage coefficients for the District's other wells.

6.1.2.1.2.5 Water Quality

Regional groundwater quality in the Yuba Subbasins is considered good to excellent for municipal, domestic, and agricultural uses and does not have a significant adverse impact on the beneficial uses of groundwater in the subbasins. There is naturally occurring arsenic, iron, and manganese in some areas

that may have concentrations that exceed the associated drinking water thresholds, although such occurrences are limited.[1]

Water delivered by the District to its customers meets all applicable drinking water standards. The District has several iron and manganese treatment plants within its water systems (three in the Olivehurst system and two in the Plumas Lake system) to address iron and manganese levels that exceed the respective secondary maximum contaminant levels.

The District prepares and provides an annual Consumer Confidence Report (CCR) to its customers that summarizes the water quality of the District's water supplies. A copy of the 2020 CCR is provided in Appendix I and can be found on the District's website.

6.1.2.2 Groundwater Management and Sustainability

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

SGMA applies to basins or subbasins designated by the DWR as high- or medium-priority basins, based on a statewide ranking that uses criteria including population and extent of irrigated agriculture dependent on groundwater. Ninety-four of the State's 515 groundwater basins were identified as medium- or high-priority basins through the basin prioritization technical process and were required to form GSAs and develop GSPs. The South Yuba Subbasin was ranked as a high-priority basin as part of the SGMA 2019 Basin Prioritization project. The South Yuba Subbasin had been previously ranked as a medium-priority basin under the 2014 California Statewide Groundwater Elevation Monitoring (CASGEM) Basin Prioritization project.

The GSP for the North and South Yuba Subbasins was developed through coordination between three GSAs: the Yuba Water Agency (YWA) GSA, the Cordua Irrigation District (CID) GSA, and the City of Marysville GSA. The GSAs actively worked to communicate with stakeholders and include them in decision-making processes. Key to this communication was the development of the Groundwater Sustainability Committee (GSC). The GSC was the advisory body that made recommendations regarding development and implementation of the GSP to the YWA Board of Directors. GSC members included 17 local districts and regional stakeholders, including the District.

The Yuba Subbasins GSP was completed in December 2019. The Yuba Subbasins have a long history of successful groundwater management, and the water budget analysis conducted as part of the GSP estimates sustainable groundwater conditions into the future. As the Yuba Subbasins are currently being sustainably managed, there are no projects or management actions that are required to achieve

[1] Yuba Subbasins Groundwater Management Plan: A Groundwater Sustainability Plan, December 2019.

sustainability. However, projects and management actions have been identified to assist in enhancing management capability and improving the understanding of the groundwater system. The identified projects and management actions allow for maintaining sustainable groundwater conditions and allow for the GSAs to respond to unexpected changes in conditions in the Yuba Subbasins so that undesirable results can be prevented. Given the nature of the need, most projects and management actions will be implemented with an as-needed, opportunistic approach, with decisions based on funding availability and identified need at a given time.

The Executive Summary of the December 2019 Yuba Basins Groundwater Management Plan: A GSP, and a link to the entire GSP, are included in Appendix H.

6.1.2.3 Groundwater Well Capacity

As shown in Table 6-1, the total groundwater pumping capacity for the District's service area is 19,640 gpm (10,323 MG/year), of which 10,590 gpm (5,566 MG/year) is in the Olivehurst system and 9,050 gpm (4,757 MG/year) is in the Plumas Lake system. However, currently, the District's groundwater wells are constrained by the filter capacity of the water treatment plants. As shown in Table 6-1, the total groundwater filter capacity for the District's service area is 16,600 gpm (8,725 MG/year), of which 10,000 gpm (5,256 MG/year) is in the Olivehurst system and 6,600 gpm (3,469 MG/year) is in the Plumas Lake system.

Table 6-1. Summary of Groundwater Well Capacity[a]

Well No.	Status	Pump Capacity, gpm	Filter Capacity, gpm
Olivehurst Distribution System			
1	Active	750	3,000
4	Active	2,420	
10	Standby[b]; planned to be abandoned	1,500	3,500
28	Active	2,400	
29	Active	2,500	3,500
30	Active	2,520	
Total (Active)[c]		**10,590**	**10,000**
Plumas Lake Distribution System			
31	Active[d]	5,550	3,100
32	Active[d]		
34	Active	3,500	3,500
33	Does not supply water	0	--
Total (Active)[c]		**9,050**	**6,600**

(a) Based on data received from the District on December 21, 2021.
(b) Standby wells are currently off-line and not treated.
(c) Total capacities do not include standby wells.
(d) Individual capacities of Wells 31 and 32 are about 3,100 gpm each, but combined capacity is reduced to about 5,550 gpm when both are operated due to their close proximity to each other.

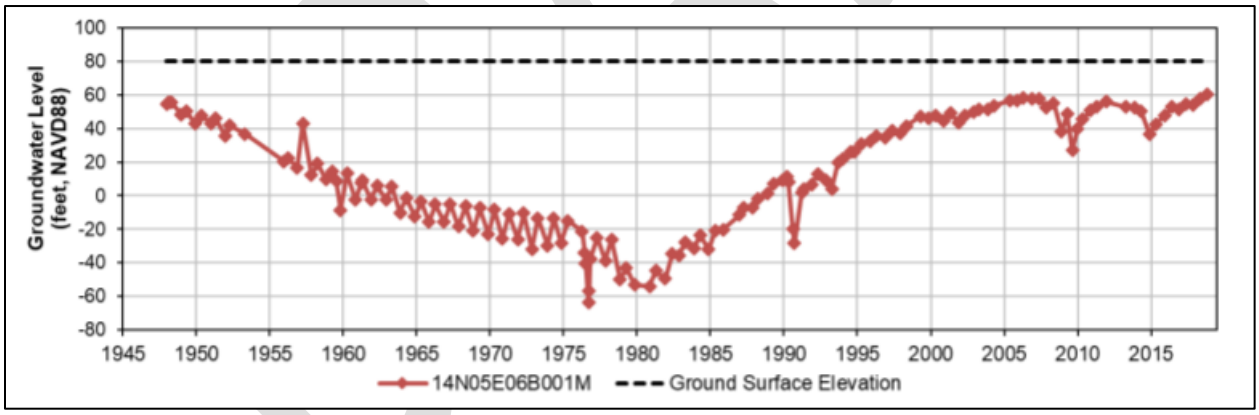
6.1.2.4 Historical Groundwater Production

Prior to construction of the South Yuba Canal, groundwater was the primary source of supply for both agricultural and municipal use in the South Yuba Subbasin. Although municipal use has increased in recent years, the majority of the total pumpage in the subbasin is used for agriculture.

Groundwater pumpage declined after surface water deliveries via the South Yuba Canal began to Brophy Water District and South Yuba Water District in 1983 (YCWA, 2005). Surface water deliveries to the South Yuba Subbasin totaled about 55,000 MG/year (170,000 AFY) in 2004, which represents about 62 percent of the total estimated water supply (NCWA, 2006). Total groundwater pumpage in the South Yuba Subbasin in 2004 was estimated to be 36,000 MG/year (110,000 AFY), of which 79 percent (86,800 AFY) was for agricultural use and the remainder (23,200 AFY) was used for municipal, domestic, industrial, commercial, and semi-agricultural uses.

The evaluation of groundwater level data in the South Yuba Subbasin conducted for water supply studies in the District's service area also show large groundwater level declines prior to 1983 and a similar amount of recovery since 1983. The magnitude of the declines and subsequent recovery ranged from 10 feet or less at the edges of the basin to 85 feet in the center of the cone of depression. By 2005, water levels in most wells had recovered to 1950s levels or higher, and the cone of depression was no longer present. The water level data show no indication of overdraft occurring in the subbasin at present. Typical long-term groundwater trends in the South Yuba Subbasin as presented in the December 2019 GSP are shown in Figure 6-1.

Figure 6-1. Typical Long-Term Groundwater Level Trends in the South Yuba Subbasin



The South Yuba Subbasin is also not expected to become overdrafted in the future based on projected groundwater pumpage and surface water deliveries. Unlike many medium- and high-priority basins and subbasins managed under GSPs, groundwater extraction in the Yuba Subbasins does not exceed the sustainable yield, and the average annual groundwater storage is stable or increasing under all scenarios, suggesting sustainable conditions. Therefore, the South Yuba Subbasin is expected to be reliable in all years and over the 25-year planning horizon of this 2020 UWMP.

Historical groundwater pumpage by the District from 2016 through 2020 is shown in Table 6-2. Average groundwater pumpage by the District over the last five years has been about 1,200 MG/year.

Table 6-2. Groundwater Pumped in Last Five Years (DWR Table 6-1 Retail)

Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016	2017	2018	2019	2020
Alluvial Basin	South Yuba Subbasin (Olivehurst System)	692	710	704	710	802
Alluvial Basin	South Yuba Subbasin (Plumas Lake System)	381	447	483	504	580
	TOTAL	1,073	1,157	1,187	1,214	1,382
NOTES: Volumes are in MG.						

6.1.3 Surface Water

The District currently does not receive any surface water supplies, nor does it expect to receive any surface water supplies by the year 2045.

6.1.4 Stormwater

Stormwater can be beneficially reused as a water supply source to meet local water supply demands. Beneficial reuses include blending with other water supplies for groundwater recharge, redirecting it into constructed wetlands or landscaping, and diverting it to a treatment facility for subsequent reuse. Currently, the District does not implement any stormwater recovery systems.

6.1.5 Wastewater and Recycled Water

The District is the wastewater and recycled authority in the unincorporated community of Olivehurst and Plumas Lake. The District operates an activated sludge, tertiary wastewater treatment facility currently permitted for 3 million gallons per day (MGD).

6.1.5.1 Recycled Water Coordination

The District's wastewater service area coincides with the District's water service area, and the District does not receive any water supplies from a wholesale agency. Therefore, there are no other local water or wastewater planning agencies that operate in the District's service area. As described in Chapter 2, the District has coordinated the development of this plan with other neighboring water agencies as well as the public.

Currently, there is no infrastructure in place to deliver tertiary treated recycled water to the District's customers. Because land use planning and development approvals within the District's service area are the responsibility of Yuba County, the District does not have the authority to approve the delivery of recycled water supplies to its customers.

6.1.5.2 Wastewater Collection, Treatment, and Disposal

The District provides wastewater services to its water service area. The District operates an activated sludge, tertiary wastewater treatment facility currently permitted for 3 MGD discharge. The wastewater treatment facility has an average dry weather flow of 1.2 MGD and average wet weather flow of 1.3 MGD. The wastewater collection system consists of approximately 32 miles of gravity sewer main collection lines, 8 miles of force main sewer collection lines, and 18 lift stations (with two new lift stations anticipated to be on-line by mid 2022). The District's wastewater treatment facility discharges into the Clark Lateral which flows into the Western Interceptor Drainage Canal which flows into the Bear River.

6.1.5.2.1 Wastewater Collected Within Service Area

Table 6-3 summarizes the information on the collection of wastewater generated within the District's service area in 2020.

Table 6-3. Wastewater Collected Within Area in 2020 (DWR Table 6-2 Retail)

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2020	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Olivehurst Public Utility District	Metered	588	Olivehurst Public Utility District	OPUD Wastewater Treatment Facility	Yes	No
Total Wastewater Collected from Service Area in 2020:		588				
NOTES: Volumes are in MG.						

6.1.5.2.2 Wastewater Treatment and Discharge Within Service Area

The District's wastewater service area is the same as the District's water service area. Table 6-4 identifies the treated wastewater disposed of within the service area in 2020.

Table 6-4. Wastewater Treatment and Disposal Within Area in 2020 (DWR Table 6-3 Retail)

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)* [2]	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 volumes [1]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
Olivehurst Public Utility District Wastewater Treatment Facility	Western Interceptor Drainage Canal	Bear River		River or creek outfall	Yes	Tertiary	547	547			
						Total	547	547	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.
[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES: Volumes are in MG.

6.1.5.3 Recycled Water System Description

The District's wastewater treatment plant produces tertiary treated effluent (1.2 MGD) that could be utilized as recycled water for parks, streetscape, and residential irrigation.

Currently, the District does not have infrastructure in place to deliver tertiary treated effluent to its customers. In addition, the ability to utilize recycled water in the District's service area is heavily dependent on cooperation of Yuba County because they are the land use authority for the District's service area. The District does not include recycled water in its supply projections in this UWMP.

6.1.5.4 Potential, Current, and Projected Recycled Water Uses

Recycled water can be used for parks irrigation, streetscape irrigation, residential landscape irrigation, agricultural irrigation, school irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable use and other appropriate uses. The most technically and economically feasible uses for recycled water in the District's service area are parks and streetscape irrigation. Future developments in the District's service area could utilize recycled water for other uses if the infrastructure is installed ahead of time. Because the District is not the local land use authority for the District's water service area, approval for the use of recycled water by future developments is not within the District's jurisdiction. The use of recycled water in the District's service area is dependent on approval from Yuba County.

As shown in Table 6-5, the District does not include recycled water in its supply projections in this plan.

As shown in Table 6-6, recycled water was not projected for use in 2020, nor used in 2020.

Table 6-5. Current and Projected Recycled Water Direct Beneficial Uses Within Service Area (DWR Table 6-4 Retail)

☑	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.

Name of Supplier Producing (Treating) the Recycled Water:	
Name of Supplier Operating the Recycled Water Distribution System:	
Supplemental Water Added in 2020 (volume) *Include units*	
Source of 2020 Supplemental Water	

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units*	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020	2025	2030	2035	2040	2045 (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)										
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
				Total:	0	0	0	0	0	0
				2020 Internal Reuse						

Table 6-6. 2015 Recycled Water Use Projection Compared to 2020 Actual (DWR Table 6-5 Retail)

☑	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.

Beneficial Use Type	**2015 Projection for 2020**	**2020 Actual Use**
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)		
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	0	0

6.1.5.5 Actions to Encourage and Optimize Future Recycled Water Use

The District is committed to the use of recycled water. The following water recycling objectives have been developed to meet the water recycling goals for the Yuba-Sutter region:

- Identify recycled water projects that reduce the regional potable water demand, thereby improving regional water supply reliability. This is specifically true for areas expecting future growth and increased water demand such as the District and Yuba City.
- Identify projects with a high supply reliability that may help local agencies avoid the costs associated with the development of additional groundwater wells and the costs of additional treatment to reach potable water quality standards as they continue to become more stringent.

In the future, the District may choose to participate in a regional project with neighboring agencies and/or Yuba County as it may allow the District to expand its recycled water use sooner as participants work collaboratively to produce and distribute recycled water throughout the southern Yuba County area.

Currently, the District does not offer recycled water to its customers primarily due to the fact that the District is not the local land use authority, and the use of recycled water by future developments would require approval from the local land use authority (Yuba County).

As shown in Table 6-7, the District does not include recycled water in its supply projections in this plan.

Table 6-7. Methods to Expand Future Recycled Water Use (DWR Table 6-6)

☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
		Total	0

6.1.6 Desalinated Water

Desalination is a process that removes dissolved minerals from seawater, brackish water or treated wastewater. The District does not have access to ocean water and thus cannot participate in seawater desalination as a source of supply. In addition, the District's groundwater supply source does not contain brackish groundwater, and therefore the District cannot participate in brackish groundwater desalination as a source of supply.

6.1.7 Water Exchanges and Transfers

The District has no current or future planned agreements for short-term or long-term transfer and exchange within the District's service area.

6.1.8 Future Water Projects

There are no expected future water supply projects or programs within the District's service area, as indicated in Table 6-8. The District's current water supply sources more than adequately meet the projected water use identified in the water supply and demand assessment.

Table 6-8. Expected Future Water Supply Projects or Programs (DWR Table 6-7 Retail)

☑	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.
	Provide page location of narrative in the UWMP

Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				

6.1.9 Summary of Existing and Planned Sources of Water

Table 6-9 summarizes the actual water supplies for the District.

The District's projected groundwater supply is assumed to provide 100 percent of the District's potable water demand during Normal Years. Table 6-10 summarizes the future projected water supplies for the District.

Table 6-9. Water Supplies Actual (DWR Table 6-8 Retail)

Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume	Water Quality Drop Down List	Total Right or Safe Yield (optional)
Groundwater (not desalinated)	South Yuba Subbasin	1,382	Drinking Water	
	Total	1,382		0

Table 6-10. Retail. Water Supplies Projected (DWR Table 6-9 Retail)

Water Supply	Additional Detail on Water Supply	Projected Water Supply Report To the Extent Practicable				
		2025	**2030**	**2035**	**2040**	**2045** (opt)
Groundwater (not desalinated)	South Yuba Subbasin	6,544	6,544	6,544	6,544	6,544
Total		6,544	6,544	6,544	6,544	6,544
NOTES: The District's reasonably available volume is assumed to be equal to 75 percent of the District's current groundwater filter capacity.						

6.2 CLIMATE CHANGE IMPACTS TO SUPPLY

There is evidence that a warming trend that occurred during the latter part of the twentieth century will likely continue through the twenty-first century. These changes will have a direct effect on water resources in California, and numerous studies have been conducted to determine the potential impacts to water resources. Based on these studies, climate change could result in the following types of water resource impacts to California:

- Reductions in the average annual snowpack due to a rise in the snowline and a shallower snowpack in the low and medium elevation zones, such as in the Tuolumne River basin, 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
- Increases in evaporation and concomitant increased irrigation need
- Changes in urban and agricultural water demand

6.3 ENERGY INTENSITY

In accordance with CWC §10631.2(a), the energy intensity to provide water service to the District'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 District's water supply within the system it owns and operates is included.

Water energy intensity is the total amount of energy, calculated on a whole-system basis, used to deliver water to the District's customers for use. Energy intensity is the total amount of energy in kilowatt hour (kWh) expended on a per million gallon basis to take water from the District's source to its point of delivery. Understanding the whole-system energy intensity would allow the District to make informed strategies in managing its water supplies and operating its system as follows:

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

In Table 6-11 below, the energy intensity of the District's water service is calculated for 2020. The total energy intensity for the District's water service is 1,429 kWh/MG.

Table 6-11. Recommended Energy Reporting – Total Utility Approach (DWR Table O-1B)

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/10/2020	**Urban Water Supplier Operational Control**		
End Date	1/9/2021			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*MG*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (MG)		*1,382*	*0*	*1,382*
Energy Consumed (kWh)		*1,973,956*	*0*	*1,973,956*
Energy Intensity (kWh/MG)		*1,429*	*0*	*1,429*

Quantity of Self-Generated Renewable Energy

0 kWh

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

Metered Data

Data Quality Narrative:

2020 water production was provided for the Olivehurst and Plumas Lake systems. 2020 energy consumption was provided in a monthly summary of metered consumption at each facility.

Narrative:

Energy consumption was provided for the following facilities:
- Wells #1, #10, #14, #29, and #34
- Wells/Water Treatment Plants #4, #28, and #30
- Lindhurst Water Storage Tank

CHAPTER 7
Water Service Reliability and Drought Risk Assessment

This chapter describes the long-term reliability and vulnerability of the District's water supplies. The District's implemented, or planned to be implemented, water management tools for increasing the reliability of water supplies are also addressed.

7.1 WATER SERVICE RELIABILITY ASSESSMENT

7.1.1 Constraints on Water Sources

The amount of groundwater available to the District may be constrained by seasonal conditions or changes in climatic patterns in the region. As the District finds a need to expand its water supply and capability in the future, finding new water sources that have satisfactory water quality will be important criteria for selection. The District's water sources receive treatment in accordance with applicable Federal and State standards.

Each year the District reports water quality test results to its customers through the Consumer Confidence Report, also known as the Annual Water Quality Report. A copy of the District's 2020 Consumer Confidence Report is provided in Appendix I. The report includes water sampling results from groundwater wells located in the Olivehurst and Plumas Lake water systems. At this time, the District does not anticipate any changes in supply availability as a result of water quality.

Climate change could constrain the District's long-term sustainability of water supplies by increasing variability in floods and droughts. Over the past several decades, the California water community as a whole has focused their attention on determining the effects of climate change, but there is no clear scientific consensus on exactly how climate change will quantitatively affect the State's water supplies. Therefore, being prepared for a wet water year, a critically dry water year, or somewhere in between, will give the District a better sense of the degree to which they may need to conserve or expand existing water supplies.

7.1.2 Reliability of Groundwater Supplies

The District's pumping records clearly demonstrate the District's ability to deliver reliable supplies under all hydrologic conditions. Groundwater supply is assumed to be drought resistant; therefore, no reduction in supply during dry years is anticipated.

As described in Chapter 6, the Yuba Subbasins have a long history of successful groundwater management, and the water budget analysis conducted as part of the GSP estimates sustainable groundwater conditions into the future. The South Yuba Subbasin is not expected to become overdrafted in the future based on projected groundwater pumpage and surface water deliveries. Unlike many medium- and high-priority basins and subbasins managed under GSPs, groundwater extraction in the Yuba Subbasins does not exceed the sustainable yield, and the average annual groundwater storage is stable or increasing under all scenarios, suggesting sustainable conditions. Therefore, the South Yuba Subbasin is expected to be reliable in all years over the 25-year planning horizon of this 2020 UWMP.

7.1.3 Year Type Characterization

The quantity of supply available from different water supply sources can vary from one year to the next depending on hydrologic conditions. Historical data, where available, were therefore used to develop a projected yield for each water supply source under three conditions: (1) normal water year, (2) single dry year, and (3) multiple dry years. In accordance with the DWR Guidebook, each condition is defined as follows:

- **Normal Water Year***:* The year in the historical sequence most closely representing average runoff or allocation levels and patterns
- **Single-Dry Year:** The year with the lowest annual runoff or allocation in the historical sequence
- **Multiple-Dry Year***:* The lowest average runoff or allocation for a consecutive 5-year period in the historical sequence

Table 7-1 lists the years that the District identifies as their historical average, single driest year, and driest multi-year period. These years are also known as the "Base Years." The available supplies column specifies the percentage and volume of the water supply expected if there were to be a repeat of the hydrology from that type of year.

As discussed in Section 6.1.2.3 (Groundwater Well Capacity), the District's current groundwater supply is constrained by a filter capacity of 16,600 gpm (8,725 MG/year). However, new developments within the District's service area are required to install new wells and treatment facilities as necessary, with maintenance and ownership transferred to the District. Since water delivery and treatment infrastructure will be developed and funded by developers, it is assumed that adequate water service will be available for planned growth in the District's service area.

As shown in Table 7-1, the District's average year supply is assumed to be 75 percent of the District's current groundwater filter capacity (75 percent of 16,600 gpm). Because the District's groundwater supply is assumed to be drought resistant, no reduction in supply during dry years is anticipated. Therefore, the District's dry year supplies are assumed to equal the District's average year supplies.

Table 7-1. Basis of Water Year Data (Reliability Assessment) (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 2019-2020, use 2020	Available Supplies if Year Type Repeats	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	2005	6,544	100%
Single-Dry Year	1977	6,544	100%
Consecutive Dry Years 1st Year	1987	6,544	100%
Consecutive Dry Years 2nd Year	1988	6,544	100%
Consecutive Dry Years 3rd Year	1989	6,544	100%
Consecutive Dry Years 4th Year	1990	6,544	100%
Consecutive Dry Years 5th Year	1991	6,544	100%
NOTES: The District's average year supply is assumed to be equal to 75 percent of the District's current groundwater filter capacity. Because the District's groundwater supply is assumed to be drought resistant, the District's dry year supply is not subject to reduction during dry years and is assumed to be 100% of the District's normal year supply. Volumes are in MG.			

7.1.4 Water Service Reliability

The District's projected supply and demand for Normal Years, Single Dry Years and Multiple Dry Years are quantified and discussed below.

7.1.4.1 Water Service Reliability – Normal Year

The District's potable water supply is expected to continue to be supplied by groundwater from the South Yuba subbasin. The District's projected groundwater supply is assumed to be 6,544 MG/year during Normal Years.

As described in Chapter 4, the District's Normal Year demands have been projected based on anticipated growth within the District's service area and are consistent with the District's per capita water use in 2020.

As shown in Table 7-2, the District's Normal Year supplies are adequate to meet projected Normal Year demands.

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

	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	6,544	6,544	6,544	6,544	6,544
Demand totals *(autofill from Table 4-3)*	1,754	2,130	2,318	2,506	2,693
Difference	4,790	4,414	4,226	4,038	3,851
NOTES: Volumes are in MG; table numbers refer to DWR table numbers.					

7.1.4.2 Water Service Reliability – Single Dry Year

The District's projected groundwater supply is assumed to be 6,544 MG/year during Single Dry Years. This assumes no reduction in available supply compared to Normal Years.

Demand reductions are not assumed during dry years. Therefore, the District's Single Dry Year demands are assumed to be the same as Normal Year demands.

As shown in Table 7-3, the District's Single Dry Year supplies are adequate to meet projected Single Dry Year demands.

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

	2025	2030	2035	2040	2045 (Opt)
Supply totals	6,544	6,544	6,544	6,544	6,544
Demand totals	1,754	2,130	2,318	2,506	2,693
Difference	4,790	4,414	4,226	4,038	3,851
NOTES: Volumes are in MG.					

7.1.4.3 Water Service Reliability – Five Consecutive Dry Years

The District's projected groundwater supply is assumed to be 6,544 MG/year during Multiple Dry Years. This assumes no reduction in available supply compared to Normal Years.

Demand reductions are not assumed during dry years. Therefore, the District's Multiple Dry Year demands are assumed to be the same as Normal Year demands.

As shown in Table 7-4, the District's Multiple Dry Year supplies are adequate to meet projected Multiple Dry Year demands.

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

		2025	2030	2035	2040	2045 (Opt)
First year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Second year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Third year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Fourth year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Fifth year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Sixth year *(optional)*	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
NOTES: Volumes are in MG.						

7.2 REGIONAL SUPPLY RELIABILITY

To minimize the District's vulnerability to groundwater quality issues, the District will continue to coordinate with YWA and other local agencies and stakeholders to evaluate groundwater withdrawals in support of continued groundwater management efforts.

In addition, the District has and continues to participate with YWA and other local agencies to implement water conservation measures. The District is responsible for water conservation marketing and outreach to the District's customers.

With these available management tools, the District does not currently foresee a need to import water from other regions.

7.3 DROUGHT RISK ASSESSMENT

CWC Section 10635(b) requires that the District prepare a Drought Risk Assessment (DRA) based on the supply condition associated with the five driest consecutive years on record. This supply condition is to be assumed to occur over the next five years, from 2021 through 2025.

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. Total water supplies during the five-year drought are compared to projected demands, accounting for any applicable supply augmentation or demand reduction measures available to the District.

This DRA would allow the District to prepare for a potential water shortage and implementation of its WSCP, if necessary. Findings show that, should the District experience five consecutive dry years starting in 2021, adequate water supplies are available to meet projected demands.

7.3.1 Data, Methods, and Basis for Water Shortage Condition

The DRA was performed for 2021 through 2025 using the same Multiple Dry Year conditions presented in Section 7.1.4,3. The 2025 projected water demand is based on normal year water demand projections developed in Section 4.2.3 of this plan, which considered population growth and the District's 2020 per capita water use. As presented in Section 4.2.3.2, water demands for 2021 through 2024 were linearly interpolated between the actual 2020 water demand and the projected 2025 water demand.

7.3.2 DRA Water Source Reliability

Groundwater is the District's sole water supply source. Therefore, the District's projected available water supply for each year of the DRA is assumed to be equal to the full Normal Year supply. No reductions in available groundwater are expected during Multiple Dry Years, as discussed in Section 7.1.3.

7.3.3 Total Water Supply and Use Comparison

As shown in Table 7-5, during a five-year drought beginning in 2021, the District's supplies are adequate to meet projected demands through 2025, even without water conservation. It is anticipated that implementation of conservation measures would reduce the 2021 through 2025 projected demands.

Table 7-5. Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b) (DWR Table 7-5)

2021	Total
Total Water Use	1,456
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	5,088
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	5,088
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	1,531
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	5,013
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	5,013
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	1,605
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	4,939
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,939
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	1,680
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	4,864
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,864
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	1,754
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	4,790
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,790
Resulting % Use Reduction from WSCP action	0%

CHAPTER 8
Water Shortage Contingency Plan

This chapter discusses the District's WSCP, seismic risk to District facilities, and WSCP adoption procedures. To allow for WSCP updates to be made outside of the UWMP preparation process, the District's WSCP is included in this plan as Appendix J.

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 District's WSCP has been prepared to be consistent with these requirements.

8.2 DISTRICT WATER SHORTAGE CONTINGENCY PLAN

The District's WSCP was developed to provide a strategic plan for preparing and responding to water shortages. The WSCP includes water shortage stages and associated shortage response actions, as well as the District's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting.

The District intends for its WSCP to be dynamic, so that it may assess response action effectiveness and adapt to foreseeable and unforeseeable events. Therefore, the District's WSCP is included in this plan as Appendix J 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 8.4.

8.3 SEISMIC RISK ASSESSMENT AND MITIGATION PLAN

CWC §10632.5(a) requires that UWMPs include a seismic risk assessment and mitigation plan to assess and mitigate a water system's seismic vulnerabilities. Details of the District's seismic risk assessment and mitigation plan are provided in Appendix J, Section 4.6.

8.4 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

The District'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 District's offices. A copy will also be provided to Yuba County. An electronic copy of the WSCP will also be available for public review and download on the District's website (www.opud.net).

The District's WSCP is an adaptive management plan and is subject to refinements as needed to ensure that the District'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 the District Board of Directors and distribution to Yuba County, the District's customers, and the general public.

CHAPTER 9
Demand Management Measures

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

9.1 WATER CONSERVATION PROGRAM OVERVIEW

Water conservation plays a significant role in the District's 2020 UWMP and its long-term strategy for meeting the water needs of the District's current customers and future service area expansions. The goals of the District's water conservation program are to:

- Promote water use efficiency and beneficial uses of potable water
- Ensure a reliable water supply
- Seek improvements to reduce system losses
- Demonstrate commitment to the DMMs

9.2 EXISTING DEMAND MANAGEMENT MEASURES

The six DMMs required to be discussed in the 2020 UWMP include 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

For each DMM, the current program is described, followed by a description of how the DMM was implemented over the previous five years to meet the water use targets required by SB X7-7 (see Chapter 5 SB X7-7 Baselines, Targets and 2020 Compliance) and proposed future implementation to meet future water use objectives.

9.2.1 Water Waste Prevention Ordinances

The District has a water conservation ordinance which establishes rules and regulations for water service and provides procedures and penalties for enforcement. For dry year conditions, or during other water supply shortages, the District has a Water Shortage Contingency Plan which includes specific water use restrictions. The District's Water Shortage Contingency Plan is described in Chapter 8 and Appendix J and the District's water conservation ordinance is included in Appendix K of this 2020 UWMP.

Continued implementation of this DMM is expected to help the District achieve its water use targets by minimizing the non-essential uses of water so that water is available to be used for human consumption, sanitation, and fire protection.

9.2.2 Metering

Although the District is currently installing water meters on all new connections, the District's water system is not yet fully metered. The District's Plumas Lake water system is totally metered; however, of the 4,609 residential connections in the Olivehurst water system in 2020, approximately 395 residential connections are not yet metered. The District's on-going meter installation program is on track to convert the remaining unmetered accounts to metered accounts by the end of 2022, and therefore satisfy the 2025 State deadline.[1]

Under the District's normal (non-drought) water rates, the District's metered water connections are billed a fixed monthly service charge based on meter size plus a water usage fee based on metered consumption. The District's unmetered water connections are billed based on a monthly flat rate based on service size and are converted to the metered rate once a water meter has been installed.

Effectiveness of the metering program will be monitored by tracking the number of retrofits installed per year. By implementing the on-going meter installation and replacement program, the District is developing a more focused and direct monitoring tool allowing the District and their customers to better monitor and track water use and help identify high water usage and/or leaks.

9.2.3 Conservation Pricing

As discussed above, the District's water system is not yet fully metered. Under the District's current normal (non-drought) water rates (included in Appendix L), metered customers are billed a fixed monthly service charge based on meter size plus a uniform water usage fee based on metered consumption. As soon as the current unmetered (flat rate) customers have a meter installed, they will also be converted to the uniform metered rate. Table 9-1 shows the District's current normal (non-drought) water rates.

Table 9-1. Current Normal (Non-Drought) Water Rates[(a)]

Metered Rate Accounts	
¾-inch Meter Accounts	Fixed Monthly Charge: $19.50 Water use included (not billed): 6 ccf Consumption Charge ($/ccf): $1.95
1-inch to 4-inch Meter Accounts	Fixed Monthly Charge: $32.50 Water use included (not billed): 10 ccf Consumption Charge ($/ccf): $1.95
Flat Rate Accounts	
¾-inch Service	Fixed Monthly Charge: $46.80
1-inch Service	Fixed Monthly Charge: $75.40

(a) Water Service Charges, effective January 1, 2021 (Resolution 2332).

[1] In 2004, the California Legislature passed AB 2572, requiring all water suppliers to install water meters on all customer connections by January 1, 2025.

The District is dedicated to providing reliable water services in a cost-effective manner while protecting water resources and the public's health. The District regularly reviews its current water rates to ensure that the rates are fair and equitable. Once all of the District's customers are metered, the District's current water rate structure and water rates will be reviewed, and any required adjustments to the water rate structure or water rates will be proposed. Any proposed change in the District's water rate structure or water rates will be subject to public review in accordance with the requirements of Proposition 218 and approval by the District Board of Directors.

In October 2015 the District adopted Resolution 2300, which provided for drought emergency water service surcharges and the adoption of a tiered drought emergency water rate system (see Table 9-2 below and Appendix L). For the District's metered customers, this rate structure encouraged further water conserving behavior by incorporating a tiered volumetric surcharge in addition to the normal (non-drought) unit service charge. Consequently, water usage reductions directly reduced the surcharge to the metered customer, while excessive water use resulted in increased surcharges to the metered customer. If current drought conditions continue and there is a need to re-enact drought emergency surcharges to encourage further water conservation and address the financial impact of a drought, a drought emergency rate system will again be evaluated and will be subject to public review in accordance with the requirements of Proposition 218 and approval by the District Board of Directors.

Continued implementation of this DMM is expected to help the District achieve its water use targets by ensuring water customers pay the true cost of water and to adequately fund water system operations and maintenance, including repair and replacement programs, and water conservation programs.

9.2.4 Public Education and Outreach

The District has an active public information and outreach program. The District has participated in public outreach activities through the YUBA FIRST 5 communication efforts, and anticipates developing a water conservation program that would include various components of a public and school outreach program as funding and staffing resources are available. The District anticipates distributing information to the public about water saving programs and conservation measures through monthly bill messages. In addition, monthly water bills are designed to show water used over the last billing period with a summary of water usage by each billing period for the previous year.

Table 9-2. 2015-2017 Drought Emergency Water Rates[a]

Quantity Charge for Metered Accounts					
2015 Emergency Drought Water Rates, $/ccf[b]					
Meter Size	Tier Water Use	Stage 1 (20%)	Stage 2 (30%)	Stage 3 (40%)	Stage 4 (50%)
¾"	0-12 ccf	0.00	0.20	0.50	0.90
¾"	13-30 ccf	0.30	0.50	0.90	0.40
¾"	Over 30 ccf	0.70	0.80	1.40	2.20
1" and larger	All Water Use	0.21	0.39	0.72	1.10
2016 Emergency Drought Water Rates, $/ccf[c]					
Meter Size	Tier Water Use	Stage 1 (20%)	Stage 2 (30%)	Stage 3 (40%)	Stage 4 (50%)
¾"	0-9 ccf	0.00	0.25	0.50	0.95
¾"	10-30 ccf	0.30	0.50	1.00	0.45
¾"	Over 30 ccf	0.70	0.80	1.45	2.45
1" and larger	All Water Use	0.25	0.45	0.82	1.24
2017 Emergency Drought Water Rates, $/ccf[d]					
Meter Size	Tier Water Use	Stage 1 (20%)	Stage 2 (30%)	Stage 3 (40%)	Stage 4 (50%)
¾"	0-6 ccf	0.00	0.30	0.60	1.00
¾"	7-30 ccf	0.30	0.55	0.95	1.50
¾"	Over 30 ccf	0.70	0.80	1.60	2.50
1" and larger	All Water Use	0.28	0.50	0.90	1.37
Revised Emergency Drought Water Rates, $/ccf[e]					
Meter Size	Tier Water Use	Stage 1a (10%)	-	-	-
¾"	0-20 ccf	0.00	-	-	-
¾"	21-30 ccf	0.30	-	-	-
¾"	Over 30 ccf	0.70	-	-	-
1" and larger	All Water Use	0.16	-	-	-
Fixed Monthly Surcharge for Flat Rate Accounts, $					
Service Size	-	-	Stage 2 (30%)	Stage 3 (40%)	Stage 4 (50%)
¾"	-	-	0.37	2.28	3.10
1"	-	-	0.56	3.50	4.76
1 ½"	-	-	0.85	5.31	7.22
2"	-	-	1.22	7.65	10.40
3"	-	-	2.55	15.92	21.66
4" and larger	-	-	3.57	22.29	30.31

(a) Proposed maximum emergency drought rates adopted by the District on October 1, 2015 (Resolution 2300).
(b) Effective on or after November 1, 2015.
(c) Effective on or after January 1, 2016.
(d) Effective on or after January 1, 2017.
(e) Revision 1 to Resolution 2300 approved by District Board of Directors on September 15, 2016; effective on or after October 1, 2016.
ccf = one hundred cubic feet or approximately 748 gallons

The District is working hand-in-hand with the Yuba Water Agency and their consulting team to expand outreach and education on the need for and importance of water use efficiency and water conservation. Efforts by the District and the Yuba Water Agency have three primary objectives:

- To identify issues of concern from water customers and solicit their feedback
- To provide information and education on efficient water use and conservation through public events, demonstrations, workshops, social media and other means
- To increase awareness of current and future water supply issues and engage the public's interest in planning for the future

Specific planned actions include:

- Providing additional customer education
- Identifying issues of concern within the District's water customer base that may not have been previously voiced due to lack of awareness or understanding
- Providing the annual required Consumer Confidence Report in a more user-friendly format, in English and Spanish, highlighting important issues for customers, explaining how to read the report and what the information means to the customers, and providing background on the District and its mission

Continued implementation of this DMM is expected to help the District achieve its water use targets by educating water users about the importance of improving water use efficiency and avoiding water waste.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

A water audit is a process of accounting for water use throughout a water system to quantify the efficiency of the water distribution system. Unaccounted-for water is the difference between metered production and metered consumption on a system-wide basis. A leak detection program typically consists of both visual inspection as well as audible inspection. Visual inspection includes the inspection of distribution system appurtenances (e.g., fire hydrants, valves, meters, etc.) to identify obvious signs of leakage. To perform audible leak detection, specialized electronic listening equipment is used to detect the sounds associated with distribution system leakage. This process allows the agency to pinpoint the location of suspected leaks.

Repair and maintenance of the water distribution systems are priorities for the District. The District has a Capital Improvement Plan that outlines maintenance programs for maximizing the efficiency of water distribution system operations and minimizing water losses. These programs include using Supervisory Control and Data Acquisition (SCADA) systems to monitor groundwater production, quick responses to water main leak detection and repair, recalibration of each well meter every four years, annual pump efficiency testing, and water quality efforts including main flushing and water quality testing.

The District recently applied for a grant for saddle replacement for roughly 1,203 homes throughout Olivehurst. Olivehurst contains a large portion of residential homes that were built prior to the 1950's and one of the previous practices for water connections from the main to the lateral were to connect them via a cast iron saddle. Cast iron is known to rust, corrode, and disintegrate over time, which is what has occurred for most of the older homes with this type of fitting. The cast iron saddles currently in place were made of cheap material and have reached or exceeded their life expectancy and are in need of

replacement per current industry standards and practices. The District plans to replace the cast iron saddles with brass saddles which are more effective, longer lasting, and resistive to corroding. It is estimated that approximately 12 MG of water is being wasted each year due to leaks, cracks, and broken infrastructure related to the cast iron saddles, and would be saved with the replacement of the saddles.

In addition, the District has an ongoing pipe replacement program to replace the Olivehurst system's aging steel pipelines. The District will be replacing approximately 14,000 feet of steel mains with 8-inch diameter C-900 PVC plastic pipe throughout historic Olivehurst via the Integrated Regional Water Management Plan (IRWMP) Project 4 Grant. This project will also replace approximately 25 fire hydrants, 69 8-inch diameter valves and 40 tie-in locations to existing water mains. The project will prevent loss of approximately 78 MG of water each year through system leaks and inefficiencies, increase public safety of a disadvantaged community by increasing water supply flow for fire-fighting, improve the water supply system that supports 10,000 residents of a disadvantaged community, and assist the District in increasing its ability to manage dry periods. The project is planned to be completed by March 1, 2024.

Ongoing analysis of unaccounted for water is one of the most effective means to achieve conservation by reducing leaks from the system. Actual losses in the District's Olivehurst system are unknown until the Olivehurst system becomes fully metered. As mentioned previously, the District's metering program is anticipated to be completed by the end of 2022. Once the conversion to metered water use is complete, the District will be able to determine actual water use and better estimate losses based on metered usage. In 2020, water losses in the District's Plumas Lake system were approximately 10 percent. The District's Plumas Lake system is relatively new; therefore, water loss percentages are expected to be low. Whenever it appears that leaks may exist on the customer's side of the meter, customers in the District's service area are notified to investigate and conduct a repair. District staff continually monitor leak repairs to ensure losses are minimized.

Concurrent with completion of the District's metering program, continued implementation of this DMM is expected to help the District achieve its water use targets by identifying sources of water loss quickly so repairs can be made and losses minimized.

9.2.6 Water Conservation Program Coordination and Staffing Support

The District does not have a full-time Water Use Efficiency Practitioner, as the District's size does not warrant a full-time position. However, the District does have a full-time staff member who is responsible for implementing and monitoring the District's water conservation activities. The Water Use Efficiency Practitioner's role is to develop, implement and manage the District's water conservation program and to coordinate on-going conservation programs with other agencies. District staff also support conservation efforts through enforcement and monthly billing mailers.

Implementation of this DMM is expected to help the District achieve its water use targets by making water conservation and implementation of the District's water conservation program a priority.

9.2.7 Other Demand Management Measures

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

- Residential conservation programs
- Commercial, industrial, institutional customer conservation programs

These programs are described below.

9.2.7.1 Residential Conservation Programs

The District's service area is demographically diverse and located in an area (Yuba County) with a median household income of about $58,054 per year[2] which is much lower than the neighboring counties (Sutter County and Placer County). Furthermore, according to U.S. Census data, the median household income in Olivehurst is $48,598 per year[3], which is lower than the county-wide median. As such, District customers are very sensitive to water rates and the District's revenues are constrained. Consequently, the District has limited personnel and funding to exhaustively support residential assistance programs and current water rates cannot support the costs associated with performing water surveys; therefore, water surveys are not part of the approved operating budget. In addition, District management and its Board of Directors are also concerned about the personal safety of its staff performing on-site residential audits; therefore, at this time, residential audits are not conducted.

As discussed above, the District has partnered with the Yuba Water Agency to expand outreach and education on the need for and importance of water use efficiency and water conservation.

Implementation of this DMM is expected to help the District achieve its water use targets by reducing the amount of water consumed by its residential customers.

9.2.7.2 Commercial, Industrial, Institutional Customers Conservation Programs

The District may choose to pass a resolution to require the future construction projects to use water conservation methods for plumbing fixtures, including Ultra-Low Flush Toilets (ULFT), low-flow showerheads, and waterless urinals.

Implementation of this DMM is expected to help the District achieve its water use targets by reducing the amount of water consumed by its Commercial Industrial Institutional (CII) customers.

[2] Median household income for Yuba County, United States Census Bureau, 2015-2019: American Community Survey 5-Year Estimates Data Profiles.

[3] Median household income for Olivehurst CPD, United States Census Bureau, 2015-2019: American Community Survey 5-Year Estimates Data Profiles.

9.3 IMPLEMENTATION TO ACHIEVE WATER USE TARGETS

Water conservation measures are a vital part of the District's overall plan to achieve reliable, high quality, and cost-effective water supply for its customers. As described above, the District has implemented mandatory potable water use restrictions and conservation pricing. The District found its drought rate structure to be extremely effective at reducing customer water use during the most recent drought.

9.4 WATER USE OBJECTIVES (FUTURE REQUIREMENTS)

In 2018, the State Legislature enacted two policy bills, (SB 606 (Hertzberg) and AB 1668 (Friedman)), to establish long-term water conservation and drought planning to adapt to climate change and the associated longer and more intense droughts in California. These two policy bills build on SB X7-7 and set authorities and requirements for urban water use efficiency. The legislation sets standards for indoor residential use and requires the State Water Board, in coordination with DWR, to adopt efficiency standards for outdoor residential use, water losses, and CII outdoor landscape areas with dedicated irrigation meters. At the time of preparation of this UWMP, DWR and the State Water Board are in the process of adopting new standards for water loss and indoor and outdoor residential water use. These standards will require urban water retailers to develop agency-wide water use objectives and provide annual reports to DWR.

The State Legislature established indoor residential water use standards as 55 gpcd until January 2025, 52.5 gpcd from 2025 to 2029, and 50 gpcd in January 2030, or a greater standard recommended by DWR and the State Water Board. By June 30, 2022, the State Water Board is anticipated to adopt an outdoor residential use standard, a standard for CII outdoor landscape area with dedicated irrigation meters, and performance measures for CII water uses. At that time, the State Water Board will adopt guidelines and methodologies for calculating the water use objectives. In accordance with CWC §10609.20(c), the water use objective for urban water retailers will be based on the estimated efficient indoor and outdoor residential water use, efficient outdoor irrigation of CII landscaped areas, estimated water losses, and estimated water use for variances approved by the State Water Board aggregated across the population in its water service area.

An urban supplier shall submit a report to DWR no later than January 1, 2024, and by January 1 every year thereafter, reporting on its progress towards meeting its urban water use objective (California Water Code §10609.24).

CHAPTER 10
Plan Adoption, Submittal, and Implementation

This chapter provides information regarding the notification, public hearing, adoption, and submittal of the District's 2020 UWMP. It also includes discussion on plan implementation and the process of amending the UWMP and the WSCP.

10.1 INCLUSION OF ALL 2020 DATA

Because 2020 is the final compliance year for SB X7-7, the 2020 UWMPs must contain data through the end of 2020. If a water supplier bases its accounting on a fiscal year (July through June) the data must be through the end of the 2020 fiscal year (June 2020). If the water supplier bases its accounting on a calendar year, the data must be through the end of the 2020 calendar year (December 2020).

As indicated in Section 2.4 of this plan, the District uses a calendar year for water supply and demand accounting, and therefore this plan includes data through December 2020.

10.2 NOTICE OF PUBLIC HEARING

In accordance with the UWMP Act, the District must provide an opportunity for the public to provide input on this 2020 UWMP. The District must consider all public input prior to its adoption. There are two audiences to be notified for the public hearing: cities and counties, and the public.

10.2.1 Notices to Cities and Counties

The District provided greater than a 60-day notice regarding the preparation of its 2020 UWMP to Yuba County as discussed in Section 2.5 of this plan. In addition, the District provided notices to the following agencies:

- Yuba Water Agency
- Linda County Water District
- Marysville Joint Unified School District
- Plumas Lake School District

The District coordinated the preparation of its UWMP internally, with Yuba County, and with the above listed agencies. The notices of preparation are included as Appendix D. Upon substantial completion of this plan, the District provided the agencies listed above, including Yuba County, notice of public hearing (see Appendix D).

Notifications to Yuba County, in accordance with the UWMP Act, are summarized in Table 10-1.

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

County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Yuba County	Yes	Yes

10.2.2 Notice to the Public

The District issued a notice of public hearing to the public and provided a public review period following the notice, and prior to adoption, to allow ample time for public comments to be prepared and received.

A notice of public hearing was issued in accordance with Government Code Section 6066 and was published twice in the (_____) newspaper to notify all customers and local governments of the public hearing. In addition, the notice was posted on the District's website (www.opud.org). A copy of the published Notice of Public Hearing is included in Appendix D.

10.3 PUBLIC HEARING AND ADOPTION

The District encouraged community participation in the development of this 2020 UWMP, including its WSCP, using public notices and web-based communication. The notice included the time and place of the public hearing, as well as the location where the plan is available for public inspection.

The public hearing provided an opportunity for District water users and the general public to become familiar with the 2020 UWMP and ask questions about the District's water supply, its continuing plans for providing a reliable, safe, high-quality water supply, and plans to mitigate various potential water shortage conditions. Copies of the Draft UWMP were made available for public inspection at the District's offices and on the District website.

10.3.1 Public Hearing

A public hearing was held on _____, 2022. As part of the public hearing, the District provided a report on the District's compliance with the Water Conservation Act of 2009. The report included information on the District's baseline, water use targets, compliance, and implementation, as discussed previously in Chapter 5 of this plan.

10.3.2 Adoption

Subsequent to the public hearing, this 2020 UWMP was adopted by the District Board of Directors on _____, 2022. A copy of the adopted resolution is included in Appendix M.

10.4 PLAN SUBMITTAL

This 2020 UWMP will be submitted to DWR within 30 days of adoption. The adopted 2020 UWMP will be submitted electronically to DWR using the Water Use Efficiency (WUE) data portal. A CD or hardcopy of the adopted 2020 UWMP will also be submitted to the California State Library.

No later than 30 days after adoption, a copy of the adopted 2020 UWMP, including the Water Shortage Contingency Plan, will be provided to Yuba County in which the District provides water.

10.5 PUBLIC AVAILABILITY

No later than 30 days after submittal to DWR, copies of this plan, including the adopted Water Shortage Contingency Plan, will be available at the District's offices for public review during normal business hours. An electronic copy of this plan will also be available for review and download on the District's website.

10.6 AMENDING AN ADOPTED UWMP OR WATER SHORTAGE CONTINGENCY PLAN

The District may amend its 2020 UWMP and Water Shortage Contingency Plan jointly or separately. If the District amends one or both documents, the District 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, copies of amendments or changes to the plans will be submitted to the California State Library and Yuba County within 30 days after adoption.

Appendix A

Legislative Requirements

WATER CODE - WAT

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999]
(Heading of Division 6 amended by Stats. 1957, Ch. 1932.)

PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 - 10609.42] *(Part 2.55 added by Stats.2009, 7th Ex. Sess., Ch. 4, Sec. 1.)*

CHAPTER 1. General Declarations and Policy [10608 - 10608.8] *(Chapter 1 added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1.)*

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 stream flows, 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.

(*Added* by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)

10608.4

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

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

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

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

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

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

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

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

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

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

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

(k) Advance regional water resources management.

(Added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)

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 (a) 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.

(Added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)

WATER CODE - WAT

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999] *(Heading of Division 6 amended by Stats. 1957, Ch. 1932.)*

PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 - 10609.42] *(Part 2.55 added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1.)*

CHAPTER 9. Urban Water Use Objectives and Water Use Reporting [10609 - 10609.38] *(Chapter 9 added by Stats. 2018, Ch. 15, Sec. 7.)*

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.

(Amended by Stats. 2019, Ch. 497, Sec. 287. (AB 991) Effective January 1, 2020.)

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.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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 the greater of 52.5 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(3) Beginning January 1, 2030, the standard for indoor residential water use shall be the greater of 50 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(b) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and may jointly recommend to the Legislature a standard for indoor residential water use that more appropriately reflects best practices for indoor residential water use than the standard described in subdivision (a). A report on the results of the studies and investigations shall be made to the chairpersons of the relevant policy committees of each house of the Legislature by January 1, 2021, and shall include information necessary to support the recommended standard, if there is one. The studies and investigations shall also include an analysis of the benefits and impacts of how the changing standard for indoor residential water use will impact water and wastewater

management, including potable water usage, wastewater, recycling and reuse systems, infrastructure, operations, and supplies.

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

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

(d) (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).

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

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

(d) 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.

(e) 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.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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)).

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 15, Sec. 7. (AB 1668) Effective January 1, 2019.)

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.

(Amended by Stats. 2019, Ch. 239, Sec. 2. (AB 1414) Effective January 1, 2020.)

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.

(Added by Stats. 2018, Ch. 453, Sec. 4. (SB 875) Effective September 17, 2018. Section operative January 1, 2019, by its own provisions.)

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.

(Amended by Stats. 2019, Ch. 239, Sec. 3. (AB 1414) Effective January 1, 2020.)

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.

(Amended by Stats. 2019, Ch. 239, Sec. 4. (AB 1414) Effective January 1, 2020.)

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.

(Added by Stats. 2019, Ch. 239, Sec. 5. (AB 1414) Effective January 1, 2020.)

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.

(c) (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.

(d) 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.

(Amended by Stats. 2019, Ch. 239, Sec. 6. (AB 1414) Effective January 1, 2020.)

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.

(Added by Stats. 2019, Ch. 203, Sec. 1. (SB 134) Effective January 1, 2020.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 12. (SB 606) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 13. (SB 606) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 14. (SB 606) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 15. (SB 606) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 16. (SB 606) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 17. (SB 606) Effective January 1, 2019.)

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999]
(Heading of Division 6 amended by Stats. 1957, Ch. 1932.)

PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 - 10657] *(Part 2.6 added by Stats. 1983, Ch. 1009, Sec..)*

CHAPTER 1. General Declaration and Policy [10610 - 10610.4] *(Chapter 1 added by Stats. 1983, Ch. 1009, Alec. 1.)*

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

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

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.

(Amended by Stats. 201B, Ch. 14, Sec. 18. (SB 606) Effective January 1, 201 9.)

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.

CHAPTER 2. Definitions [10611 - 1 0618] ***(Chapter 2 added by Stats. 1983, Ch. 1009, iec. 1.)***

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

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

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.

Added by renumbering Section 10612 by Stats. 2018, Ch. 14, Sec. 20. (SB 606) Effective January 1, 2019.)

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.

(Amended by Stats. 1995, Ch. 854, Sec. 3. Effective January 1, 1996.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 21. (SB 606) Effective January 1, 201 9.)

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.

(Added by :3tats. 1983, Ch. 1009, Exec. 1.)

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

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

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.

(Amended by Stats. 1995, *Ch. 854, Sec. 4. Effective January 1, 1996.)*

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

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

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

(Added by Stats. 1995, Ch. 854, Sec. 5. Effective January 1, 1996)

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.

(Amended by Stats. 1996, *Ch. 1023, Sec. 428. Effective January 29, 1996.)*

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.

(Added by Stats. 2018, Ch. 14, Sec. 22. (SB 606) Effective January 1, 2019)

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.

(Added by Stats. 2018, Ch. 14, Sec. 23 (SB 606). Effective January 1, 2019)

CHAPTER 3. Urban Water Management Plans [10620 - 10645] *(Chapter 3 added by* Stabs. *1983, Ch. 1009, Sec. 1.)*

ARTICLE 1. General Provisions [10620 - 1 0621] *(Article 1 added by Stats. 1 983, Ch. 1009, Sec. 1.)*

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) (I) 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.

(Amended by Stats. 2018, Ch. 14, Sec. 24. (SB 606) Effective January 1, 2019.)

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 July1, 2016

(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1,2021

(Amended by Stats. 2019, Ch. 239, Sec. 7. (AB 1414) Effective January 1, 2020.)

CHAPTER 3. Urban Water Management Plans [10620 - 10645] ***(Chapter 3 added by Stats. 1983, Ch. 1009, Sec. 1.)***

ARTICLE 2. Contents of Plans [10630 - 1 0634] ***(Article 2 added by Stats. 1 983, Ch. 1009, Sec. 1.)***

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.

(Amended by Stats. 2018, Ch. 14, Sec. 26. (SB 606) Effective January 1, 201 9.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 27. (SB 606) Effective January 1, 2019.)

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:

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.

(A) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For 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).

(B) 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.

(C) 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) (I) 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.

(e) 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) For the supplement required of urban retail water suppliers by paragraph (2) of subdivision (f) of Section 10621, 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, pursuant to Chapter 9 (commencing with Section 10609) of Part 2.55.

(C) 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 (C) 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).

(Amended by Stats. 2018, Ch. 14, Sec. 28. (SB 606) Effective January 1, 2019.)

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.

(Added by Stats. 2005, Ch. 727, Sec. 2. Effective January 1, 2006.)

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.

(Amended by Stats. 2018, Ch. 14, Sec. 29. *(SB* 606a *Effective January 1, 2019.)*

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. Locally appropriate demand reduction actions to adequately respond to shortages.

(B) Locally appropriate operational changes.

(C) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(D) 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.

(Repealed and added by Stats. 2018, Ch. 14, Sec. 32. (SB 606) Effective January 1, 2019.)

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 June 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 June 1 of each year, whichever is later.

(Added by Stats. 2018, Ch. 14, Sec. 33. (SB 606) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 34. (SB 606) Effective January 1, 2019.)

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.

(Added by Stats. 2018, Ch. 14, Sec. 35. (SB 606) Effective January 1, 2019.)

10632.5 (a) In addition to the requirements of paragraph (3) of subdivision (a) 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.

(Added by Stats. 2015, Ch. 681, Sec. 1. (SB 664a *Effective January 1, 2OJ* 6.g

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.

(Amended by Stats. 2009, Ch. 534, Sec. 2. (AB 1465) Effective January 1, 2010.)

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.

(Added by Stats. 2001, Ch. 644, Sec. 3. Effective January 1, 2002.)

CHAPTER 3. Urban Water Management Plans [10620 - 10645] ***(Chapter 3 added by*** **Stabs.** ***1983, Ch. 1009, Sec. 1.)***

ARTICLE 2.5. Water Service Reliability [10635- 10635.] ***(Article 2.5 added by Stats. 1995, Ch. 854, Sec. 11.)***

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

(Amended by Stats. 2018, Ch. 14, Sec. 36. (SB 606) Effective January 1, 2019.)

CHAPTER 3. Urban Water Management Plans [10620 - 10645] ***(Chapter 3 added by*** **Stabs.** ***1983, Ch. 1009, Sec. 1.)***

ARTICLE 3. Adoption and Implementation of Plans [1 0640 - 10645] ***Article 3 added by Stats. 1983, Ch. 1009, Sec. 1.)***

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.

(Amended by Stats. 2018, Ch. 14, Sec. 37. (SB 606a *Effective January 1, 2OJ* 9.g

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.

(Amended by Stats. 2018, Ch. 14, Sec. 38. (SB 606a *Effective January 1, 20J* 9.g

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.

(Amended by Stats. 2018, Ch. 14, Sec. 39. (SB 606$ *Effective January 1, 70J* 9.g

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

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

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.

(Amended by Stats. 2018, Ch. 14, Sec. 40. (SB 606) Effective January 1, 2019.)

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.

(Amended by Stats. 2018, Ch. 14, Sec. 41. (SB 606) Effective January 1, 201 9.)

CHAPTER 4. Miscellaneous Provisions [1 0650 - 10657] ***(Chapter 4 added by :itats. 1 983, Ch. 1009, iec. 1.)***

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.

(Amended by Stats. 2018, Ch. 14, Sec. 42. (SB 606) Effective January 1, 2019.)

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.

(Amended by Stats. 2018, Ch. 14, Sec. 43. (SB 606) *Effective January 1, 2019*

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.

(Amended by Stats. 1995, Ch. 854, Sec. 6. *Effective January 1, 1996.)*

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.

(Amended by Stats. 2018, Ch. 14, Sec. 45. (SB 606) *Effective January 1, 2019)*

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.

(Amended by Stats. 2018, Ch. 14, Sec. 44. (SB 606) *Effective January 1, 2019)*

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.

(Amended by Stats. 1983, Ch. 1009, Sec. 1)

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.

(Amended by Stats. 2018, Ch. 14, Sec. 46. (SB 606) *Effective January 1, 2019)*

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.

(Amended by Stats. 2018, Ch. 14, Sec. 47. (SB 606) *Effective January 1, 2019)*

Appendix B

DWR 2020 Urban Water Management Plan Tables

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
CA5810003	Olivehurst System	4,765	802
CA5805001	Plumas Lake System	2,669	580
	TOTAL	7,434	1,382
NOTES: Volumes are in million gallons (MG).			

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable*
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
Units of measure used in UWMP *	
Unit	MG
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	

Submittal Table 2-4 Retail: Water Supplier Information Exchange
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.
Wholesale Water Supplier Name
not applicable

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020	2025	2030	2035	2040	2045*(opt)*
	25,697	32,697	39,697	43,197	46,697	50,197
NOTES: 2020 population is generally based on U.S. Census data for the Olivehurst CDP and Plumas Lake CDP, with minor adjustments to account for some additional connections served outside of the Olivehurst CDP and some connections not served within the Olivehurst CDP. Projected population is based on recent and anticipated development trends within the District's service area. See Appendix E for additional detail.						

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 Actual		
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	Additional Description (as needed)	Level of Treatment When Delivered Drop down list	Volume[2]
Single Family		Drinking Water	941
Multi-Family		Drinking Water	46
Commercial	Includes Institutional demands.	Drinking Water	97
Industrial		Drinking Water	10
Landscape		Drinking Water	83
Other	Unmetered Accounts (Olivehurst system)	Drinking Water	59
Other	Unbilled Unmetered	Drinking Water	3
Losses		Drinking Water	142
		TOTAL	1,382
[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in Table 6-4.* [2] *Units of measure (AF, CCF, MG) must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES: Volumes are in MG.			

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected 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		2025	2030	2035	2040	2045 (opt)
Single Family		1,270	1,542	1,678	1,814	1,950
Multi-Family		58	71	77	83	90
Commercial	Includes Institutional demands.	123	150	163	176	189
Industrial		13	15	17	18	19
Landscape		105	128	139	151	162
Other	Unbilled Unmetered	4	5	5	5	6
Losses		181	219	239	258	277
	TOTAL	1,754	2,130	2,318	2,506	2,693
NOTES: Volumes are in MG.						

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*	1,382	1,754	2,130	2,318	2,506	2,693
Recycled Water Demand[1] *From Table 6-4*	0	0	0	0	0	0
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]						
TOTAL WATER USE	1,382	1,754	2,130	2,318	2,506	2,693

[1] Recycled water demand fields will be blank until Table 6-4 is complete

*[2] Long term storage means water placed into groundwater or surface storage that is not removed from storage in the same year. Supplier **may** deduct recycled water placed in long-term storage from their reported demand. This value is manually entered into Table 4-3.*

NOTES: Volumes are in MG; table numbers refer to DWR table numbers.

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2]
01/2016	140
01/2017	265
01/2018	138
01/2019	157
01/2020	142
[1] Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet. *[2] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES: The water loss shown represents the combined water loss from the District's Olivehurst and Plumas Lake systems; volumes in MG; copies of the District's 2016-2020 Water Audits for the Olivehurst system and Plumas Lake system are provided in Appendix F.	

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	No
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.	
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form *Retail Supplier or Regional Alliance Only*				
Baseline Period	Start Year	End Year	Average Baseline GPCD	Confirmed 2020 Target
10-15 year	2001	2010	178	167
5 Year	2003	2007	190	
NOTES:				

Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form *Retail Supplier or Regional Alliance Only*				
2020 GPCD			2020 Confirmed Target GPCD	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD	2020 TOTAL Adjustments	Adjusted 2020 GPCD *(Adjusted if applicable)*		
147			167	Y
NOTES:				

Submittal Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
☐	All or part of the groundwater described below is desalinated.					
Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016	2017	2018	2019	2020
Alluvial Basin	South Yuba Subbasin (Olivehurst System)	692	710	704	710	802
Alluvial Basin	South Yuba Subbasin (Plumas Lake System)	381	447	483	504	580
	TOTAL	1,073	1,157	1,187	1,214	1,382
NOTES: Volumes are in MG.						

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
	Percentage of 2020 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2020	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Olivehurst Public Utility District	Metered	588	Olivehurst Public Utility District	OPUD Wastewater Treatment Facility	Yes	No
Total Wastewater Collected from Service Area in 2020:		588				
NOTES: Volumes are in MG.						

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020

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

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)* [2]	Method of Disposal *Drop down list*	Does This Plant Treat Wastewater Generated Outside the Service Area? *Drop down list*	Treatment Level *Drop down list*	2020 volumes [1]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
Olivehurst Public Utility District Wastewater Treatment Facility	Western Interceptor Drainage Canal	Bear River		River or creek outfall	Yes	Tertiary	547	547			
						Total	547	547	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.
[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES: Volumes are in MG.

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area

☑ Recycled water is not used and is not planned for use within the service area of the supplier.
The supplier will not complete the table below.

Name of Supplier Producing (Treating) the Recycled Water:	
Name of Supplier Operating the Recycled Water Distribution System:	
Supplemental Water Added in 2020 (volume) *Include units*	
Source of 2020 Supplemental Water	

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units*	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020	2025	2030	2035	2040	2045 (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)										
Golf course irrigation										
Commercial use										
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)										
				Total:	0	0	0	0	0	0
				2020 Internal Reuse						

[1] ***Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES:

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual

☑	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.

Beneficial Use Type	2015 Projection for 2020	2020 Actual Use
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)		
Golf course irrigation		
Commercial use		
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Description Required)		
Total	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.

NOTE:

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
		Total	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☑	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☐	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume	Water Quality Drop Down List	Total Right or Safe Yield (optional)
Groundwater (not desalinated)	South Yuba Subbasin	1,382	Drinking Water	
	Total	1,382		0
NOTES: Volumes are in MG.				

Submittal Table 6-9 Retail: Water Supplies — Projected						
Water Supply	Additional Detail on Water Supply	Projected Water Supply Report To the Extent Practicable				
		2025	**2030**	**2035**	**2040**	**2045** (opt)
Groundwater (not desalinated)	South Yuba Subbasin	6,544	6,544	6,544	6,544	6,544
	Total	6,544	6,544	6,544	6,544	6,544
NOTES: The District's reasonably available volume is assumed to be equal to 75 percent of the District's current groundwater filter capacity.						

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
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 2019-2020, use 2020	**Available Supplies if Year Type Repeats**	
		☐	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		☑	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	**% of Average Supply**
Average Year	2005	6,544	100%
Single-Dry Year	1977	6,544	100%
Consecutive Dry Years 1st Year	1987	6,544	100%
Consecutive Dry Years 2nd Year	1988	6,544	100%
Consecutive Dry Years 3rd Year	1989	6,544	100%
Consecutive Dry Years 4th Year	1990	6,544	100%
Consecutive Dry Years 5th Year	1991	6,544	100%
NOTES: The District's average year supply is assumed to be equal to 75 percent of the District's current groundwater filter capacity. Because the District's groundwater supply is assumed to be drought resistant, the District's dry year supply is not subject to reduction during dry years and is assumed to be 100% of the District's normal year supply. Volumes are in MG.			

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals (*autofill from Table 6-9)*	6,544	6,544	6,544	6,544	6,544
Demand totals *(autofill from Table 4-3)*	1,754	2,130	2,318	2,506	2,693
Difference	4,790	4,414	4,226	4,038	3,851
NOTES: Volumes are in MG; table numbers refer to DWR table numbers.					

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals	6,544	6,544	6,544	6,544	6,544
Demand totals	1,754	2,130	2,318	2,506	2,693
Difference	4,790	4,414	4,226	4,038	3,851
NOTES: Volumes are in MG.					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025	2030	2035	2040	2045 (Opt)
First year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Second year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Third year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Fourth year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Fifth year	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
Sixth year *(optional)*	Supply totals	6,544	6,544	6,544	6,544	6,544
	Demand totals	1,754	2,130	2,318	2,506	2,693
	Difference	4,790	4,414	4,226	4,038	3,851
NOTES: Volumes are in MG.						

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Total Water Use	1,456
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	5,088
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	5,088
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	1,531
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	5,013
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	5,013
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	1,605
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	4,939
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,939
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	1,680
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	4,864
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,864
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	1,754
Total Supplies	6,544
Surplus/Shortfall w/o WSCP Action	4,790
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,790
Resulting % Use Reduction from WSCP action	0%

Submittal Table 8-1
Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Shortage Response Actions (*Narrative description*)
1	Up to 10%	Water Supply Warning
2	Up to 20%	Water Shortage Alert
3	Up to 30%	Water Shortage Crisis
4	Up to 40%	Water Shortage Severe Crisis
5	Up to 50%	Water Shortage Emergency
6	>50%	Water Shortage Catastrophic Emergency

NOTES:

Submittal Table 8-2: Demand Reduction Actions				
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? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
Stage 1	CII - Restaurants may only serve water upon request	50 gal/day/commercial connection		No
Stage 1	Other water feature or swimming pool restriction	No data available	All pools, spas, and ornamental fountains/ponds shall be equipped with recirculating pumps and shall be constructed to be leak proof	No
Stage 1	Other water feature or swimming pool restriction	No data available	Pool draining and refilling shall be allowed only for health, maintenance, or structural considerations	No
Stage 1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	No data available		No
Stage 1	Other - Require automatic shut of hoses	50 gal/day/connection	Free flowing hoses are prohibited for all uses, including vehicle and equipment washing, ponds and evaporative coolers	No
Stage 1	Other - Prohibit use of potable water for washing hard surfaces	50 gal/day/connection	Washing down of sidewalks, driveways, parking lots, or other paved surfaces is prohibited except to alleviate immediate fire or sanitation hazards	No
Stage 2	Landscape - Limit landscape irrigation to specific days	Based on 2020 water use data, and assuming that 30% of single family water use is for landscape water use, it is estimated that irragation would be reduced by about 50%, with a savings of about 180 MG	Landscape irrigation shall be limited to a maximum of three days per week when necessary based on the following an odd-even schedule: -Odd numbered street addresses may irrigate only on Tuesdays, Thursdays, and Saturdays -Even numbered street addresses may irrigate only on Wednesdays, Fridays, and Sundays -No irrigation on Mondays	Yes
Stage 2	Landscape - Limit landscape irrigation to specific times	Depends on times that irrigation will be allowed, but can reduce water use by 20-25 gallons per day per household	Automatic sprinkler systems shall only operate during off-peak hours between 12:00AM and 6:00AM	Yes
Stage 2	CII - Restaurants may only serve water upon request	50 gal/day/commercial connection		Yes
Stage 2	Other - Prohibit use of potable water for washing hard surfaces	50 gal/day/connection	Washing down of sidewalks, driveways, parking lots, or other paved surfaces is prohibited except to alleviate immediate fire or sanitation hazards	Yes

Stage 3	Landscape - Limit landscape irrigation to specific days	Based on 2020 water use data, and assuming that 30% of single family water use is for landscape water use, it is estimated that irragation would be reduced by about 75%, with a savings of about 270 MG	Landscape irrigation shall be limited to a maximum of two days per week only when necessary based on the following odd-even schedule: -Odd numbered street addresses may irrigate only on Tuesdays and Saturdays -Even numbered street addresses may irrigate only on Wednesdays and Sundays -No irrigation on Mondays, Thursdays, and Fridays	Yes
Stage 3	Water Features - Restrict water use for decorative water features, such as fountains	No data available	Water use for ornamental ponds and fountains is prohibited	Yes
Stage 3	Other water feature or swimming pool restriction	No data available	No potable water from the utility's system shall be used to fill or refill new swimming pools, artificial lakes, ponds, or streams until the water crisis is over	Yes
Stage 3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	100-200 gal/year/residential connection	Washing of automobiles or equipment shall be done on the lawn or at a commercial establishment that uses recycled or reclaimed water	Yes
Stage 4	Landscape - Limit landscape irrigation to specific days	Based on 2020 water use data, and assuming that 30% of single family water use is for landscape water use, it is estimated that irragation would be reduced by about 50%, with a savings of about 180 MG	Landscape irrigation shall be limited to a maximum of one day per week when necessary based on the following odd-even schedule: -Odd numbered street addresses may irrigate only on Saturdays -Even numbered street addresses may irrigate only on Sundays -No irrigation on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays	Yes
Stage 5	Other	Depends on extent and frequency of current flushing activities	Flushing of fire hydrants is prohibited except in case of emergency or only for essential operations	Yes
Stage 5	Other	Prevents an increased shortage gap	No potable water shall be sold outside the District's service area	Yes
Stage 5	Other	Prevents an increased shortage gap	New connections to the District system will not be allowed	Yes
Stage 6	Landscape - Prohibit all landscape irrigation	Based on 2020 water use data, and assuming that 30% of single family water use is for landscape water use, savings would be about 365 MG		Yes
NOTES:				

Submittal Table 8-3: Supply Augmentation and Other Actions			
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? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
Stage 1			No supply augmentation methods available
Stage 2			No supply augmentation methods available
Stage 3			No supply augmentation methods available
Stage 4			No supply augmentation methods available
Stage 5			No supply augmentation methods available
Stage 6			No supply augmentation methods available
NOTES: The District does not have any supply augmentation methods.			

Submittal Table 10-1 Retail: Notification to Cities and Counties		
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Yuba County	Yes	Yes

Urban Water Supplier: *Olivehurst Public Utility District*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/10/2020	**Urban Water Supplier Operational Control**		
End Date	1/9/2021	**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
☐ Is upstream embedded in the values reported?				
Water Volume Units Used	*MG*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (MG)		*1,382*	*0*	*1,382*
Energy Consumed (kWh)		*1,973,956*	*0*	*1,973,956*
Energy Intensity (kWh/MG)		*1,429*	*0*	*1,429*

Quantity of Self-Generated Renewable Energy

0 kWh

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

Metered Data

Data Quality Narrative:

2020 water production was provided for the Olivehurst and Plumas Lake systems. 2020 energy consumption was provided in a monthly summary of metered consumption at each facility.

Narrative:

Energy consumption was provided for the following facilities:

- Wells #1, #10, #14, #29, and #34
- Wells/Water Treatment Plants #4, #28, and #30
- Lindhurst Water Storage Tank

Appendix C

DWR 2020 Urban Water Management Plan Checklist

Appendix C
UWMP Checklist

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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	Section 1.2
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.	Summary	Executive Summary
X	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1 (District has been a water supplier for a number of years)
X	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.3
X	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Section 2.5.2 Appendix D
X	Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	Section 2.5.1 (District does not have any wholesale suppliers)
	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	N/A
X	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 3.1, 3.2
X	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3
X	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.4.1, Table 3-2
X	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.4.2
X	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Section 3.4.1
X	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.4.1 and 3.5

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2
X	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Section 4.3
X	Section 4.2.6	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	Section 4.4
X	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 3.4.1 and 4.2.3
X	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Section 4.3 and Appendix F
X	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5
X	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 4.6 and 7.3
X	Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Section 5.5, 5.6
X	Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 5.6
	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	N/A
X	Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.6 (District has not made an adjustment)
X	Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.5
X	Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	Section 5.6 and Appendix G
X	Sections 6.1 and6.2	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.	System Supplies	Section 6.1.2.2, 6.1.2.4 and 7.1.3

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	Sections 6.1	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	Section 6.1.2.2, 6.1.2.4 and 7.1.1
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	Section 6.1 (District only has a single supply source)
X	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Section 6.1.8
X	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	Section 6.1.9
X	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.1.2
X	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.1.2.2
X	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.1.2.1
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	Section 6.1.2.1
X	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 6.1.2.2
X	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.1.2.4, Table 6-2
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	Section 6.1.9, Table 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	Section 6.1.7
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)	Section 6.1.5.2
X	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.1.5.3
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)	Section 6.1.5.4

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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 a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.1.5.4
X	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.1.5.4
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)	Section 6.1.5.4
X	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.1.6
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)	Section 6.1.5.2
X	Section 6.2.8, Section 6.3.7	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 5 consecutive water years.	System Supplies	Section 6.1.8
X	Section 6.4 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	Section 6.3, Table 6-11
X	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1.1, Appendix I
X	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.2
X	Section 7.3	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 supply sources available to the water supplier with the total projected water use over the next20 years.	Water Supply Reliability Assessment	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	Section 7.3
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 5 consecutive years.	Water Supply Reliability Assessment	Section 7.3.1
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	Section 7.3.2
X	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 7.3.3

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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	Section 7.1.1, Section 7.1.2
X	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Section 8 and Appendix J
X	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Appendix J Section 1.0
X	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Appendix J Section 10.0
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	Appendix J Section 2.1
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	Appendix J Sections 2.2 and 2.3
X	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent 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	Appendix J Section 3.0
X	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	n/a; District's WSCP has been updated to the six standard stages
X	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Appendix J Section 4.3
X	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Appendix J Section 4.1
X	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Appendix J Section 4.4
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	Appendix J Section4.2

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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	Appendix J Table 4
X	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	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	Appendix J Section 5.0
X	Section 8.5 and 8.6	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	Appendix J Section 5.0
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	Appendix J Section 6.0
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	Appendix J Section 7.0
X	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Appendix J Section 2.1
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	Appendix J Section 2.1
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	Appendix J Section 8.0
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	Appendix J Section 8.0
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	Appendix J Section 8.0
X	Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Appendix J Section 9.0
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	Appendix J Section 11.0
X	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Appendix J Section 12.0

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 (days) after adopted the plan.	Water Shortage Contingency Planning	Appendix J Section 12.0
	Sections 9.1 and9.3	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
X	Sections 9.2 and 9.3	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	Section 9.2, Section 9.3
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	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 urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 10.2.1
X	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 10.4 (plan to be submitted within 30 days of adoption; missed the July 1, 2021 due date)
X	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.2 Appendix D
X	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Section 10.3
X	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.2 Appendix M
X	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4
X	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4
X	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Section 10.4 and 10.6

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5
X	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5
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
X	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Section 10.6

Appendix D

Agency and Public Notices

OLIVEHURST PUBLIC UTILITY DISTRICT

Our mission is to provide high quality services to enhance our community's quality of life.

BOARD OF DIRECTORS

Dennise Burbank John Floe MaryJane Griego Lacey Nelson Marc Perrault

GENERAL MANAGER
John Tillotson

November 23, 2021

Kevin Mallen
County Administrator
Yuba County
915 8th. St., Suite 115
Marysville, CA 95901

SUBJECT: Preparation of 2020 Urban Water Management Plan and Water Shortage Contingency Plan

Dear Mr. Mallen:

The Olivehurst Public Utility District (OPUD) is currently in the process of updating its Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). The Urban Water Management Planning Act, Water Code Section 10610 et seq., requires every urban water supplier providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually to prepare and adopt an UWMP and periodically update that plan at least every five years. Further, changes to the Act since 2015 require updates to OPUD's WSCP.

The UWMP is a planning document and a source document which reports, describes and evaluates water deliveries and uses, water supply sources and conservation efforts. The WSCP provides a plan for response to various water supply shortage conditions. As an urban water supplier, the OPUD coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP and WSCP updates. The OPUD will be reviewing the UWMP and WSCP and will make amendments and updates, as appropriate.

If you wish to contact the OPUD about its review process, you may do so by writing to the undersigned or by email to jtillotson@opud.org.

Sincerely,

Olivehurst Public Utility District

John Tillotson, P.E.
General Manager

1970 9th Avenue / P O Box 670
Olivehurst, CA

Phone: (530) 743-4657
Email: opud@opud.org

Cc:

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Appendix E

Population Information

Olivehurst Public Utility District
Population Projections

District Service Area Population Projection (as included in the 2015 UWMP):

The District's projected population at buildout was calculated using the District's 2010 population (20,322 people) plus the maximum additional population that is projected to occur in the District's service area at buildout (48,000 people) based on the population projections reported in the Yuba County 2030 General Plan[1]. This results in a total population of up to 68,300 people in the District's future service area by 2030.

The District's current (2015) and projected service area population is shown in Table 3-2.

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

Population Served	2015	2020	2025	2030	2035	2040*(opt)*
	20,626	30,700	45,800	68,300	68,300	68,300

NOTES: 2015 population is estimated using a persons-per connection methodology. Population projections are according to the Yuba County 2030 General Plan.

District Service Area Population (Actual and Projected)

	2010	2015	2020	2025	2030	2035	2040	2045	
Olivehurst CDP	13,656		16,595						*U.S. Census Bureau Quick Facts, Olivehurst CDP, April 1, 2010 and 2020 Population Estimates*
Wheeler Ranch (291 homes)	873		1,048						*291 homes @ 3.6 people/residential connection for Olivehurst CDP*
Subtract out 20 homes not served in Olivehurst CDP	(60)		(72)						*20 homes @ 3.6 people/residential connection for Olivehurst CDP*
Plumas Lake CDP	5,853		8,126						*U.S. Census Bureau Quick Facts, Plumas Lake CDP, April 1, 2010 and 2020 Population Estimates*
Total District Service Area	20,322		25,697						
2015 UWMP		20,626							
Actual Population	**20,322**	**20,626**	**25,697**						
Addtl People over 5 year period (estimated based on recent development through 2030 at about 450 new housing units per year; then tapering off through 2045 to about 225 new housing units per year)				7,000	7,000	3,500	3,500	3,500	
Projected Population	**20,322**	**20,626**	**25,697**	**32,697**	**39,697**	**43,197**	**46,697**	**50,197**	

Recent Development in District Service Area

	2016	2017	2018	2019	2020	2021
New home permits	80	87	228	387	282	442
Estimated addtl people per year @ 3.1 people/ connection (based on 8,126 people and 2,632 residential connections for Plumas Lake)	248	270	707	1,200	874	1,370

People Per Residential Connection

	Olivehurst	Plumas Lake
CDP Population in 2020	16,595	8,126
Residential Connections in 2020	4,609	2,632
People Per Residential Connection	3.6	3.1

Appendix F

AWWA Water Loss Audits

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst Public Utility District (5810003)
Reporting Year: 2016 (1/2016 - 12/2016)

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

					Pcnt:	Value:	
Volume from own sources:	3	696.200	MG/Yr	3			MG/Yr
Water imported:	n/a	0.000	MG/Yr				MG/Yr
Water exported:	n/a	0.000	MG/Yr				MG/Yr

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

WATER SUPPLIED: 696.200 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	5	486.500	MG/Yr			
Billed unmetered:	7	100.070	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	8	4.360	MG/Yr		4.360	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 590.930 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 105.270 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		1.741	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	9.929	MG/Yr	2.00%	MG/Yr
Systematic data handling errors:		1.216	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: 12.885 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 92.385 MG/Yr

WATER LOSSES: 105.270 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 109.630 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	56.5	miles
Number of active AND inactive service connections:	8	4,440	
Service connection density:		79	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: 5 60.0 psi

COST DATA

Total annual cost of operating water system:	10	$1,488,392	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$2.45	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	5	$624.00	$/Million gallons

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 52 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

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

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst Public Utility District (5810003)
Reporting Year: 2017 1/2017 - 12/2017

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

				Pcnt:	Value:	
Volume from own sources:	3	710.918	MG/Yr			MG/Yr
Water imported:	n/a	0.000	MG/Yr			MG/Yr
Water exported:	n/a	0.000	MG/Yr			MG/Yr

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

WATER SUPPLIED: 710.918 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	5	469.670	MG/Yr			
Billed unmetered:	5	56.340	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	8	4.360	MG/Yr		4.360	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 530.370 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 180.548 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		1.777	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	5	9.585	MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		1.174	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: 12.537 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 168.011 MG/Yr

WATER LOSSES: 180.548 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 184.908 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	56.5	miles
Number of active AND inactive service connections:	8	4,460	
Service connection density:		79	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:	5	60.0	psi

COST DATA

Total annual cost of operating water system:	10	$1,508,665	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$3.27	$/1000 gallons (US)	
Variable production cost (applied to Real Losses):	5	$604.62	$/Million gallons	☑ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 52 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: Billed metered
3: Billed unmetered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst Public Utility District (5810003)
Reporting Year: 2018 | 1/2018 - 12/2018

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

			Pcnt:	Value:	
Volume from own sources:	711.417	MG/Yr			MG/Yr
Water imported:	0.000	MG/Yr			MG/Yr
Water exported:	0.000	MG/Yr			MG/Yr

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

WATER SUPPLIED: 711.417 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

		Pcnt:	Value:	
Billed metered:	563.014 MG/Yr			
Billed unmetered:	66.110 MG/Yr			
Unbilled metered:	0.000 MG/Yr			
Unbilled unmetered:	4.360 MG/Yr		4.360	MG/Yr

Use buttons to select percentage of water supplied **OR** value

AUTHORIZED CONSUMPTION: 633.484 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

77.933 MG/Yr

Apparent Losses

		Pcnt:	Value:	
Unauthorized consumption:	1.779 MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	11.490 MG/Yr	2.00%		MG/Yr
Systematic data handling errors:	1.408 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: 14.676 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 63.257 MG/Yr

WATER LOSSES: 77.933 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 82.293 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	56.5	miles
Number of active AND inactive service connections:	4,556	
Service connection density:	81	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: 60.0 psi

COST DATA

Total annual cost of operating water system:	$1,825,757	$/Year
Customer retail unit cost (applied to Apparent Losses):	$2.81	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	$690.02	$/Million gallons

☑ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

Add a grading value for 11 parameter(s) to enable an audit score to be calculated

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: Billed metered
3: Billed unmetered

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst Public Utility District (5810003)
Reporting Year: 2019 | 1/2019 - 12/2019

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

				Pcnt:	Value:	
Volume from own sources:	4	719.210	MG/Yr	0.00%		MG/Yr
Water imported:	n/a	0.000	MG/Yr			MG/Yr
Water exported:	n/a	0.000	MG/Yr			MG/Yr

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

WATER SUPPLIED: 719.210 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	4	558.140	MG/Yr			
Billed unmetered:	7	63.130	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	1.395	MG/Yr		1.395	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 622.665 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 96.545 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		1.798	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	11.391	MG/Yr	2.00%	MG/Yr
Systematic data handling errors:		1.395	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: 14.584 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 81.961 MG/Yr

WATER LOSSES: 96.545 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 97.940 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	56.5	miles
Number of active AND inactive service connections:	7	4,721	
Service connection density:		84	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: 5 60.0 psi

COST DATA

Total annual cost of operating water system:	10	$1,829,312	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$2.28	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	5	$585.45	$/Million gallons

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 54 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: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst PUD (CA5810003)
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

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

						Pcnt:	Value:	
Volume from own sources:	3	804.047	MG/Yr	4	0.00%			MG/Yr
Water imported:	n/a	0.000	MG/Yr					MG/Yr
Water exported:	n/a	0.000	MG/Yr					MG/Yr

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

WATER SUPPLIED: 804.047 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	8	660.493 MG/Yr			
Billed unmetered:	5	59.700 MG/Yr			
Unbilled metered:	n/a	0.000 MG/Yr			
Unbilled unmetered:	3	1.800 MG/Yr		1.800	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 721.993 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 82.054 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		2.010 MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	2	13.479 MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		1.651 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: 17.141 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 64.913 MG/Yr

WATER LOSSES: 82.054 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 83.854 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	6	56.5	miles
Number of active AND inactive service connections:	5	4,323	
Service connection density:		77	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:	7	60.0	psi

COST DATA

Total annual cost of operating water system:	10	$2,057,422	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$3.11	$/1000 gallons (US)	
Variable production cost (applied to Real Losses):	8	$535.27	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 54 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

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

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst Public Utility District (5805001)
Reporting Year: 2016 (1/2016 - 12/2016)

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

					Pcnt:	Value:	
Volume from own sources:	3	381.320	MG/Yr	3			MG/Yr
Water imported:	n/a	0.000	MG/Yr				MG/Yr
Water exported:	n/a	0.000	MG/Yr				MG/Yr
WATER SUPPLIED:		**381.320**	MG/Yr				

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

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	5	346.110	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	8	0.120	MG/Yr		0.120	MG/Yr
AUTHORIZED CONSUMPTION:		**346.230**	MG/Yr			

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) **35.090** MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		0.953	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	7.063	MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		0.865	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: **8.882** MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **26.208** MG/Yr

WATER LOSSES: **35.090** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **35.210** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	25.1	miles
Number of active AND inactive service connections:	8	2,147	
Service connection density:		86	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: 5 60.0 psi

COST DATA

Total annual cost of operating water system:	10	$716,633	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$2.01	$/1000 gallons (US)	
Variable production cost (applied to Real Losses):	5	$512.86	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 51 out of 100 *****

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

PRIORITY AREAS FOR ATTENTION:

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

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

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst Public Utility District (5805001)
Reporting Year: 2017 1/2017 - 12/2017

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

				Pcnt:	Value:	
Volume from own sources:	3	435.856	MG/Yr			MG/Yr
Water imported:	n/a	0.000	MG/Yr			MG/Yr
Water exported:	n/a	0.000	MG/Yr			MG/Yr

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

WATER SUPPLIED: 435.856 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	5	351.110	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	8	0.120	MG/Yr		0.120	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 351.230 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 84.626 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		1.090	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	5	7.166	MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		0.878	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: 9.133 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 75.493 MG/Yr

WATER LOSSES: 84.626 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 84.746 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	25.1	miles
Number of active AND inactive service connections:	8	2,192	
Service connection density:		87	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:	5	60.0	psi

COST DATA

Total annual cost of operating water system:	10	$833,241	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$2.71	$/1000 gallons (US)	
Variable production cost (applied to Real Losses):	5	$484.68	$/Million gallons	☑ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 53 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: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst Public Utility District (5805001)
Reporting Year: 2018 | 1/2018 - 12/2018

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

			Pcnt:	Value:	
Volume from own sources:	466.961	MG/Yr			MG/Yr
Water imported:	0.000	MG/Yr			MG/Yr
Water exported:	0.000	MG/Yr			MG/Yr
WATER SUPPLIED:	**466.961**	MG/Yr			

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

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	406.637	MG/Yr			
Billed unmetered:	0.000	MG/Yr			
Unbilled metered:	0.000	MG/Yr			
Unbilled unmetered:	0.120	MG/Yr		0.120	MG/Yr
AUTHORIZED CONSUMPTION:	**406.757**	MG/Yr			

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)

60.204 MG/Yr

Apparent Losses

		Pcnt:	Value:	
Unauthorized consumption:	1.167 MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	8.299 MG/Yr	2.00%		MG/Yr
Systematic data handling errors:	1.017 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: **10.483** MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **49.721** MG/Yr

WATER LOSSES: **60.204** MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: **60.324** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	25.1	miles
Number of active AND inactive service connections:	2,285	
Service connection density:	91	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: 60.0 psi

COST DATA

Total annual cost of operating water system:	$915,684	$/Year
Customer retail unit cost (applied to Apparent Losses):	$2.18	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	$527.24	$/Million gallons

☑ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

Add a grading value for 10 parameter(s) to enable an audit score to be calculated

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: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst Public Utility District (5805001)
Reporting Year: 2019 (1/2019 - 12/2019)

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

				Pcnt:	Value:	
Volume from own sources:	4	505.270	MG/Yr	0.00%		MG/Yr
Water imported:	n/a	0.000	MG/Yr			MG/Yr
Water exported:	n/a	0.000	MG/Yr			MG/Yr

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

WATER SUPPLIED: 505.270 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	4	443.150	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	1.263	MG/Yr		1.263	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 444.413 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 60.857 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		1.263	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	3	9.044	MG/Yr	2.00%	MG/Yr
Systematic data handling errors:		1.108	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: 11.415 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 49.442 MG/Yr

WATER LOSSES: 60.857 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 62.120 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	25.1	miles
Number of active AND inactive service connections:	8	2,422	
Service connection density:		96	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:	5	60.0	psi

COST DATA

Total annual cost of operating water system:	10	$1,042,738	$/Year
Customer retail unit cost (applied to Apparent Losses):	9	$2.28	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	5	$427.53	$/Million gallons

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 53 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: Billed metered
3: Customer metering inaccuracies

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
American Water Works Association.

? Click to access definition
+ Click to add a comment

Water Audit Report for: Olivehurst PUD - Plumas Lake (CA5805001)
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

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ----------> Pcnt: Value:

Volume from own sources:	3	579.168	MG/Yr	4	0.00%		MG/Yr
Water imported:	n/a	0.000	MG/Yr				MG/Yr
Water exported:	n/a	0.000	MG/Yr				MG/Yr

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

WATER SUPPLIED: 579.168 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

Pcnt: Value:

Billed metered:	8	517.686	MG/Yr		
Billed unmetered:	n/a	0.000	MG/Yr		
Unbilled metered:	n/a	0.000	MG/Yr		
Unbilled unmetered:	3	1.294	MG/Yr		1.294 MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 518.980 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 60.188 MG/Yr

Apparent Losses

Pcnt: Value:

Unauthorized consumption:		1.448	MG/Yr	0.25%	MG/Yr

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

Customer metering inaccuracies:	2	10.565	MG/Yr	2.00%	MG/Yr
Systematic data handling errors:		1.294	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: 13.307 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 46.881 MG/Yr

WATER LOSSES: 60.188 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 61.482 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	6	25.1	miles
Number of active AND inactive service connections:	5	2,653	
Service connection density:		106	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:	7	60.0	psi

COST DATA

Total annual cost of operating water system:	10	$1,262,628	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$2.44	$/1000 gallons (US)	
Variable production cost (applied to Real Losses):	8	$456.04	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 55 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

Appendix G

SB X7-7 Compliance Form

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Million Gallons
**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 2020 Population Estimate	
Method Used to Determine 2020 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**
☐	**4. Other** DWR recommends pre-review
NOTES: Combined 2020 census results for Olivehurst CDP and Plumas Lake CDP, with adjustments for connections outside the Olivehurst CDP boundary that are served by the District and connections inside the Olivehurst CDP boundary that are not served by the District.	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	25,697
NOTES:	

SB X7-7 Table 4: 2020 Gross Water Use							
		2020 Deductions					
Compliance Year 2020	**2020 Volume Into Distribution System** *This column will remain blank until SB X7-7 Table 4-A is completed.*	**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.*	**2020 Gross Water Use**
	1,382			-		-	**1,382**
* **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:							

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment

Complete one table for each source.

Name of Source	Groundwater, South Yuba Subbasin (Olivehurst System)
This water source is *(check one)* **:**	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	802	-	802

[1] ***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.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s) Meter Error Adjustment

Complete one table for each source.

Name of Source	Groundwater, South Yuba Subbasin (Plumas Lake System)
This water source is *(check one)* **:**	
☑	The supplier's own water source
☐	A purchased or imported source

Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional (+/-)*	Corrected Volume Entering Distribution System
	580		580

[1] ***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.*

[2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)		
2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
1,382	25,697	**147**
NOTES:		

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD Enter "0" if Adjustment Not Used Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]	TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
147	-	-	-	-	147	167	**YES**
[1] *All values are reported in GPCD*							
[2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*							
NOTES: 2020 Confirmed Target GPCD from Table 5-1 in the May 2017 UWMP.							

Appendix H

Groundwater Information

Sacramento Valley Groundwater Basin, South Yuba Subbasin

- Groundwater Basin Number: 5-21.61
- County: Yuba
- Surface Area: 89,000 acres (138 square miles)

Boundaries and Hydrology

The South Yuba subbasin lies in the southern portion of the Sacramento Basin Hydrologic Study Area. It is bounded on the north by the Yuba River, on the west by the Feather River, on the south by the Bear River, and on the east by the Sierra Nevada and encompasses nearly 107,000 acres. Elevations range from about 150 feet in the northwest region of the basin to about 30 feet in the southwest corner near the confluence of the Feather and Bear Rivers.

Average precipitation is less than 20 inches in the southwest and 20 to 24 inches in the rest of the basin.

Hydrogeologic Information

Water Bearing Formations

The South Yuba Subbasin aquifer system is comprised of continental deposits of Quaternary (Recent) to Late Tertiary (Miocene) age. The cumulative thickness of these deposits increases from a few hundred feet near the Sierra Nevada foothills on the east to over 1400 feet along the western margin of the basin (DWR 1978). The base of the aquifer system overlies the Pre-Tertiary metamorphosed igneous and sedimentary rocks of the Sierra Nevada block.

Holocene Dredger Tailings. These deposits occur along the Yuba and Bear Rivers within the eastern region of the South Yuba Groundwater subbasin. The coarse gravels and cobbles can be up to 125 feet thick and are highly permeable.

Holocene Stream Channel and Floodplain Deposits. These alluvial materials occur as coarse sand and gravels along present stream channels of the Yuba, Feather, and Bear Rivers. Coarser grained materials occur near streams with thicknesses up to 110 feet. Both grain size and thickness decrease with increased distance from streams. These deposits are highly permeable and provide for large amounts of groundwater recharge within the subbasin. Well yields are reported in the range of 2,000 to 4,000 gpm.

Pleistocence Victor Formation. The Victor Formation lies unconformably above the Laguna Formation. The majority of the formation occurs as alluvium throughout the North Yuba Groundwater subbasin, but floodplain deposits are present along stream channels above the alluvium.

Pleistocene Floodplain Deposits. These deposits occur as gravelly sand, silt, and clay from flood events along the Feather River and its tributaries. This unit overlies the Older Alluvium, underlies Quaternary Deposits, and ranges in thickness from 5 to 15 feet. These deposits provide a good medium

for groundwater recharge, provided the groundwater can pass the lower contact with the Older Alluvium.

Pleistocene Alluvium. This unit occurs at over 50 percent of the basin surface and at least 60 percent of its irrigated agricultural lands. Its thickness is highly variable due to its lower contact with the Laguna Formation. The Older Alluvium is comprised of Sierran alluvial fan deposits of loosely compacted silt, sand, and gravel with lesser amounts of clay deposits. The deposits occur as lenticular beds with decreasing thickness and grain size with increasing distance from the Yuba River and the foothills. Hardpan and claypan soils have developed to form an impermeable surface, but below this the Older Alluvium is moderately permeable and provides for most of the groundwater from domestic and shallow irrigation wells. Wells in the older alluvium have yields up to 1,000 gpm.

Pliocene Laguna Formation. The Laguna Formation is the most extensive water-bearing unit within the South Yuba Groundwater subbasin (Bookman-Edmonston 1992). The formation is comprised of reddish to yellowish or brown silt to sandy silt with abundant clay (Bookman-Edmonston 1992) and minor lenticular gravel beds. It overlies the Mehrten Formation and occurs at the surface intermittently at the east end of the basin (Olmsted and Davis 1961). The continental deposits of the Laguna dip to the west beneath the Victor Formation and range in thickness from 400 feet near the Yuba River up to 1,000 feet in the southwest portion of the county. Although the occurrence of thin sand and gravel zones is common, many of them have reduced permeability due to cementation. This coupled with its fine-grained character, leads to an overall low permeability for the Laguna Formation. Most of the groundwater produced from wells in the Laguna comes from overlying units.

Miocene-Pliocene Mehrten Formation. The Mehrten Formation is a sequence of volcanic rocks of late Miocene through middle Pliocene age. Surficial exposures are limited to a few square miles in the northeast corner of the basin (Olmsted and Davis 1961) and thickness varies from 200 feet near the eastern margin of the basin to 500 feet near the Feather River. The Merhten Formation is composed of two distinct units. One unit occurs as intervals of gray to black, well-sorted fluvial andesitic sand (up to 20 feet thick), with andesitic stream gravel lenses and brown to blue clay and silt beds. These sand intervals are highly permeable and wells completed in them can produce high yields. The second unit is an andesitic tuff-breccia that acts as a confining layer between sand intervals. A more detailed description of the Mehrten Formation can be found in Bulletin 118-6 (DWR 1978).

Recharge Areas

Stream channel and floodplain deposits present along the Yuba River, Feather River, and Honcut Creek are highly permeable and provide for large amounts of groundwater recharge within the subbasin. The potential for artificial recharge of groundwater in the basin is limited since areas which have available storage space typically have overlying soils with very low infiltration rates that would restrict recharge potential (Bookman-Edmonston Engineering, Inc. 1992).

Groundwater Level Trends

As early as 1960 groundwater levels showed a well-developed cone of depression beneath the South Yuba basin. Water levels in the center of the cone of depression were just below sea level. Nearly all water levels were well below adjacent river levels on the Bear, Feather, and Yuba Rivers. Groundwater conditions in 1984 reflect a continued reliance on ground water pumping in the South Yuba Basin. Water levels in the center of the South Yuba cone of depression had fallen to 30 feet below sea level. The water level contours adjacent to the Bear and Yuba Rivers indicated a large gradient and seepage from the rivers. By 1990, water levels in the South Yuba Basin cone of depression rose to 10 feet above sea level. The rise in water levels was due to increasing surface water irrigation supplies and reduced groundwater pumping. Current DWR records indicate groundwater levels continue to increase. Bookman-Edmonston Engineering, Inc. (1992)

Groundwater Storage

Groundwater Storage Capacity. An unpublished study by Bookman-Edmonston Engineering, Inc. (1992) estimated groundwater storage in the South Yuba basin. The estimated storage capacity for the South Yuba basin is 1,090,000 acre-feet. This estimate was based on an area of 88,700 acres, which closely corresponds to boundaries used by DWR. The Bookman-Edmonston Engineering, Inc. calculated an average specific yield of 6.9 percent and an assumed thickness of 200 feet.

Groundwater in Storage. There are no published reports, which discuss groundwater in storage.

Groundwater Budget (Type A)

Previous DWR unpublished studies have estimated natural and applied recharge. DWR has also estimated urban and agriculture extractions and subsurface outflow. Basin inflows include natural recharge of 53,700 af, and applied water recharge of 26,000 af. Outflows include urban extraction of 6,000 af, agricultural extraction of 93,400 af, and subsurface outflow of 24,900 af.

Groundwater Quality

Characterization. The generally good water quality characteristics are apparent in the overall salinity of ground water in the study area. In general, total dissolved solids (TDS) concentrations in the study area are below 500 milligrams per liter (mg/l) throughout the entire basin. Bookman-Edmonston Engineering, Inc. (1992). DWR maintains data for 27 water quality wells in the South Yuba Subbasin. Data collected from these wells indicate a TDS range of 141 to 686 mg/l and a median of 224mg/l. The primary water chemistry in the area, mapped by Bertoldi (1991) indicates calcium magnesium bicarbonate or magnesium calcium bicarbonate groundwater. Some magnesium bicarbonate can be found in the northwest portion of the basin.

Impairments. There are no documented impairments to groundwater quality in the subbasin.

Water Quality in Public Supply Wells

Constituent Group[1]	Number of wells sampled[2]	Number of wells with a concentration above an MCL[3]
Inorganics – Primary	38	2
Radiological	31	0
Nitrates	43	0
Pesticides	33	0
VOCs and SVOCs	33	1
Inorganics – Secondary	38	32

[1] A description of each member in the constituent groups and a generalized discussion of the relevance of these groups are included in *California's Groundwater – Bulletin 118* by DWR (2003).
[2] Represents distinct number of wells sampled as required under DHS Title 22 program from 1994 through 2000.
[3] Each well reported with a concentration above an MCL was confirmed with a second detection above an MCL. This information is intended as an indicator of the types of activities that cause contamination in a given basin. It represents the water quality at the sample location. It does not indicate the water quality delivered to the consumer. More detailed drinking water quality information can be obtained from the local water purveyor and its annual Consumer Confidence Report.

Well Characteristics

	Well yields (gal/min)	
Municipal/Irrigation		Average: 1,650 (44 Well Completion Reports)
	Total depths (ft)	
Domestic	Range: 40-650	Average: 186 (253 Well Completion Reports)
Municipal/Irrigation	Range:88-642	Average: 343 (90 Well Completion Reports)

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
DWR	Groundwater levels	20 wells semi-annually
YCWA		6 monthly
Wheatland WD		28 wells semi-annually
		1 well semi-annually
DWR	Mineral, nutrient, & minor element.	11 wells biennially
YCWA		
Department of Health Services	Coliform, nitrates, mineral, organic chemicals, and radiological.	32 wells as required in Title 22, Calif. Code of Regulations

Basin Management

Groundwater management:	South Yuba WD completed an AB3030 plan in 1998. Yuba County Water Agency-AB3030 plan.
Water agencies	
Public	Yuba County Water Agency, Brophy Water District, Linda County Water District, Wheatland Water District, South Yuba Water District, Plumas Water District, Reclamation District 794
Private	

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Errata

Updated groundwater management information and added hotlinks to applicable websites. (1/20/06)

Cordua Irrigation District

YUBA WATER AGENCY

Yuba Subbasins Water Management Plan:
A Groundwater Sustainability Plan

December 2019

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YUBA SUBBASINS WATER MANAGEMENT PLAN: A GROUNDWATER SUSTAINABILITY PLAN

1/7/2020

Yuba Water Agency
December 27, 2019

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APPENDICES

TABLES

FIGURES

ACRONYMS AND ABBREVIATIONS

µg/L	micrograms per liter
µS/cm	micro Siemens per centimeter
AB	Assembly Bill
AF	acre-feet
AFB	Air Force Base
AFY	acre-feet per year
amsl	above mean sea level
AWMP	Agricultural Water Management Plan
BFW	base of freshwater
bgs	below ground surface
BMP	Best Management Practice(s)
BVID	Browns Valley Irrigation District
CA-NL	California State Notification level
CASGEM Program	California Statewide Groundwater Elevation Monitoring Program
CDEC	California Data Exchange Center
CDFW	California Department of Fish and Wildlife
CEDEN	California Environmental Data Exchange Network
cfs	cubic feet per second
CID	Cordua Irrigation District
CIMIS	California Irrigation Management Information System
CVP	Central Valley Project
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
CWC	California Water Code
DAC	disadvantaged community
DDW	State Water Resources Control Board, Division of Drinking Water
DPR	California Department of Pesticide Regulation
DWR	California Department of Water Resources
EC	electrical conductivity
ft	feet
ft^2/day	square feet per day
GAMA Program	Groundwater Ambient Monitoring Assessment Program
GDE	groundwater dependent ecosystems
GICIMA	Groundwater Information Center Interactive Map Application
GIS	geographic information system
GMP	Groundwater Management Plan

gpd/ft	gallons per day per foot
gpm	gallons per minute
GPS	global positioning system
GSA	Groundwater Sustainability Agency
GSC	Groundwater Sustainability Committee
GSP	Groundwater Sustainability Plan
GWS	groundwater substitution
HCM	hydrogeologic conceptual model
HUR	*Hydrogeologic Understanding Report* (Yuba Water Agency, 2008a)
IDC	IWFM Demand Calculator
ILRP	Irrigated Lands Regulatory Program
InSAR	interferometric synthetic aperture radar imagery
IP	interested person(s)
IRWMP	Integrated Regional Water Management Plan
IWFM	Integrated Water Flow Model
JPL	Jet Propulsion Laboratory
MCL	maximum contaminant level
mg/L	milligrams per liter
MMP	Measurement and Monitoring Program
msl	mean sea level
MTBE	methyl tertiary butyl ether
NASA	National Aeronautics and Space Administration
NAVD88	North American Vertical Datum of 1988
NCCAG	natural communities commonly associated with groundwater
NCRO	North Central Region Office
ND	non-detect
NGO	non-governmental agency
NGS	National Geodetic Survey
NOAA	National Oceanic and Atmospheric Administration
NOI	notice of intent
ohm-meter^2/m	ohm meters squared per meter
Reclamation	United States Bureau of Reclamation
RWQCB	Regional Water Quality Control Board
SACOG	Sacramento Area Council of Governments
SAGBI	Soil Agricultural Groundwater Banking Index
SB	Senate Bill
SCADA	supervisory control and data acquisition

SGMA	Sustainable Groundwater Management Act
SMCL	secondary maximum contaminant level
SWAMP	Surface Water Ambient Monitoring Program
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	thousand acre-feet
TDS	total dissolved solids
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
WDL	Water Data Library
WIIN	Water Infrastructure Improvements for the Nation Program
WRCC	Western Regional Climate Center
YCWA	Yuba County Water Agency (now Yuba Water Agency)
YGM	Yuba Groundwater Model
Yuba Accord	Lower Yuba River Accord
Yuba Subbasins	North Yuba and South Yuba Subbasins
YWA	Yuba Water Agency (formerly Yuba County Water Agency)

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EXECUTIVE SUMMARY

Introduction

In 2014, in response to continued overdraft of many of California's groundwater basins, the State of California enacted the Sustainable Groundwater Management Act (SGMA) to provide local and regional agencies the authority to sustainably manage groundwater. While sustainably managed and with stable groundwater levels, the North Yuba and South Yuba Groundwater Subbasins (Yuba Subbasins) are subject to SGMA as they are two of 127 basins and subbasins identified in 2014 by the California Department of Water Resources (DWR) as being medium- or high-priority, based on components such as population and groundwater use. For these basins and subbasins, SGMA requires preparation of a Groundwater Sustainability Plan (GSP) to reach sustainability within 20 years of implementing their sustainability plans. Within the framework of SGMA, sustainable groundwater management is defined as the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.

This GSP has been developed through coordination between three Groundwater Sustainability Agencies (GSAs): the Yuba Water Agency (YWA) GSA, the Cordua Irrigation District (CID) GSA, and the City of Marysville GSA. Funding for this project has been provided in part from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 and through an agreement with DWR.

Sustainable Groundwater Management

"the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results"

- California Water Code 10721(v)

The Yuba Subbasins have a long history of proactively and collaboratively managing its water resources, with strong participation of local water management agencies, stakeholders, and state and federal agencies. Examples of this proactive management are the long-term stable groundwater level conditions in the North Yuba Subbasin and the efforts that led to reversing a potentially serious overdraft situation that existed in the South Yuba Subbasin. Between 1948 and 1981, groundwater elevations in the South Yuba Subbasin had declined an estimated 130 feet. In 1983, YWA began delivering surface water from its New Bullards Bar Reservoir to this subbasin, which offset the use of groundwater extraction by local water districts, resulting in raising groundwater elevations to near historical levels by the early 2000s.

Water managers in the Yuba Subbasins combined this proactive groundwater management with their surface water operations to create a robust conjunctive use program that allows the Yuba Subbasins greater operational flexibility. This conjunctive use program has been effective in maintaining the groundwater subbasins near historical high levels, while meeting the challenge of delivering reliable water supply to the local economy during California's historic drought of 2014-2016, maintaining environmental flow requirements in the lower Yuba River and contributing to state-wide water needs.

YWA and DWR have a long-established partnership that created an extensive regional monitoring network in Yuba County that currently monitors groundwater elevations, quality, land subsidence, and interaction with surface water throughout the subbasins. This monitoring network, along with additional monitoring by other entities, provides a strong foundation for understanding the subbasins and allows for effective and proactive management of water resources.

This GSP provides guidance for continued sustainability for the North Yuba Subbasin and South Yuba Subbasin.

Outreach Efforts

Given the diverse nature of groundwater users, outreach was a critical component in the development of this GSP. The GSAs actively worked to communicate with stakeholders and include them in decision-making processes. Key to this communication was the development of the Groundwater Sustainability Committee (GSC). The GSC is the advisory body that makes recommendations regarding development and implementation of the GSP to the YWA Board of Directors. The GSC recommendations may also be considered by the governing boards of the other GSAs. GSC members include 17 local districts and regional stakeholders including Beale Air Force Base (AFB), Browns Valley Irrigation District, Camp Far West Irrigation District, City of Marysville, City of Wheatland, CID, Dry Creek Mutual Water Company, Hallwood Irrigation Company, Linda County Water District, Olivehurst Public Utility District, Plumas Mutual Water Company, Brophy Water District, Ramirez Water District, Reclamation District No. 10, South Yuba Water District, Wheatland Water District, and Yuba County. The two additional GSAs within the North Yuba Subbasin, City of Marysville and CID, are also members of the GSC and agreed to participate in the GSC meetings and workshops for the development of a single, coordinated North and South Yuba Subbasin GSP.

Lower Yuba River Accord

"we frequently refer to the Yuba Accord as a model for modern water management in California."

- Public Policy Institute of California

There is a long and substantial history of collaboration in water resources in the Yuba Subbasins. First and foremost is the Lower Yuba River Accord, an effort by a diverse group of 18 agencies and non-governmental organizations that reached an agreement which provides meaningful benefits for both fish and wildlife purposes, and water supply reliability for irrigation, hydropower generation, and recreation. Other collaborative efforts related to groundwater and this GSP include the Groundwater Management Plan (GMP), associated GMP annual monitoring and measuring reports, Agricultural Water Management Plan, Yuba County Integrated Regional Water Management Plan (IRWMP), and city and county general plans. This history of engagement with stakeholders across the Yuba Subbasins provided for existing relationships, knowledge, and trust that the GSP process was able to leverage to achieve a high level of engagement through the development of the GSP.

GSP-specific outreach efforts encouraged participation from stakeholders throughout the GSP development process. The GSAs publicly notify interested persons through an email list, online webpage, and local newspaper and encourage stakeholders to participate in GSC meetings. Between June 2015 and November 2019, the GSC held 19 open meetings. Attendees and interested persons include a diverse range of agricultural and surface water users, public water systems, environmental organizations, adjacent subbasins, government agencies, and consultants. The GSC and the public were engaged first to learn about SGMA, groundwater, and groundwater management concepts. Subsequent meetings focused on development of the GSP specifically for the Yuba Subbasins. Finally, the GSC and the public were provided draft sections of the GSP to support development of these chapters followed by the full draft GSP to allow for additional opportunities for direct comment.

Plan Area

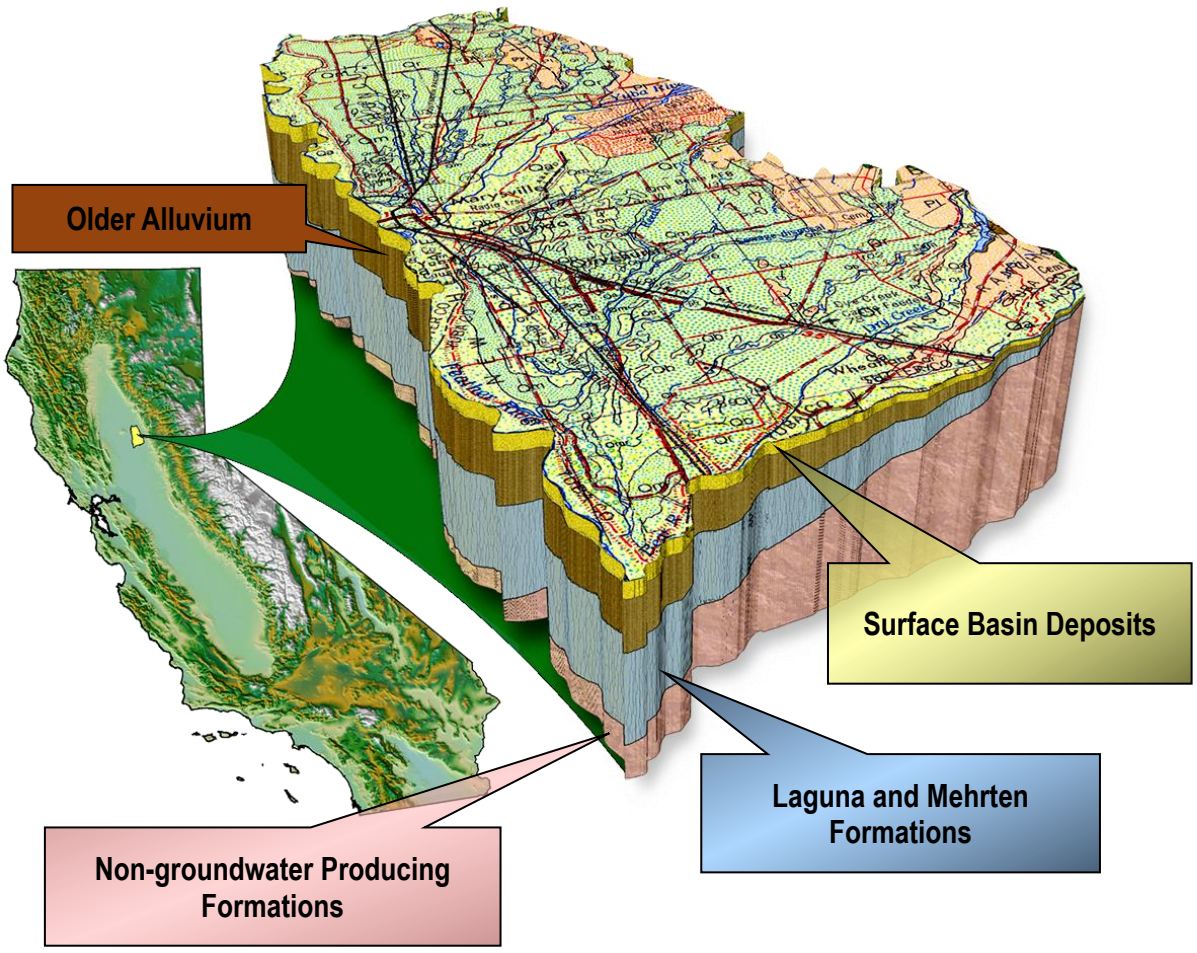
The GSP's plan area is a combination of the North Yuba Subbasin (5-21.60) and South Yuba Subbasin (5-21.61), as defined by DWR's Final 2018 Basin Boundary Modifications. The Yuba Subbasins are on the eastern side the Sacramento Valley, bounded generally by the Sierra Nevada foothills to the east and Yuba Water Agency boundaries to the north, west, and south. The four major rivers and streams in the subbasins are the Feather River, Honcut Creek, Yuba River, and Bear River, with other tributaries flowing westward into these rivers from the Sierra foothills.

The plan area generally covers the valley floor of Yuba County, including the cities of Marysville and Wheatland and Beale Air Force Base. Land use within the Yuba Subbasins is approximately 53% agricultural and managed wetlands, 33% native vegetation, 11% urban, and 3% barren. Agricultural uses are dominated by rice and tree crops.

The jurisdictional areas of the three GSAs include overlap between YWA and both CID and the City of Marysville. These GSAs were formed before the effective date of 2015's Senate Bill 13; the terms of which regarding overlapping GSAs therefore do not apply here.

Hydrogeologic Conceptual Model

One principal aquifer exists across the Yuba Subbasins. The aquifer consists of the Riverbank, Laguna, and Mehrten formations deposited during the Miocene and Pliocene Epochs. There are no known structural properties, such as faults, that significantly restrict groundwater flow within the Yuba Subbasins. Of particular importance to groundwater flow in the Yuba Subbasins is the presence of significant near-surface clays. These clays create ideal conditions for rice cultivation, restricting the vertical movement of water in the shallow subsurface. In contrast to the clays in much of the subbasins, a unique feature is the Yuba Goldfields, composed of 8,000 acres of dredged cobbles adjacent to the Yuba River and an area of substantial groundwater recharge.



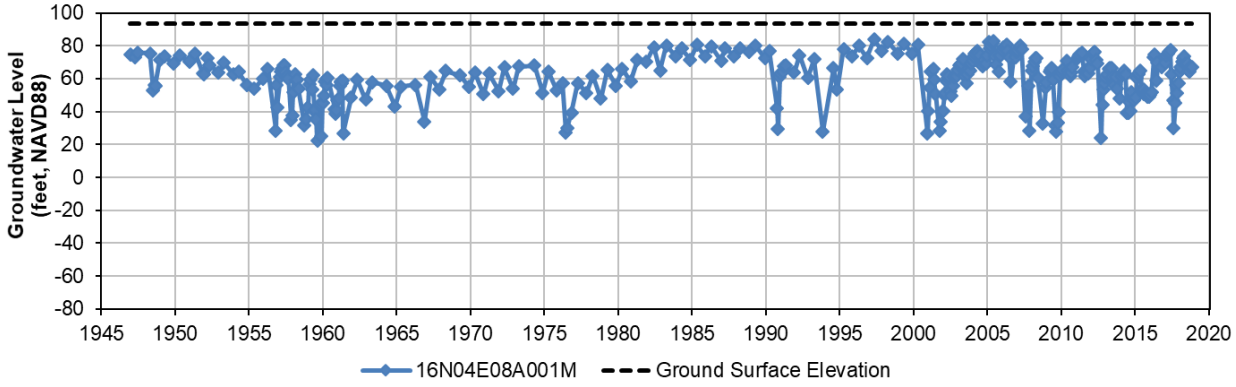
Groundwater Producing Formations in the Yuba Subbasins

Existing Groundwater Conditions

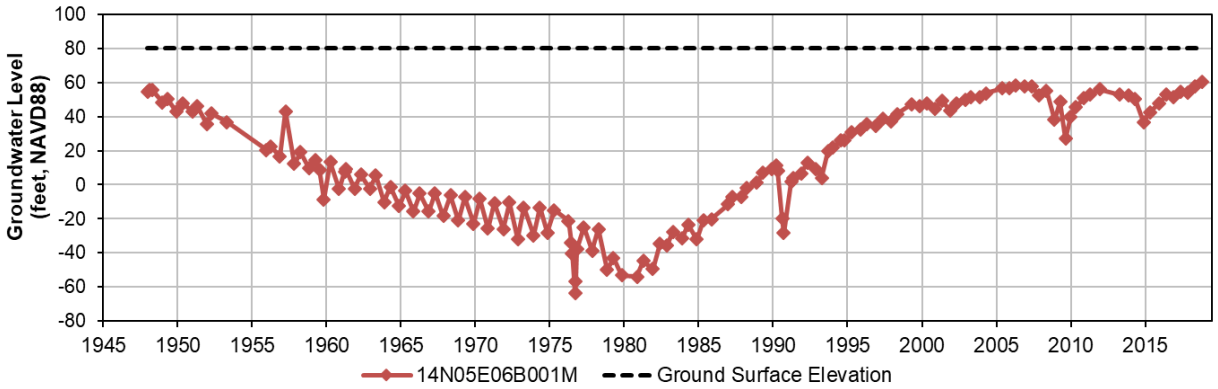
Groundwater levels in the North Yuba Subbasin have been generally stable for at least 70 years. Groundwater levels in the South Yuba Subbasin were generally declining from the 1940s through the early 1980s but have recovered since the introduction of surface water deliveries to the subbasin in 1983. Groundwater conditions are regularly reported in YWA's annual Monitoring and Measurement Reports.

Similar to most groundwater basins in the state, groundwater levels typically decline in summer and recover in the fall and winter. This follows patterns of use and recharge. More groundwater use occurs in the summer to irrigate fields and water lawns, and more recharge occurs in the winter from precipitation and higher streamflow. Groundwater generally flows from east to west across the Yuba Subbasins, although there are temporary and localized exceptions to this general rule.

Regional groundwater quality in the Yuba Subbasins is considered good to excellent for municipal, domestic, and agricultural uses and does not have a significant adverse impact on the beneficial uses of groundwater in the subbasins. There is naturally occurring arsenic, iron, and manganese in some areas that may have concentrations that exceed the associated drinking water thresholds, although such occurrences are limited. Instances with elevated concentrations may be addressed through treatment, blending, use of supplies at different depths or locations, or through non-potable uses not sensitive to the constituent. Beale Air Force Base and other localized contaminated sites are present in the subbasin but are under remediation overseen by the state and federal regulatory agencies.



Typical Long-Term Groundwater Level Trends in the North Yuba Subbasin



Typical Long-Term Groundwater Level Trends in the South Yuba Subbasin

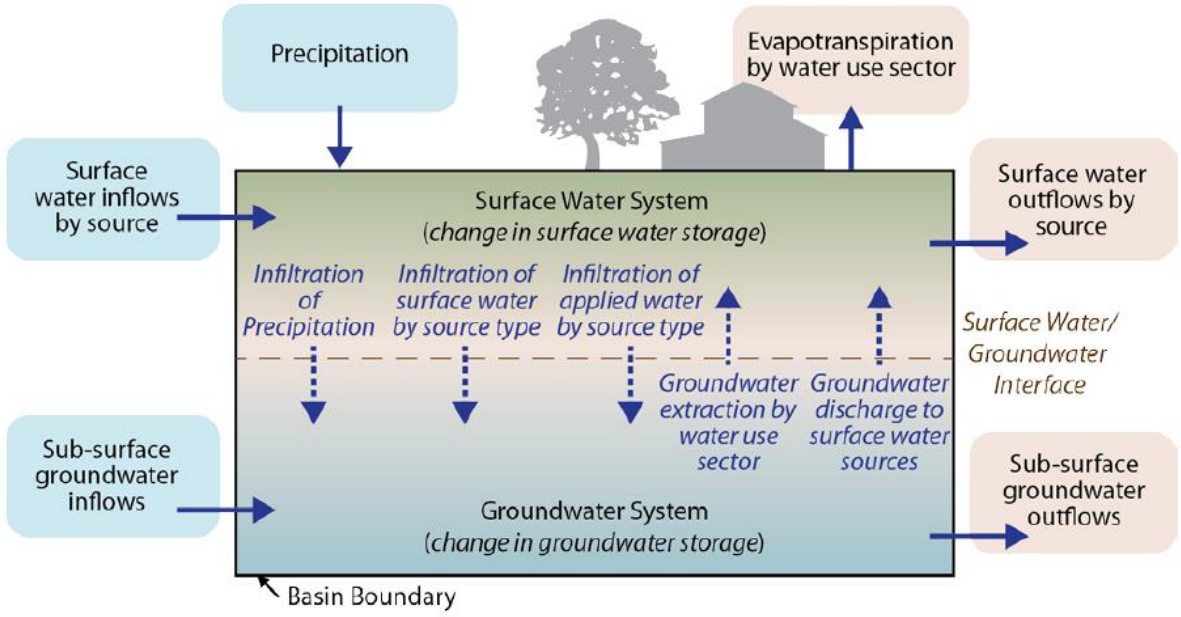
Water Budgets

Water budgets were developed to provide a quantitative accounting of surface water and groundwater entering and leaving the Yuba Subbasins under historical, current, future, and future with climate change conditions. The budgets were estimated using the Yuba Groundwater Model, a numerical groundwater and surface water model. The primary components of the groundwater budget are:

Yuba Groundwater Model

The Yuba Groundwater Model, or YGM, simulates the groundwater and surface water resources of the Yuba Subbasins and adjacent Wyandotte Creek Subbasin, providing a valuable tool for groundwater management. The YGM is developed based on DWR's Integrated Water Flow Model (IWFM) platform.

- Inflows:
  - Deep percolation from rainfall and irrigation-applied water
  - Recharge due to stream seepage
  - Recharge from other sources such as irrigation canals and recharge ponds
  - Boundary inflows from adjacent, non-alluvial areas
  - Subsurface inflows from adjacent subbasins
- Outflows:
  - Groundwater pumping
  - Discharge to streams and rivers
  - Subsurface outflows to adjacent subbasins
  - Boundary outflows
- Change in groundwater storage

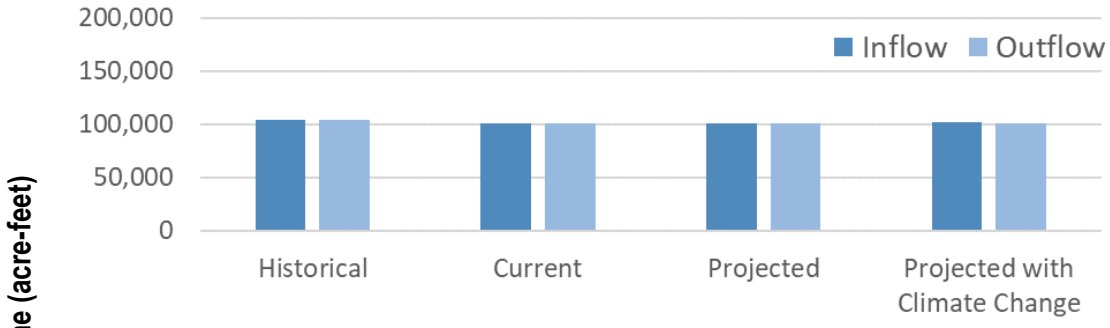


Overview of Water Budget Components

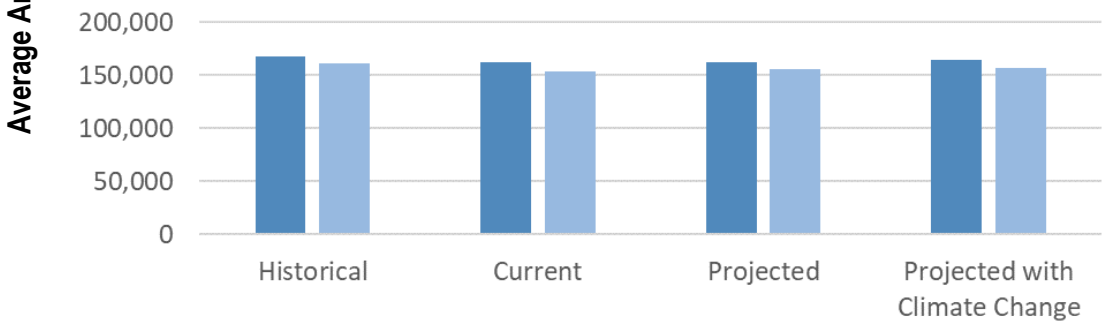
The average annual groundwater storage is stable or increasing under all scenarios, suggesting sustainable conditions.

The total sustainable yield is estimated as 239,000 acre-feet per year (AFY), with 93,000 AFY in the North Yuba Subbasin and 146,000 AFY in the South Yuba Subbasin. This compares to recent use in the North Yuba Subbasin between 38,000 and 89,000 AFY and in the South Yuba Subbasin between 72,000 and 132,000 AFY. As the Yuba Subbasins are operated under conjunctive water management, it is critical to understand that the sustainable yield is a long-term value. Thus, pumping may exceed these values during certain years, balanced by other years with reduced pumping so that the long-term average remains at or below the sustainable yield.

Unlike many medium- and high-priority basins and subbasins managed under GSPs, groundwater extraction in the Yuba Subbasins does not exceed the sustainable yield. The healthy condition of the aquifer system is a credit to foresight of local water managers and has sustainably supported urban and agricultural uses along with the groundwater substitution transfer programs. The sustainable yield estimate exceeds current groundwater production by approximately 89,000 AFY.



North Yuba Subbasin Average Annual Groundwater Budget



South Yuba Subbasin Average Annual Groundwater Budget

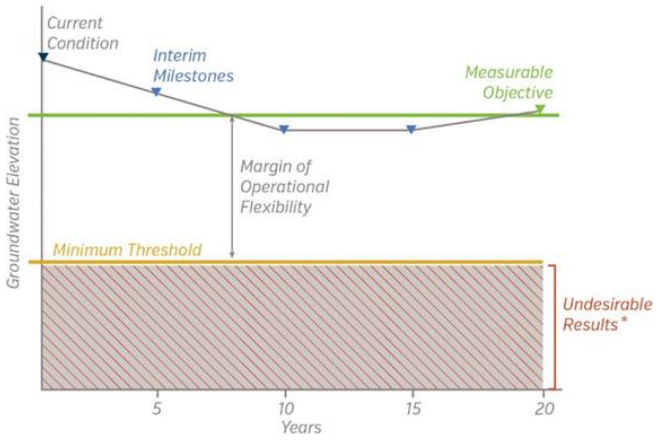
Sustainable Management Criteria

SGMA introduces several terms to measure sustainability, including the following:

- **Sustainability Goal** – the culmination of conditions resulting in an absence of undesirable results within 20 years. (Cal. Code of Regs, title 23, § 354.33)
- **Sustainability Indicators** – any of the adverse effects caused by groundwater conditions occurring throughout the subbasins that, when significant and unreasonable, cause undesirable results, including the following:
  - Chronic lowering of groundwater levels
  - Reduction of groundwater storage (does not apply in the subbasins)
  - Seawater intrusion (does not apply in the subbasins)
  - Degraded water quality
  - Land subsidence
  - Depletion of interconnected surface water (CWC § 10721(x), Cal. Code of Regs, title 23, § 351(ah))
- **Undesirable Results** – the significant and unreasonable occurrence of one or more of the six sustainability indicators caused by groundwater conditions occurring throughout the subbasins. (CWC § 10721(x))
- **Minimum Thresholds** – a numeric value for each sustainability indicator and are used to define when undesirable results occur, based on exceedance of minimum thresholds in a percentage of sites in the representative monitoring network. (Cal. Code of Regs, title 23, § 351(t), 354.26(b)(2))
- **Measurable Objectives** – specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions to achieve the sustainability goal for the basin. (Cal. Code of Regs, title 23, § 351(s))

Sustainability Indicators

- Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon
- Significant and unreasonable reduction of groundwater storage (does not apply in the Yuba Subbasins)
- Significant and unreasonable seawater intrusion (does not apply in the Yuba Subbasins)
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies
- Significant and unreasonable land subsidence that substantially interferes with surface land uses
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water



Schematic of Sustainable Management Criteria

The Yuba Subbasins have a long history of successful groundwater management, and the water budget analysis estimates sustainable groundwater conditions into the future. With this history of sustainable conditions, the sustainable management criteria are developed with measurable objectives that are generally similar to current conditions and minimum thresholds that allow for changes in the subbasin to the extent they are not significant and unreasonable.

The sustainability goal for the Yuba Subbasins is

> *to maintain a locally managed, economically viable, sustainable groundwater resource for existing and future beneficial use in Yuba County by continuing existing management to maintain operation within the sustainable yield or by modification of existing management to address unforeseen future conditions.*

The method prescribed by SGMA to measure undesirable results and achieve the sustainability goal involves setting minimum thresholds and measurable objectives for a series of representative monitoring sites. These representative sites are all or a subset of the monitoring network. While the undesirable results are analyzed separately for the North and South Yuba Subbasins to comply with SGMA, the undesirable results, measurable objectives, and minimum thresholds are defined consistently across both subbasins. The sustainable management criteria are summarized in the following table.

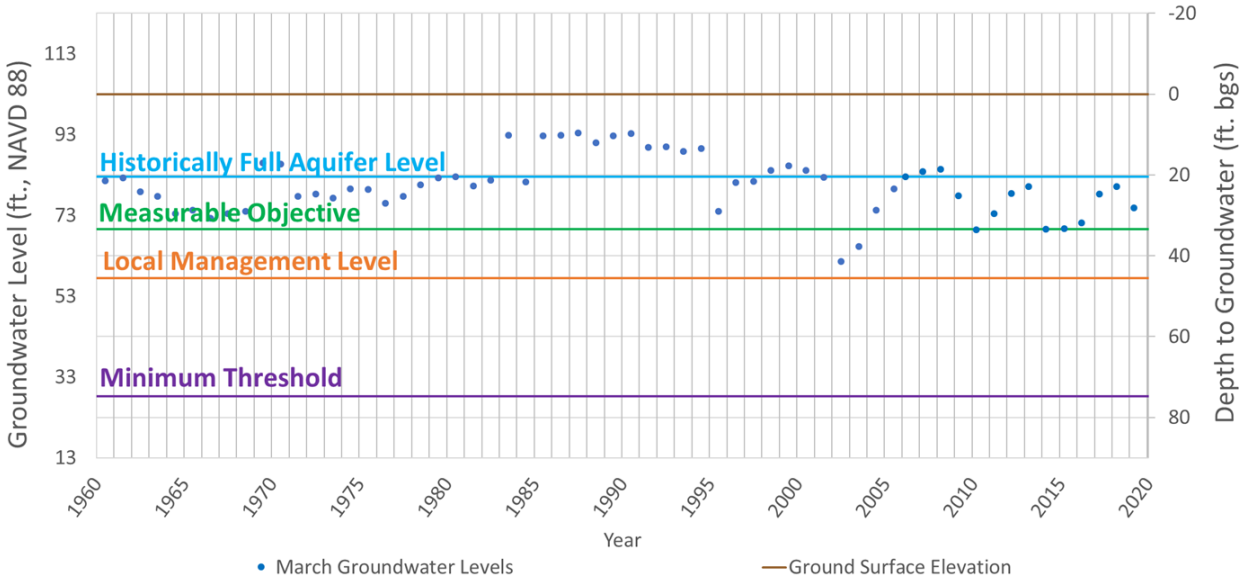
Summary of Sustainable Management Criteria

Sustainability Indicator	Undesirable Results	Identification of Undesirable Results	Measurable Objective	Minimum Threshold
Chronic lowering of groundwater levels	A result that causes significant and unreasonable reduction in the long-term viability of domestic, agricultural, municipal, or environmental uses over the planning and implementation horizon of this GSP.	More than 25% of representative monitoring wells (4 of 13 wells in the North Yuba Subbasin; 5 of 18 wells in the South Yuba Subbasin) below their minimum elevation thresholds for two consecutive years at each location.	The measurable objective was defined for each representative monitoring well based on the minimum March groundwater level at that well within the 2014-2015 time period.	The deeper of either 1) the bottom of the shallowest domestic well near a monitoring well, adjusted for March measurements or 2) the historical low March groundwater level from 1985 to present at the monitoring well. A 75-foot minimum value was applied to the threshold.
Reduction in groundwater storage	Undesirable results related to groundwater storage are not present and are not likely to occur in the Yuba Subbasins.	Undesirable results related to groundwater storage are not present and are not likely to occur in the Yuba Subbasins.	Measurable objectives are not developed, because undesirable results related to groundwater storage are not present and are not likely to occur in the Yuba Subbasins.	Minimum thresholds are not developed, because undesirable results related to groundwater storage are not present and are not likely to occur in the Yuba Subbasins.
Seawater intrusion	Undesirable results related to seawater intrusion are not present and are not likely to occur in the Yuba Subbasins.	Undesirable results related to seawater intrusion are not present and are not likely to occur in the Yuba Subbasins.	Measurable objectives are not developed, because undesirable results related to seawater intrusion are not present and are not likely to occur in the Yuba Subbasins.	Minimum thresholds are not developed, because undesirable results related to seawater intrusion are not present and are not likely to occur in the Yuba Subbasins.

Sustainability Indicator	Undesirable Results	Identification of Undesirable Results	Measurable Objective	Minimum Threshold
Degraded water quality	A result stemming from a causal nexus between SGMA-related groundwater management activities, such as groundwater extraction or groundwater recharge, and groundwater quality that causes significant and unreasonable reduction in the long-term viability of domestic, agricultural, municipal, or environmental uses over the planning and implementation horizon of this GSP.	At least 50% of representative monitoring wells (2 of 4 sites in the North Yuba Subbasin; 2 of 4 sites in the South Yuba Subbasin) exceed the minimum thresholds for water quality for two consecutive measurements (occurring biennially) at each location and where these values can be tied to a causal nexus between SGMA-related activities and water quality.	At each of eight representative wells, the long-term average electrical conductivity (EC) concentration from 2000 through present. Where the average EC levels are below half the recommended SMCL, 450 micro Siemens per centimeter (µS/cm), 450 µS/cm was used.	At each of eight representative wells, EC of 1,000 µS/cm, a value similar to the recommended SMCL and crop tolerance while significantly below the upper SMCL.
Land subsidence	A result due to groundwater extraction that causes a significant and unreasonable reduction in the viability of the use of infrastructure over the planning and implementation horizon of this GSP.	At least 50% of representative subsidence monitoring sites (3 of 6 sites in the North Yuba Subbasin; 3 of 6 sites in the South Yuba Subbasin) exceed the minimum threshold for subsidence.	0.25 feet of subsidence per 5-year period at each site, a rate that is small, but recognizes the accuracy limitations of the subsidence monitoring network.	0.5 feet of subsidence per 5-year period at each of the monitoring locations in the Yuba Subbasins.
Depletions of interconnected surface water	A result that causes significant and unreasonable adverse effects on beneficial uses of interconnected surface water within the Yuba Subbasins over the planning and implementation horizon of this GSP.	Management of depletions of interconnected surface water is performed using groundwater levels as a proxy.	Management of depletions of interconnected surface water is performed using groundwater levels as a proxy.	Management of depletions of interconnected surface water is performed using groundwater levels as a proxy.

Of the four applicable sustainability indicators in the Yuba Subbasins, chronic lowering of groundwater levels is the driver for sustainable groundwater management, as the other indicators are all correlated with groundwater levels. Given the importance of the groundwater levels indicator and given the added complexity of conjunctively managed groundwater subbasins, additional non-regulatory criteria (full aquifer levels and local management levels) are developed to assist in management. This is consistent with the legislature's findings in SGMA, that "sustainable groundwater management in California depends upon creating more opportunities for robust conjunctive management of surface water and groundwater resources." Full aquifer levels, measurable objectives, local management levels and minimum thresholds were developed for each of the identified representative wells.

- **Full aquifer levels** capture the historical upper end of groundwater levels during conjunctive water management, based on March groundwater levels during wet conditions.
- **Measurable objectives** capture the historical lower end of groundwater levels during conjunctive water management, based on March groundwater levels during dry conditions. Interim milestones are set at the same level.
- **Local management levels** are non-regulatory criteria used by this GSP to identify locally preferred minimum groundwater levels that may not be significant and unreasonable. These levels also trigger adaptive management actions. The local management levels consider shallow, domestic well data and the wells' historically low March groundwater level.
- **Minimum thresholds** collectively define when undesirable results occur and trigger adaptive management actions. They consider historical low spring groundwater levels, shallow domestic well depth, seasonal groundwater level changes, and a minimum of 75 feet to groundwater. Undesirable results may result in probationary status and intervention by the State Water Resources Control Board.



Schematic Relationship Between Groundwater Level Criteria

Monitoring Networks

Monitoring networks are developed for the four sustainability indicators that apply to the subbasins and for groundwater storage, leveraging existing monitoring that has been developed locally and in cooperation with DWR. The objective of these monitoring networks is to monitor conditions across the Subbasins so that the GSAs can continue to manage groundwater sustainably. Specifically, the monitoring network was developed to do the following:

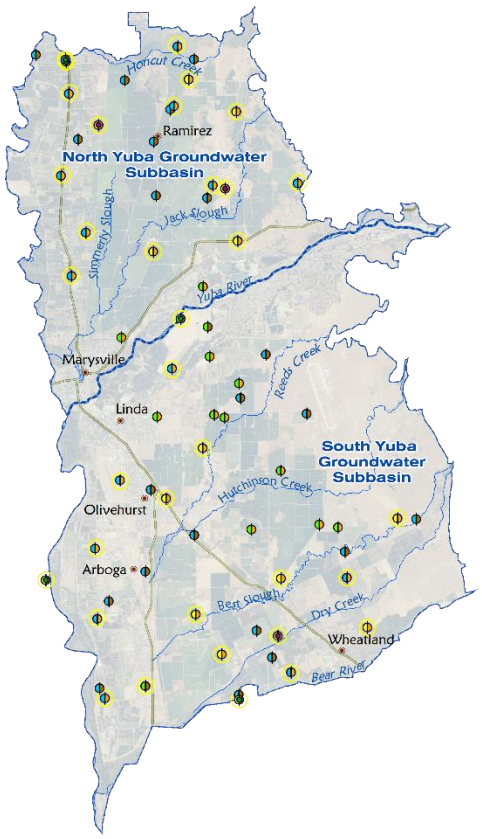
- Monitor impacts to the beneficial uses or users of groundwater
- Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds
- Demonstrate progress toward achieving measurable objectives described in the GSP
- Support estimation of annual changes in water budget components

To achieve these objectives, monitoring networks incorporate sites and frequency that can detect short-term, seasonal, and long-term trends in each applicable sustainability indicator. This includes selection of an appropriate temporal frequency and spatial density to evaluate groundwater conditions related to the effectiveness of the GSP.

The groundwater level monitoring network uses 87 existing monitoring wells that are monitored either by YWA or DWR on a continuous, monthly, or semi-annual basis. A subset of the groundwater level monitoring network is used as representative wells to set minimum thresholds and measurable objectives. This network also supports monitoring of groundwater in storage, as groundwater in storage is a function of groundwater levels and aquifer properties.

The groundwater quality monitoring network is composed of eight wells historically monitored by DWR with a long period of record representative of regional conditions. These wells are monitored biennially for electrical conductivity to track progress in meeting GSP goals and criteria, as well as other constituents not managed under this GSP to support the overall understanding of water quality in the Yuba Subbasins.

The subsidence monitoring network utilizes the Sacramento Valley network developed jointly by DWR and the United States Bureau of Reclamation (Reclamation). Sampling monuments extend throughout the Sacramento Valley, with 19 monuments providing useful data for the Yuba Subbasins. Eleven of the monuments are within the Subbasins, and eight lie just outside but still provide important data.



Groundwater Level Monitoring Network

Monitoring of depletions of interconnected surface water is conducted by monitoring surface water levels and groundwater levels to characterize spatial and temporal exchanges between surface water and groundwater and to calibrate and apply the tools and methods necessary to estimate depletions. The monitoring network incorporates surface water monitoring, performed by the United States Geological Survey and DWR-North Central Region Office, and groundwater level monitoring, utilizing a subset of the locations described under the groundwater level monitoring network.

Projects and Management Actions

As the Yuba Subbasins are currently being sustainably managed, there are no projects or management actions that are required to achieve sustainability. However, projects and management actions can assist in enhancing management capability and improving the understanding of the groundwater system. The identified projects and management actions allow for maintaining sustainable groundwater conditions and allow for the GSAs to respond to unexpected changes in conditions in the Yuba Subbasins so that undesirable results can be prevented. Given the nature of the need, most projects and management actions will be implemented with an as-needed, opportunistic approach, with decisions based on funding availability and identified need at a given time. Several projects are scheduled to be completed within the first five years of implementation.

Projects and management actions include:

- Improved Understanding of Local Conditions
  - Agroclimate Station*
  - Yuba Groundwater Model – Updates and Refinements*
  - Continued Groundwater Dependent Ecosystem and Depletion Evaluation*
  - Identification of Locations Vulnerable to Damage from Subsidence
  - Aquifer Testing*
  - Estimation of Use for Groundwater Uses that are Difficult to Estimate*
  - Enhanced Boundary Flow Measurement
- Information Sharing and Dissemination
  - Public Data Portals and Data Coordination with Other Entities*
  - Coordination and Information Sharing with Local, State, and Federal Entities
- Groundwater Monitoring
  - Groundwater Level Monitoring Network Coordination and Improvements*
  - Modifications to the Groundwater Quality Monitoring Network*

**Asterisk indicates that the project or management action is scheduled to be fully or partially completed within the first five years.*

Implementation

Implementation of this GSP includes monitoring of conditions, comparing against sustainable management criteria, reporting of those conditions, evaluating the GSP, implementing adaptive management strategies, implementing projects and management actions, and funding of these activities.

Data will be collected through monitoring on a prescribed schedule for each monitoring network. The data collected will be used to improve the understanding of the Yuba Subbasins as well as for comparison with the sustainable management criteria. The representative monitoring sites included in each monitoring network have defined sustainable management criteria that allow for comparison with monitored data to track progress towards maintaining desired conditions and avoiding undesirable results.

Comparisons between monitored data at representative sites and the sustainable management criteria allow for assessment of whether desired conditions are being maintained, through comparison with the measurable objectives or full aquifer levels. The comparisons will also allow for assessment of whether conditions are approaching critical levels, through comparison with the minimum thresholds or local management levels. While conditions considered to be undesirable results are not anticipated, should sites begin to violate local management levels or minimum thresholds, adaptive management strategies will be implemented. Further, if sites exceed the minimum threshold, the total percentage of representative sites violating minimum thresholds will be calculated and compared against the percentage which has been identified as reflective of undesirable results.

Implementation activities will be reported in annual reports produced by April 1 of each year, reporting on conditions and activities from the previous water year. Every five years, evaluation reports will be developed to document progress in implementation and to reconsider elements of the GSP.

Adaptive management strategies will be used on an as-needed basis if sustainability indicators drop to or near minimum thresholds or local management levels. Adaptive management strategies provide the GSAs flexibility in addressing potential exceedances of local management levels and unforeseen issues. In this way, the GSAs will take necessary action to investigate the cause of potential exceedances of the local management level for groundwater levels and provide a framework for responding to such exceedances in order to prevent reaching the minimum threshold. As local management levels are not defined for the other sustainability indicators, adaptive management will occur should other sustainability indicators approach minimum thresholds, even if not in the percentages or timing defined as undesirable results. Action, if any, would be taken by the GSAs after considering recommendations provided by the GSC and may include corrective action, additional study, or management modification in the area influencing the monitoring site. The corrective action or information gathering would be deemed successful in returning the subbasin to sustainable conditions once monitoring indicates that conditions are above the local management level or minimum threshold, or if the issue was identified as a result of localized conditions.

Implementation of the GSP is estimated to cost between $1 million and $1.5 million per year, with additional costs for projects and management actions variable based on decisions made. Some of these costs are already being incurred through existing groundwater management. Although GSAs have the legal authority to impose fees and assessments to cover implementation costs, the implementation of the GSP, including projects and management actions, will be funded through available grant funding as well as existing revenue streams provided by YWA. Additional revenue options, including cost sharing with the City of Marysville GSA and the CID GSA, may be considered in the future. The GSAs have had past success in pursuing grants to fund groundwater and other water resources needs. Grant programs will be tracked throughout GSP implementation and applied for on an as-needed basis, determined primarily by availability of funding.

Conclusion

Through a long history of locally-driven water management activities, the Yuba Subbasins have been sustainably managed. This local management includes the infrastructure to divert and distribute surface water, wells to pump groundwater, reservoirs to store water, and extensive surface water and groundwater monitoring, all of which is needed for successful conjunctive management. Conjunctive management allows for use of more surface water when available in wet periods and use of more groundwater in dry periods. The California Legislature noted in its findings in SGMA that "sustainable groundwater management in California depends upon creating more opportunities for robust conjunctive management of surface water and groundwater resources." The Yuba Subbasins' history of reliable, sustainable groundwater supplies to benefit in-basin use and successful groundwater substitution transfers to benefit other portions of the state is a model for the robust conjunctive water management.

The Yuba Subbasins have long managed groundwater to achieve a sustainable resource. This management was initiated locally to serve the needs of the local beneficial users of water. Over time, the area incorporated water management techniques promoted by DWR, including development of the GMP, associated GMP annual monitoring and measuring reports, Agricultural Water Management Plan, and the Yuba County IRWMP. Of the water resources achievements in the region, none is greater than the Lower Yuba River Accord, an effort by a diverse group of 18 agencies and non-governmental organizations that reached an agreement which provides meaningful benefits for both fish and wildlife purposes, and water supply reliability for irrigation, hydropower generation, and recreation.

Yuba River Development Project

Much of the sustainability of the Yuba Subbasins is the result of locally driven efforts to develop surface water supplies. The Yuba River Development Project includes New Bullards Bar Dam and Reservoir and serves multiple uses including hydropower, flood control, water supply, and environmental resources.

This GSP was developed through an open, stakeholder-driven process, meets the requirements of SGMA, and continues the long history of sustainable water management in the Yuba Subbasins. The technical basis of the document is provided through the hydrogeologic conceptual model, documentation of current and historical conditions, and development of groundwater budgets for historical, current, projected, and projected-with-climate-change conditions.

Sustainable management criteria provide the management framework for the Yuba Subbasins, describing undesirable results, quantifying conditions where undesirable results would occur through the minimum thresholds, and quantifying the desired state of the subbasins through the measurable objectives. These criteria are supported by a network of representative monitoring sites within a broader monitoring network.

As the Yuba Subbasins are sustainable under historical, current, and projected conditions, including incorporating the effects of climate change, no projects and management actions are required to achieve sustainability. Even with the existing sustainable conditions, projects and management actions are proposed to assist in enhancing management capability and improve the understanding of the groundwater system. Further, an adaptive management approach is developed to allow for response to unanticipated conditions.

The current sustainable conditions in the Yuba Subbasins are a testament to the success of locally-driven water management in the Yuba Subbasins and the proactive, forward-thinking infrastructure efforts that provide water resources benefits locally and statewide. This GSP continues that management, allowing for sustainable groundwater use into the future.

Appendix I

2020 Consumer Confidence Report

Olivehurst Public Utility District
2020 Water Quality Consumer
Confidence Report
Public Water System Numbers 5810003 and 5805001

For additional information concerning your drinking water, contact **John Tillotson** at (**530) 743-0317**

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien.

Daimntawv tshaj tawm no muaj lus tseemceeb txog koj cov dej haus. Tshab txhais nws, los yog tham nrog tej tug neeg uas totaub txog nws.

Water for the Olivehurst Public Utility District originates from several groundwater sources as follows:

System # 5810003 (Olivehurst)	System # 5805001(Plumas Lake)
Iron and manganese treatment Plant #1 (for wells 10 and 28), #2 (for wells 1 and 4), and #3 (Wheeler Ranch, for Wells 29 and 30) provide treated water to the distribution system. Well 14 can pump directly into the distribution system during high demand. Well 9 is active but has no pump to pump into the distribution system.	The first iron and manganese treatment plant treats water from Wells 1 and 32. Well 34 has an iron and manganese treatment plant that pumps treated water directly into the distribution system. Well 3 can pump directly into the distribution system in case of an emergency and is untreated.

DEFINITIONS OF TERMS USED IN THIS REPORT:
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is technologically, and economically feasible.
Primary Drinking Water Standards (PDWS): MCLs for contaminants that affect health along with their monitoring and reporting requirements, and surface water treatment requirements.
Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the Federal Environmental Protection Agency (USEPA).
Notification Level: Notification levels are health-based advisory levels established by the State Water Resources Control Board (State Board) for chemicals in drinking water that lack a primary maximum contaminant level. When chemicals are found at concentrations greater than their notification level, certain requirements and recommendations apply.
Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
TON: threshold odor number
ppb: parts per billion or micrograms per liter
ppm: parts per million or milligrams per liter
ND: non detectable at testing limit
TDS: total dissolved solids
NTU: Nephelometric Turbidity Units
pCi/L: picocuries per liter. Unit of measure used to express the results of radioactivity tests in water.
µS/cm: MicroSiemens/cm – measure of conductance in water.

BACTERIOLOGICAL WATER QUALITY:
Testing for bacteriological contaminants in the distribution system is required by State regulations. This testing is done regularly to verify that the water system is free from coliform bacteria. The maximum number of positive coliform samples that is allowed by regulations in any one month is one.

In Olivehurst, four samples per week are required by regulations. Coliform bacteria were not detected in any samples in 2020.
In Plumas Lake, four samples per week are required by regulations. Coliform bacteria were not detected in any samples in 2020.

DETECTED CONTAMINANTS IN OUR WATER SUPPLY:
The following table gives a list of all detected chemicals in our water during the most recent sampling. Please note that not all sampling is required annually, so in some cases our results are more than one year old.

Plumas Lake Lead and Copper

Chemical Detected	Year Tested	Numbers of Samples Collected	Number of Samples above AL	MCLG	90th Percentile Result (ppb)	Action Level (ppb)	Origin/Notes
Lead	2018	20	0	0	0	15	Internal corrosion of household plumbing systems; discharges from industrial manufacturing; erosion from natural deposits
Copper	2018	20	0	1300 ppb	66	1300	Internal corrosion of household plumbing systems; leaching from wood preservatives; erosion from natural deposits

Olivehurst Lead and Copper

Chemical Detected	Year Tested	Numbers of Samples Collected	Number of Samples above AL	MCLG	90th Percentile Result (ppb)	Action Level (ppb)	Origin/Notes
Lead	2017	30	0	0	0	15	Internal corrosion of household plumbing systems; discharges from industrial manufacturing; erosion from natural deposits

Copper	2017	30	0	1300 ppb	66	1300	Internal corrosion of household plumbing systems; leaching from wood preservatives; erosion from natural deposits

OLIVEHURST

Chemical Detected	Year	Source(s) with detection(s)	Range of Detections	Average Detected	MCL or MRDL	PHG	Origin/Notes
Sodium and Hardness PPM (No Standards – For Information Only)							
Sodium	2011 2012 2015	Wells 1,10,14 Wells 4, 29 Well 28	13 – 22 42 – 73 n/a, one detection	18 57.5 12	none	none	Naturally Occurring
Hardness	2011 2012 2014 2015	All sources Wells 4, 29 Well 30 Well 28	99 - 214 118 – 120 159 – 164 n/a, one detection	139 119 162 90	none	none	Naturally Occurring.
Contaminants with a Primary MCL (PPB unless otherwise stated)							
Arsenic	2011 2012 2020	Well 14 All sources Well 10	n/a, one detection ND – 5.3 n/a, one detection	7 1.1 6.5	50	0.004	Naturally Occurring.
Barium	2011 2012	Wells 1,10,14 Well 4, 29	ND – 110 ND - 100	70 50	1000	2000	Naturally Occurring.
Fluoride** (naturally occurring)	2012 2014 2015	Well 4 All Sources Well 28	0.14 – 0.23 ppm 0.13 – 0.19 ppm n/a, one detection	0.19 ppm 0.16 ppm 0.15 ppm	2 ppm	1 ppm	Naturally Occurring. Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha	2007 2016 2017	Wells 14, 29, 30 Well 10 Well 1, 28, 29	1.1 - 1.8 pCi/L n/a, one detection ND – 3 pCi/L	1.55 pCi/L 1.2 pCi/L 1.85 pCi/L	15 pCi/L	none	Naturally occurring. Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation.
Xylenes	2015	Well 1	ND – 0.64	0.21	1.75	1.8	Discharge from petroleum and chemical factories; fuel solvent
Nickel	2011 2012 2015	Wells 1,10,14 Wells 4, 29 Well 28	ND – 21 ND – 26 n/a, one detection	7 13 11	100	12	Naturally Occurring; discharge from industrial and petroleum processes
Contaminants with a Secondary MCL (Non-Health Based, PPB unless otherwise stated)							
Chloride	2012 2015 2017	Well 4, 29 Well 28 Well 30	80 – 120 n/a, one detection n/a, one detection	100 ppm 15 ppm 120 ppm	500 ppm	none	Naturally Occurring.
Specific Conductance	2017	All Sources	220 - 670 µS/cm	393 µS/cm	1600 µS/cm	none	Substances that form ions when in water; seawater influence.
TDS	2012 2014 2015	Treatment plants Well 30 Well 28	370 - 380 ppm n/a, one detection n/a, one detection	375 ppm 434 ppm 160 ppm	1000 ppm	none	Naturally Occurring
Iron	2011 2018	Well 14 Treatment plants	**n/a, one detection** 300	**330 *** 300	300	none	Naturally Occurring. *** Well 14 is an untreated standby well**
Manganese	2018 2020	Well 14 All Sources	**n/a, one detection** 70-150	**350** **110**	50	none	Naturally Occurring. *** Well 14 is an untreated standby well.**
Zinc	2011 2012 2015	Wells 1, 10, 14 Well 4, 29 Well 28	ND – 78 ND – 59 n/a, one detection	26 29.5 74	5000	none	Naturally Occurring.
Odor	2012	System	1.0 – 1.4 units	1.2 units	3 units	none	Naturally Occurring organic materials.
Chlorine Residuals of the bacteriological samples							
Free Chlorine	2020	All Sources	ND – 1.84 ppm	0.31 ppm	4.0 ppm	4 ppm	Disinfectant added to the drinking water.
UCMR 3 (see note) Monitoring and Unregulated Contaminants (contaminants without MCLs or PHGs, but with Notification Levels, PPB)					Notification Level		
Bromodichloro methane	2014	Well 1	n/a, one detection	1.5	1		Runoff from agricultural fields
Chlorate	2013	Well 1,4,28,30	350 - 700	538	20		Naturally occurring; runoff from industrial waste
Strontium	2013	Well 1,4,28,30	0.12 – 0.39	0.28	0.3		Naturally occurring
Bromomethane	2013 2014	Well 30 Well 1	n/a, one detection	3.8 2.5	2		Runoff from agricultural fields
Chloromethane	2013 2014	Well 30 Well 1	n/a, one detection	4 5.8	2		Runoff from industrial and consumer uses
Chromium	2013	Well 28	n/a, one detection	0.34	0.2		Naturally occurring; discharge from chemical and industrial processes.

NOTE: In 2012, USEPA revised the Unregulated Contaminant Monitoring Rule (UCMR 3 assessment monitoring) to assess and establish a new set of unregulated contaminants.

Plumas Lake

Chemical Detected	Year	Source(s) with detection(s)	Range of Detections	Average Detected	MCL or MRDL	PHG	Origin/Notes
Sodium and Hardness PPM (No Standards – For Information Only)							
Hardness	2012 2013	Well 1 Well 32,34	n/a, one detection 77 - 89	87 83	none	none	Naturally Occurring
Sodium	2011 2012 2013	Well 3 Well 1 Well 32,34	n/a, one detection n/a, one detection 26 - 37	27 24 32	none	none	Naturally Occurring
Contaminants with a Primary MCL (PPB unless otherwise stated)							
Arsenic	2019	Well 32	n/a, one detection	2.30	50	o.oo4	Naturally Occuring
Barium	2012 2016	Well 1 Well 32,34	n/a, one detection 140 - 150	120 145	1000	1000	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits. Well 3 is an untreated standby well
Fluoride** (naturally occurring)	2012 2014 2014	All Sources Well 1 Well 32,34	ND – 0.23 ppm n/a, one detection 0.18 – 0.20 ppm	0.16 ppm 0.14 ppm 0.19 ppm	2 ppm	1 ppm	Naturally Occurring. Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha	2008 2015 2017	Well 3 All Sources Well 1	n/a, one detection ND – 0.75 pCi/L n/a, one detection	3.30 pCi/L 0.24 pCi/L 3.00 pCi/L	15 pCi/L	none	Naturally occurring. Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation. Well 3 is an untreated standby well
Contaminants with a Secondary MCL (Non-Health Based, PPB unless otherwise stated)							
Iron	2011	Well 3	**n/a, one detection**	**610 ***	300	none	Naturally Occurring; *** Well 3 is an untreated standby well**
Manganese	2011	Well 3	**n/a, one detection**	**60 ***	50	none	Naturally Occurring; *** Well 3 is an untreated standby well**
Chloride	2011 2012 2016	Well 3 Well 1 Wells 32,34	n/a, one detection n/a, one detection 31 - 34 ppm	40 ppm 34 ppm 33 ppm	500 ppm	none	Naturally Occurring; Well 3 is an untreated standby well.
Specific Conductance	2017 2015	Wells 1, 32 Well 34	290-300 µS/cm n/a, one detection	295 µS/cm 290 µS/cm	1600 µS/cm	none	Substances that form ions when in water; seawater influence.
Sulfate	2012 2016	Well 1 Well 32,34	n/a, one detection ND – 5.6	7.6 ppm 2.8 ppm	500 ppm	none	Runoff/leaching from natural deposits; industrial wastes
TDS	2012 2016	Well 1 Wells 32,34	n/a, one detection 200 – 230 ppm	210 ppm 215 ppm	1000 ppm	none	Naturally Occurring
Chlorine Residuals of the bacteriological samples							
Free Chlorine	2020	All Sources	0.01 – 1.37 ppm	0.73 ppm	4 ppm	4 ppm	Disinfectant added to the drinking water.
Unregulated Contaminants (contaminants without MCLs or PHGs, but with Notification Levels, PPB)				Notification Level	ppb		
Boron	2003	Well 1	n/a, one detection	100	1000		Naturally occurring
Vanadium	2003	Well 3	n/a, one detection	7	50		Naturally occurring; Well 3 is an untreated standby well
Hexavalent Chromium	2003	Well 3	n/a, one detection	2	none		Naturally occurring; Well 3 is an untreated standby well

GENERAL INFORMATION ON DRINKING WATER:

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly individuals, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The USEPA/Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.*
- *Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.*

- *Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.*

- *Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.*

- *Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.*

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

ARSENIC:
While your drinking water meets the current federal and state standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

REGULAR MEETINGS:
The Olivehurst Public Utility Board of Directors meets regularly on the third Thursday of every month at 7:00 p.m. The Meetings are held in the Board Chambers at 1970 9th Ave Olivehurst, CA.

A Water and Sewer Committee meets each month and reports back to the Board. The meetings are held at the OPUD offices at 1970 9th Ave Olivehurst, CA.

Copies of Board Meeting agendas and Committee agendas can be obtained by contacting the OPUD office at (530) 743-4657 or visiting the OPUD web site: www.opud.org

A source water assessment *has been completed for the wells serving Olivehurst and Plumas Lake. The sources are considered most vulnerable to the following activities:*

Olivehurst:
Contaminant plume from lumber manufacturing, railroad yards, and sewer collection systems (Well 1 and 4)
Agricultural Drainage and Animal Grazing (Well 10)
Existing and Historic Gas Stations (Well 14)
Sewer Collection Systems (Wells 9, 10, 29, 30)
Septic Systems (Well 14)
Auto Body Shops (Wells 9 and 10)
Airports and Military Installations (Well 28)

Plumas Lake:
Sewer collection systems
Agricultural drainage
Grazing
Agricultural wells

The assessments were completed on the dates indicated below:
Olivehurst OPUD #5810003
Well 1 – February 2002
Well 4 – February 2002
Well 10 – May 2002
Well 14 – May 2002
Well 28 – May 2002
Well 29 – June 2007
Well 30 – September 2005

Plumas Lake OPUD #5805001
Well 1 – September 2003
Well 32 – September 2003
Well 3 – September 2003
Well 34 – July 2011

A copy of the complete assessments may be viewed at:

SWRCB, DDW, District 21 (Valley)
364 Knollcrest Drive, Suite 101
Redding, CA 96002
Attention: Reese Crenshaw, 530-224-4861

Olivehurst Public Utility District
1970 9th Ave/PO Box 670
Olivehurst, CA 95961
Attention: John Tillotson, 530-743-0317

ADDITIONAL INFORMATION:

Unregulated contaminant monitoring helps USEPA and the State Water Resources Control Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

Metered Water

To comply with State requirements, drinking water meters were installed on all new construction homes in the OPUD service area, e.g. Plumas Lake, Wheeler Ranch, Summerfield, etc. OPUD has begun billing the radio read meters based on the meter reading. State law required that all meters be read by 2010. The goal is to be 100% metered rates by 2025.

Lead in Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. OPUD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

****Fluoridation**

OPUD treated your water by adding fluoride to the naturally occurring level in both the Olivehurst and Plumas Lake systems in order to prevent dental caries in consumers until May 1, 2013 at which time fluoridation was discontinued. The fluoride levels were maintained at or near a recommended target concentration of 0.7 ppm, during fluoridation, as required by Department of Public Health regulations. Contact OPUD or visit the web page (www.opud.org) for details. Additional information about fluoridation and oral health may be obtained at http://www.waterboards.ca.gov/certlic/drinkingwater/flouridation/shtml

Appendix J

Water Shortage Contingency Plan

Olivehurst Public Utility District
Water Shortage Contingency Plan

JOINTLY PREPARED BY

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LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
Annual Assessment	Annual Water Supply and Demand Assessment
County	Yuba County
CWC	California Water Code
DWR	Department of Water Resources
ERP	Emergency Response Plan
FEMA	Federal Emergency Management Agency
Legislature	California State Legislature
LHMP	Local Hazard Mitigation Plan
MHMP	Multi-Hazard Mitigation Plan
MGD	Million Gallons Per Day
SB	Senate Bill
SGMA	Sustainable Groundwater Management Act
SSWRCB	State Water Resources Control Board
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan
YWA	Yuba Water Agency

Olivehurst Public Utility District
Water Shortage Contingency Plan

This document presents the Olivehurst Public Utility District (District) Water Shortage Contingency Plan (WSCP), which describes the strategic plan for preparing and responding to water shortages, including the water shortage stages and associated actions.

Water shortages occur whenever the available water supply cannot meet the normally expected customer water use. 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. As part of the WSCP, the District's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting are described.

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.

The purpose of the District's WSCP is to minimize non-essential uses of water and conserve remaining supplies for the greatest public benefit in the event of a water supply shortage. The District's WSCP provides a guide for the District to proactively prevent catastrophic service disruptions and has been updated to be consistent with the 2018 Water Conservation Legislation requirements. The District 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 District to modify this WSCP outside of the UWMP process.

1.0 WATER SUPPLY RELIABILITY ANALYSIS

Chapters 6 and 7 of the District's 2020 UWMP, present the District's water supply sources and reliability, respectively. Groundwater is currently the only source of potable water supply for the District. In the District's Olivehurst system there are three treatment plants, six active wells, and one standby well. In the District's Plumas Lake system, there are two treatment plants, three active wells, and one standby well.

The District's groundwater supply is pumped from the South Yuba Subbasin. As described in the December 2019 Groundwater Sustainability Plan prepared for the Yuba Subbasins, the Yuba North and South Subbasins have a long history of proactively and collaboratively managing its water resources, with strong participation of local water management agencies, stakeholders, and state and federal agencies. Examples of this proactive management are the long-term stable groundwater level conditions in the North Yuba Subbasin and the efforts that led to reversing a potentially serious overdraft situation that existed in the South Yuba Subbasin. Between 1948 and 1981, groundwater elevations in the South Yuba Subbasin had declined an estimated 130 feet. In 1983, the Yuba Water Agency (YWA) began delivering surface water from its New Bullards Bar Reservoir to this subbasin, which offset the use of groundwater extraction by local water districts, resulting in raising groundwater elevations to near historical levels by the early 2000s.

Water managers in the Yuba Subbasins combined this proactive groundwater management with their surface water operations to create a robust conjunctive use program that allows the Yuba Subbasins greater operational flexibility. This conjunctive use program has been effective in maintaining the groundwater subbasins near historical high levels, while meeting the challenge of delivering reliable water

supply to the local economy during California's historic drought of 2014-2017, maintaining environmental flow requirements in the lower Yuba River and contributing to state-wide water needs.

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 District may foresee a water shortage, but the water shortage may also be caused by an unforeseen sudden or emergency event. In general, the District's water supply conditions may be affected by the following:

- Climatic variability and drought conditions
- Water quality issues
- Water supply facility failures (loss of wells, treatment facilities, or distribution pipelines)
- State drinking water quality regulatory updates
- Unforeseen Sustainable Groundwater Management Act (SGMA) requirements to available groundwater supply in the future

The District's groundwater supplies are assumed to be drought-resistant. Consequently, supply shortages would not likely occur as a result of a single dry year or even multiple dry years. Supply shortages would be the result of a catastrophic event or water quality issue that would impact large portions of the subbasin.

As described in Chapter 7 of the District's 2020 UWMP, findings show that the District can reliably meet its projected demands through 2045 in normal and dry hydrologic conditions, including single dry years and five consecutive dry years.

Starting in 2022, the District will be required to conduct an annual water supply and demand assessment as described below in Section 2.0. The analysis associated with this WSCP was developed in the context of the District's water supply sources and reliability.

2.0 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

Beginning July 1, 2022, California Water Code (CWC) §10632.1 requires water suppliers to complete an Annual Water Supply and Demand Assessment (Annual Assessment) and submit an Annual Water Shortage Assessment Report to the Department of Water Resources (DWR). This section provides the procedures for the District to conduct its Annual Assessment, which will inform the District's Annual Water Shortage Assessment Report and assist the District with planning for potential water supply shortages. The objective of the Annual Assessment is to determine actual forecasted near-term supply conditions so that the District can prepare logistically and financially for any anticipated water supply constraints, as well as enact appropriate shortage response actions in a timely manner.

The Annual Assessment procedures below describe the steps the District 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 District will use the decision-making process described below to consistently determine its water supply reliability on an annual basis. The District may adjust and improve this process as needed.

The District is responsible for preparing the District's Annual Assessment and Annual Water Shortage Assessment Report and for submitting the report to DWR by July 1st of each year (starting in 2022). The District will gather key data inputs described in Section 2.2 and conduct the assessment in accordance with Section 2.3. Each June the District will finalize the assessment based on available supply and demand data and projections. If the Annual Assessment finds that available water supply will be sufficient to meet expected demands for the current year and one subsequent dry year, no further action will be required. The final approved documents will be submitted to DWR by July 1 each year.

The District will follow the schedule of activities shown in Table 1 for conducting the Annual Assessment. Due to variations in climate and hydrologic conditions, the start and end dates shown in the table are approximate and may be adjusted as needed. The intent of the schedule is to allow 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 Annual Assessment Activities

Schedule	Activities	Responsible Party
February	Convene assessment team.	District General Manager
February to March	Determine water supply sources for current year and one subsequent dry year. Describe sources and quantities considering factors affecting supply as described in Section 2.2.	District staff
February to March	Determine water demands for current year and one subsequent dry year. Describe demand types and quantities considering factors affecting demand as described in Section 2.2.	District staff
Early to Mid-April	Calculate the District's water supply reliability for the current year and one subsequent dry year using the methodology described in Section 2.3.	District staff
Early to Mid-April	Complete assessment based on groundwater monitoring data and SGMA protocols for implementing a sustainable groundwater supply.	District staff
Late April	Based on determinations of Annual Assessment, prepare the Annual Water Shortage Assessment Report with recommendations on water shortage condition determination and response actions. Submit to District General Manager, or designee(s), for review.	District staff
Early May	Review Annual Assessment and Annual Water Shortage Assessment Report and provide comments as needed.	District General Manager
Mid-May to Early June	Finalize and approve Annual Assessment and Annual Water Shortage Assessment Report.	District staff and General Manager
Before July 1	Submit Annual Assessment and finalized Annual Water Shortage Assessment Report to DWR.	District General Manager

Should the Annual Assessment find that available supply will not meet expected demands, the District will coordinate internally, with YWA, and with the County for the possible proclamation of a local emergency. The General Manager will present the finalized assessment to the District Board of Directors, 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 Annual Assessment, the Board of Directors 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. District staff will then prepare the District's Annual Water Shortage Assessment Report, incorporating District Board of Directors determinations and approved actions. The schedule of decision-making activities is provided in Table 2. The start and end dates and the activities shown in this table are approximate and may be adjusted as needed.

Table 2. Schedule of Decision-Making Activities if Water Shortage Condition Exists

Schedule	Activities	Responsible Party
Early May	Based on finalized determinations of Annual Assessment regarding water shortage condition and recommended actions, prepare recommendations on water shortage condition determination and actions.	District staff and General Manager
Early May	Prepare resolutions approving determinations and actions.	District staff and General Manager
Mid-May	Coordinate internally, with YWA, and with the County for the possible proclamation of a local emergency.	District General Manager
Early May to Mid-May	Present finalized determinations and recommendations, along with resolutions approving determinations and actions.	District General Manager
Late May to Early 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.	District Board of Directors
Mid-June	If a water shortage emergency condition is declared, implement the WSCP and the water shortage response actions as approved by District Board of Directors.	District staff
July 1	Finalize Annual Water Shortage Assessment Report and submit to DWR.	District staff and General Manager

2.2 Key Data Inputs

The Annual Assessment requires evaluating supplies and demands for the current year and one subsequent dry year.

In reviewing planned water supplies, the Annual Assessment will consider the following key inputs:

- Hydrological conditions
- Water quality conditions
- Groundwater well production limitations (e.g., issues with physical assets or SGMA constraints)
- Infrastructure capacity constraints or changes
- Capital improvement project implementation

Planned water supply sources and quantities will be described and should be reasonably consistent with the supply projections in Chapter 6 of the District's most recent UWMP. If the Annual Assessment and UWMP supply sources and projections differ significantly, the District will explain the difference.

In reviewing planned unconstrained (i.e., without conservation) water demands, the Annual Assessment will consider the following key inputs:

- Weather conditions
- Water year type
- Population changes (e.g., due to development projects)
- Anticipated new demands (e.g., changes to land use)
- Pending policy changes that may impact demands

Planned water demand types and quantities will be described and should be reasonably consistent with the demand projections in Chapter 4 of the District's most recent UWMP. If the Annual Assessment and UWMP demand differ significantly, the District will explain the difference.

2.3 Assessment Methodology

In preparing the Annual Assessment, the District will use the following assessment methodology and evaluation criteria to evaluate water supply reliability for the current year and one subsequent dry year.

Supply and demand will be compared to determine the reliability of the District's water supply in the current year and one subsequent dry year. The District's water supply for the current year and the subsequent dry year will be deemed reliable if projected water supply can meet projected water demands. If the projected water supply cannot meet the projected water demands in the current year or the subsequent dry year, the extent of the water shortage condition will be determined, and the District will prepare response actions in accordance with this WSCP.

The Annual Assessment findings will be presented to the District Board of Directors, along with recommendations for action for Board of Directors consideration.

3.0 SIX STANDARD WATER SHORTAGE STAGES

The District's WSCP, as included in the District's 2015 UWMP, included four stages of actions based on increasing severity up to a water shortage of 50 percent. Those four stages were as follows:

- Stage 1 – Water Supply Warning
  - Mandatory restrictions on water use
  - Expected reduction up to 10 percent
- Stage 2 – Water Shortage Alert
  - Mandatory restrictions on water use
  - Expected reduction up to 20 percent
- Stage 3 – Water Shortage Crisis
  - Mandatory restrictions and prohibitions
  - Expected reduction up to 35 percent
- Stage 4 – Water Shortage Emergency
  - Mandatory restrictions and water allocations
  - Expected reduction up to 50 percent

To provide a consistent regional and statewide approach to 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 ranges of up to 10, 20, 30, 40, 50 percent, and greater than 50 percent shortages from the normal supply 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 3 summarizes the water shortage range (i.e., percent shortage from normal supplies) and a brief narrative description of the corresponding water shortage condition and shortage response actions. These water shortage stages apply to both foreseeable and unforeseeable water supply shortage conditions. As noted above, the District's previous WSCP (as included in the District's 2015 UWMP) had four stages, but has been updated to align with the State's standard stages as shown in Table 3.

Table 3. Water Shortage Contingency Plan Levels (DWR Table 8-1)

Shortage Level	Percent Shortage Range	Water Shortage Condition	Shortage Response Actions
1	Up to 10%	• Annual Assessment shows that water supply is not able to meet normal demands by up to 10%; or • Definable event has reduced the District's ability to meet normal demands by up to 10%.	Water Supply Warning (Implement actions per Table 4)
2	Up to 20%	• Annual Assessment shows that water supply is not able to meet normal demands by up to 20%; or • Definable event has reduced the District's ability to meet normal demands by up to 20%.	Water Shortage Alert (Implement actions per Table 4)
3	Up to 30%	• Annual Assessment shows that water supply is not able to meet normal demands by up to 30%; or • Definable event has reduced the District's ability to meet normal demands by up to 30%.	Water Shortage Crisis (Implement actions per Table 4)
4	Up to 40%	• Annual Assessment shows that water supply is not able to meet normal demands by up to 40%; or • Definable event has reduced the District's ability to meet normal demands by up to 40%.	Water Shortage Severe Crisis (Implement actions per Table 4)
5	Up to 50%	• Annual Assessment shows that water supply is not able to meet normal demands by up to 50%; or • Definable event has reduced the District's ability to meet normal demands by up to 50%.	Water Shortage Emergency (Implement actions per Table 4)
6	>50%	• Annual Assessment shows that water supply is not able to meet normal demands by more than 50%; or • Definable event has reduced the District's ability to meet normal demands by more than 50%.	Water Shortage Catastrophic Emergency (Implement actions per Table 4)
Notes: Annual Assessment = Annual Water Supply and Demand Assessment			

As described in Section 2.0, the District will conduct an Annual Assessment to determine its water supply condition for the current year and a subsequent dry year. Preparing the Annual Assessment helps the District ascertain the need to declare a water shortage emergency and water shortage stage. In other cases, the District may need to declare a water shortage emergency due to unforeseen water supply interruptions. When the District anticipates or identifies that water supplies may not be adequate to meet the normal water supply needs of its customers, the District Board of Directors 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.

4.0 SHORTAGE RESPONSE ACTIONS AND EFFECTIVENESS

CWC §10632 (a)(4) requires shortage response actions that align with the defined shortage levels. The District' shortage response actions consist of a combination of demand reduction and operational changes. The District's suite of response actions depends on the event that precipitates a water shortage stage, the time of the year the event occurs, the water supply sources available, and the condition of its water system infrastructure.

In general, the District plans to use a balanced approach, combining demand reduction and operational changes to respond to the event and the resulting water shortage stage. As described further in Section 4.3 below, supply augmentation opportunities, beyond additional pumpage of groundwater, are not currently available to the District. The District will adapt its response actions to close the gap between water supplies and water demand and meet the water use goals associated with the declared water shortage stage.

Water meters allow the District to compare current water demands with demand reduction goals and adjust its shortage response actions accordingly. Nearly all of the District's water customers are metered; remaining unmetered connections in the Olivehurst system will be metered by the end of 2022. Meters are read monthly to track the extent of the effectiveness of the District's response actions.

Water production and water use can be compared to previous periods by customer sector or individual customer. This continuous monitoring allows the District to assess water system demands and compare with water demand reduction goals. The District may then adjust its shortage response actions as needed to balance demands with available water supplies. For example, the District may intensify its public outreach or more vigorously enforce compliance to water use prohibitions if needed water demand reduction goals are not met for any specific stage. Conversely, the District may reduce public outreach frequency or decrease compliance actions if demand reduction goals are exceeded.

The shortage response actions discussed below may be considered as tools that allow the District to respond to water shortage conditions. Shortage response actions are initiated at the shortage levels shown and continue to be implemented at higher shortage levels. Because the District may continuously monitor and adjust its response actions to reasonably balance demands with available supply, the extent to which implementation of each action reduces the gap between water supplies and water demand is difficult to accurately quantify and can only be estimated. For example, certain response actions, such as public outreach and enforcement, support the effectiveness of other response actions and do not have a quantifiable effect on their own.

4.1 Demand Reduction

During water shortage conditions, the District plans to reduce demand by implementing the actions shown in Table 4. Demand reduction actions are organized by the triggering water shortage level (i.e., 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 District uses compliance actions such as penalties, charges, or other enforcement. Demand reduction actions are initiated at the shortage levels shown and will continue to be implemented at higher shortage levels.

Table 4. Water Shortage Contingency Plan Demand Reduction Actions (DWR Table 8-2)

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? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
Add additional rows as needed				
Stage 1	CII - Restaurants may only serve water upon request	50 gal/day/commercial connection		No
Stage 1	Other water feature or swimming pool restriction	No data available	All pools, spas, and ornamental fountains/ponds shall be equipped with recirculating pumps and shall be constructed to be leak proof	No
Stage 1	Other water feature or swimming pool restriction	No data available	Pool draining and refilling shall be allowed only for health, maintenance, or structural considerations	No
Stage 1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	No data available		No
Stage 1	Other - Require automatic shut of hoses	50 gal/day/connection	Free flowing hoses are prohibited for all uses, including vehicle and equipment washing, ponds and evaporative coolers	No
Stage 1	Other - Prohibit use of potable water for washing hard surfaces	50 gal/day/connection	Washing down of sidewalks, driveways, parking lots, or other paved surfaces is prohibited except to alleviate immediate fire or sanitation hazards	No
Stage 2	Landscape - Limit landscape irrigation to specific days	Based on 2020 water use data, and assuming that 30% of single family water use is for landscape water use, it is estimated that irragation would be reduced by about 50%, with a savings of about 180 MG	Landscape irrigation shall be limited to a maximum of three days per week when necessary based on the following an odd-even schedule: -Odd numbered street addresses may irrigate only on Tuesdays, Thursdays, and Saturdays -Even numbered street addresses may irrigate only on Wednesdays, Fridays, and Sundays -No irrigation on Mondays	Yes
Stage 2	Landscape - Limit landscape irrigation to specific times	Depends on times that irrigation will be allowed, but can reduce water use by 20-25 gallons per day per household	Automatic sprinkler systems shall only operate during off-peak hours between 12:00AM and 6:00AM	Yes
Stage 2	CII - Restaurants may only serve water upon request	50 gal/day/commercial connection		Yes
Stage 2	Other - Prohibit use of potable water for washing hard surfaces	50 gal/day/connection	Washing down of sidewalks, driveways, parking lots, or other paved surfaces is prohibited except to alleviate immediate fire or sanitation hazards	Yes

Stage 3	Landscape - Limit landscape irrigation to specific days	Based on 2020 water use data, and assuming that 30% of single family water use is for landscape water use, it is estimated that irragation would be reduced by about 75%, with a savings of about 270 MG	Landscape irrigation shall be limited to a maximum of two days per week only when necessary based on the following odd-even schedule: -Odd numbered street addresses may irrigate only on Tuesdays and Saturdays -Even numbered street addresses may irrigate only on Wednesdays and Sundays -No irrigation on Mondays, Thursdays, and Fridays	Yes
Stage 3	Water Features - Restrict water use for decorative water features, such as fountains	No data available	Water use for ornamental ponds and fountains is prohibited	Yes
Stage 3	Other water feature or swimming pool restriction	No data available	No potable water from the utility's system shall be used to fill or refill new swimming pools, artificial lakes, ponds, or streams until the water crisis is over	Yes
Stage 3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	100-200 gal/year/residential connection	Washing of automobiles or equipment shall be done on the lawn or at a commercial establishment that uses recycled or reclaimed water	Yes
Stage 4	Landscape - Limit landscape irrigation to specific days	Based on 2020 water use data, and assuming that 30% of single family water use is for landscape water use, it is estimated that irragation would be reduced by about 50%, with a savings of about 180 MG	Landscape irrigation shall be limited to a maximum of one day per week when necessary based on the following odd-even schedule: -Odd numbered street addresses may irrigate only on Saturdays -Even numbered street addresses may irrigate only on Sundays -No irrigation on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays	Yes
Stage 5	Other	Depends on extent and frequency of current flushing activities	Flushing of fire hydrants is prohibited except in case of emergency or only for essential operations	Yes
Stage 5	Other	Prevents an increased shortage gap	No potable water shall be sold outside the District's service area	Yes
Stage 5	Other	Prevents an increased shortage gap	New connections to the District system will not be allowed	Yes
Stage 6	Landscape - Prohibit all landscape irrigation	Based on 2020 water use data, and assuming that 30% of single family water use is for landscape water use, savings would be about 365 MG		Yes

The District may request that its customers reduce their water demands in response to any water shortage stage, including imposing additional mandatory restrictions as discussed in Section 4.2.

The District will monitor water production, water consumption, 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 stage declaration as discussed in Section 9.0.

4.2 Additional Mandatory Restrictions

In response to the then on-going drought conditions, in 2015 the State Water Resources Control Board (SWRCB) adopted emergency regulations that were passed into law in March 2015, which included prohibitions against certain wasteful water use practices. The following actions were prohibited, except where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a state or federal agency:

- The application of potable water to any driveway or sidewalk.
- Using potable water to water outdoor landscapes in a manner that causes runoff to adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots or structures.
- Using a hose that dispenses potable water to wash a motor vehicle, unless the hose is fitted with a shut-off nozzle.
- The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system.
- The application of potable water to outdoor landscapes during and within 48-hours after measurable rainfall.
- The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased.
- To promote water conservation, operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.

To implement the mandatory potable water use restrictions imposed by the SWRCB, the District implemented its Water Shortage Contingency Plan in 2015. The mandatory prohibitions against specific water use practices required by the District's Water Shortage Contingency Plan, as of March 17, 2015, included the following:

- Water is to be used for beneficial and useful purposes only. All unnecessary and wasteful uses of water are prohibited.
- Washing down sidewalks, driveways, parking lots or other paved surfaces is prohibited except to alleviate immediate fire or sanitation hazards.
- Free-flowing hoses are prohibited for all uses, including vehicle and equipment washing, ponds, and evaporative coolers. Automatic shut-off devices shall be installed on any hose or other large-volume filling apparatus in use.

- Leaking consumer pipes or faulty sprinklers shall be repaired within five days or less if warranted by the severity of the problem.
- All pools, spas, and ornamental fountains/ponds shall be equipped with recirculating pumps and shall be constructed to be leak-proof. Pool draining and refilling shall be allowed only for health, maintenance or structural considerations.
- Landscape irrigation shall be limited to a maximum of three days per week when necessary based on the following odd-even schedule:
  - Customers with street addresses that end with odd numbers may irrigate only on Tuesdays, Thursdays, and Saturdays.
  - Customers with street addresses that end with even numbers may irrigate only on Wednesdays, Fridays, or Sundays.
  - No irrigation is permitted on Mondays.
- Automatic sprinkler system timers shall be set to operate only during off-peak hours between 9:00 p.m. and 6:00 a.m.
- Washing of streets, parking lots, driveways, sidewalks, or buildings is prohibited except as necessary for health, sanitary or fire protection services.
- Restaurants shall serve water only upon request.

The SWRCB expanded, updated, extended, and readopted the emergency regulations several times, most recently in February 2017. Governor Brown ended the drought State of Emergency in April 2017. In response, the SWRCB partially repealed the February 2017 drought emergency conservation regulations, maintaining urban water supplier reporting requirements and the prohibitions on wasteful water use practices. These requirements remained in place until November 25, 2017.

As part of the Making Conservation a California Way of Life legislation, the SWRCB is currently proposing permanent water use prohibitions. The proposed permanent prohibitions are similar to the emergency prohibitions on wasteful water uses that were in effect during the 2012-2017 drought. There are a few differences that reflect the permanent nature of these prohibitions. The following wasteful practices would be prohibited, unless exempt to protect health and safety, to meet state and federal permit obligations, when used exclusively for commercial agricultural purposes, or for other reasons noted below:

- Using potable water to wash sidewalks and driveways;
- Allowing more than incidental runoff when irrigating turf and other ornamental landscapes;
- Using hoses without automatic shutoff nozzles to wash motor vehicles;
- Using potable water in ornamental fountains or decorative water features that do not recirculate the water
- Irrigating turf and ornamental landscape during and within 48 hours following measurable rainfall;
- Hotels and motels laundering towels and linens daily without providing guests the option of using them again;
- During a drought emergency, the serving of drinking water in restaurants and bars without it being requested; and

- As of January 1, 2025, irrigating turf on public street medians and parkways unless the turf serves a community recreational or civic function, the turf is irrigated incidentally with trees, or the turf is watered with recycled water by an irrigation system installed prior to January 1, 2018.

4.3 Supply Augmentation and Other Actions

The District's water supply portfolio consists exclusively of local groundwater. At any water shortage stage and depending on the water shortage event, the District may adjust its groundwater pumping rate. Since the District's groundwater pumping is already considered for reliability and dry conditions, it is included in determining the gap between available supply and customer water use and should not be counted again as a potential shortage response.

Potential supply augmentation actions include transfer, exchanges, other purchases, new recycled water, rain seeding, and stored emergency supply; however, none of these actions are currently available to the District. Therefore, Table 5 indicates that no supply augmentation actions are currently available under any of the District's shortage levels.

Table 5. Water Shortage Contingency Plan Supply Augmentation and Other Actions (DWR Table 8-3)

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? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
Add additional rows as needed			
Stage 1			No supply augmentation methods available
Stage 2			No supply augmentation methods available
Stage 3			No supply augmentation methods available
Stage 4			No supply augmentation methods available
Stage 5			No supply augmentation methods available
Stage 6			No supply augmentation methods available
NOTES: The District does not have any supply augmentation methods.			

4.4 Operational Changes

Beginning at Stage 3, the District will adjust operations to minimize supply losses and more closely track customer water use. These adjustments include increasing meter reading and increasing water waste patrols. At Stage 5, flushing of fire hydrants will be prohibited except in case of an emergency or only for essential operations, no potable water shall be sold outside of the District's service area, and no new connections to the District's system will be allowed.

4.5 Emergency Response Plan

As stated in Section 3.0, the District's water shortage stages outlined in Table 3 apply to both foreseeable and unforeseeable water supply shortage conditions, including catastrophic water shortage conditions. Catastrophic water shortage conditions are addressed in the District's Emergency Response Plan (ERP), which is being updated concurrent with preparation of the District's 2020 UWMP. ERPs outline the preparation, response, and recovery procedures associated with unforeseeable incidents such as water supply contamination, earthquake, infrastructure failure, and other events.

The District's ERP describes the equipment and resources available in an unforeseen water shortage, including backup generators (stationary and portable). The District has standby generators at its each of its active wells, and all new water facilities being planned will include backup power. Repair or replacement of the electrical equipment control panels and wiring could be accomplished within 24 hours.

A power outage would be a significant threat to the District's water system. The devastating effect of major natural disasters on power systems can cause widespread outages over a long period of time. Windstorms, flooding and earthquakes can take down power lines and interrupt service. In the event of a power outage, the following steps shall be initiated:

- Obtain the estimated down time from PG&E
- Initiate backup power
- Increase disinfectant residual
- Issue "Boil Water", "Do Not Drink", or "Do Not Use" orders and press releases, as appropriate
- Initiate appropriate stage of Water Shortage Contingency Plan

Earthquakes can and have been very destructive to water utility systems in California. Heavy damage results from loss of power to ruptured pumping stations and displacement of soil causing broken lines, cracks in concrete storage tanks and structural damage. Connection pipes can break due to movement; pump and motor housings can be damaged from ground shaking events. In the event of an earthquake, the following steps shall be initiated:

- Initiate backup power
- Increase disinfectant residual
- Issue "Boil Water", "Do Not Drink", or "Do Not Use" orders and press releases, as appropriate
- Initiate appropriate stage of Water Shortage Contingency Plan

In the event of an emergency that impacts water delivery, the District will coordinate with YWA and the County to organize and deliver alternate water supplies to their customers, if available.

4.6 Seismic Risk Assessment and Mitigation Plan

CWC §10632.5(a) requires that UWMPs include a seismic risk assessment and mitigation plan to assess and mitigate a water system's seismic vulnerabilities. At time of preparation of this plan, Yuba County is in the process of preparing a 2021 Local Hazard Mitigation Plan (LHMP) update of its 2015 Multi-Jurisdictional Local Hazard Mitigation Plan (MHMP), which is under public review through the following link: Yuba County 2021 LHMP Update. The 2021 update recognizes earthquake events as hazards that can have a significant impact on the County. Although the likelihood of future earthquake occurrences is considered to be unlikely (less than a 1 percent chance of occurrence in the next 100 years, or has a recurrence interval of greater than 100 years), the magnitude/severity is considered to be critical (with 25 to 50 percent of property severely damaged; shutdown of facilities for at least two week; and/or injuries) and the significance is considered to be medium (with moderate potential impact).

Yuba County is located within an area of relatively low seismic activity and is not located within a highly active fault zone. No Alquist-Priolo Earthquake Fault Zones are located in the County. Faults include primarily inactive faults of the Foothills Fault System, running south-southeastward near Loma Rica, Browns Valley, and Smartville. Faults include the Prairie Creek Fault Zone, the Spenceville Fault, and the Swain Ravine Fault. There have been no disaster declarations in the County related to earthquakes. Although the County has felt ground shaking from earthquakes with epicenters located elsewhere, no major earthquakes have been recorded within the County. The risks associated with earthquakes, such as surface fault rupture, within the County are considered low.

The 2021 Local Hazard Mitigation Plan Update does include modeling to evaluate the potential impacts from a probabilistic 7.0 magnitude seismic event in the County. Key losses included 8,740 households in the County experiencing a loss of potable water the first day after the earthquake and damage to utility systems in the County including seven facilities with at least moderate damage, 384 potable water line breaks, 193 wastewater line breaks, and 1 natural gas line break.[1]

The District has implemented efforts in addressing its facilities' vulnerabilities. In accordance with America's Water Infrastructure Act (AWIA), the District completed a Risk and Resilience Assessment (RRA) of its water system in September 2021. The RRA systematically evaluated the District's assets, threats, and risks, as well as countermeasures that might be implemented to minimize overall risk to the system. This included assessment of natural hazards, including seismic, on the District's source water. To ensure the security of the District's water system, the RRA is retained by the District as a confidential document.

5.0 COMMUNICATION PROTOCOLS

In the event of a water shortage, the District must inform their customers, the general public and interested parties, the County, 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. Cell phone numbers for District staff are shared internally, and District email accounts are available for internal and external communication.

5.1 Communication for Foreseeable Events

Water shortage may be foreseeable when the District conducts its Annual Assessment as described in Section 2.0. When the District determines the potential of a water shortage event, the Board of Directors may declare a water shortage emergency by resolution and authorize shortage response actions.

The District will follow the communication protocols and procedures detailed below. The District may trigger any of these protocols at any water shortage stage.

- If a water shortage emergency is anticipated, the District will coordinate internally and with the County and the YWA for the possible proclamation of a local emergency.

[1] Table 4-59 HAZUS-MH Earthquake Loss Estimation Probabilistic 2,500-Year Scenario Results, Yuba County 2021 Local Hazard Mitigation Plan Update, July 2021 Public Review Draft.

- The District will conduct a Board of Directors meeting in which the Annual Assessment findings and recommendations for a water shortage emergency and shortage response actions are presented.
- The District will communicate conditions to the general public using some or all of the following options, as needed at the various shortage levels: press releases, radio/television coverage, social media posts, bill inserts, newsletters, and postings on the District's website. Public entities and officials are informed of water shortage information via email.

5.2 Communication for Unforeseeable Events

Water shortage may occur during unforeseeable events such as earthquakes, fires, infrastructure failures, civil unrest, and other catastrophic events. The District's ERP provides communication protocols and procedures to convey water shortage contingency planning actions during these events. The District may trigger any of these communication protocols at any water shortage stage, depending on the event.

All District staff are provided their communication responsibilities. Depending on the event, the District may designate a spokesperson to interact with the media. The ERP also provides a list of relevant contacts to notify at the local, regional, and state level.

6.0 COMPLIANCE AND ENFORCEMENT

When a water shortage is anticipated, the District Board of Directors will adopt a resolution declaring a water shortage emergency condition and the regulations and restrictions that should be enforced in response to the declared water shortage level.

Provisions for administrative citations are provided in the District's Ordinance No. 185 (also referred to as the Olivehurst Water Ordinance). If the District believes that water has been or is being used in violation of the above restrictions, the District will send a written notice to the customer specifying the nature of the violation and the date and time of occurrence and request that the customer cease the violation and take remedial action. The District will provide the customer with a copy of the ordinance and inform the customer that failure to comply may result in termination of water service.

7.0 LEGAL AUTHORITIES

Appendix K of the District's 2020 UWMP includes the District's Ordinance No. 185, which establishes rules and regulations for water service and provides procedures and penalties for enforcement.

8.0 FINANCIAL CONSEQUENCES OF WSCP

An extended water shortage would reduce the amount of water sold by the District to its customers. The most severe restrictions could reduce consumption by possibly more than 50 percent. In the event of a water shortage scenario, District revenues may decrease from the implementation of conservation measures and corresponding reduction in water sales. Conversely, expenses could increase as a result of the implementation and enforcement of water conservation measures.

In October 2015, in response to the then on-going drought conditions, the District adopted Resolution No. 2300, which provided for drought emergency water service surcharges and the adoption of a tiered drought emergency water rate system. For the District's metered customers, this rate structure encouraged further water conserving behavior by incorporating a tiered volumetric surcharge in addition to the normal (non-drought) unit service charge. Consequently, water usage reductions directly reduced the surcharge to the metered customer, while excessive water use resulted in increased surcharges to the metered customer.

A copy of Resolution No. 2300 is provided in Appendix L of the District's 2020 UWMP. A similar resolution could be enacted by the District if needed during future drought emergencies.

9.0 MONITORING AND REPORTING

Meter readings are an important tool to help the District adjust public outreach, enforcement, and other water shortage response actions. The District has meters at its water sources (groundwater production wells) and meters almost all of its water customers. Some remaining unmetered residential customers served by the Olivehurst system are anticipated to be metered by the end of 2022. Customers' water meters are read monthly to track the extent of their compliance with the District's water use restrictions. Water production information may be read daily.

At the time of preparation of this WSCP, the State Water Resources Control Board is preparing regulations for monthly reporting of water production and other uses, along with associated enforcement metrics. The District regularly records its water meter readings, along with enforcement actions, ensuring that the District will be able to comply with upcoming 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 District' 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 District may adjust its response actions and modify its WSCP. The District may also modify its WSCP based on improvements identified through systematic monitoring or feedback from District staff and customers as discussed below. When a revised WSCP is proposed, the revised WSCP will undergo the process described in Section 12.0 for adoption by the District Board of Directors and distribution to Yuba County, the District's customers and the general public.

10.1 Systematic Monitoring

The District will monitor meters at its water sources to evaluate the overall effectiveness of its response actions in meeting the declared water shortage stage. Should overall demands fall short of the goals of the declared water shortage stage, the District can increase the intensity of public outreach for water conservation and the extent of enforcement of water use restrictions. Conversely, should overall demands meet or exceed the goals of the declared water shortage stage, the District can decrease the intensity of public outreach for water conservation and the extent of enforcement of water use restrictions.

The District may implement operational changes in combination with enforcement of its water use restrictions and prohibitions to meet the objectives of the water shortage stage while maintaining overall public health and safety.

10.2 Feedback from District Staff and Customers

Feedback from District staff and the public is important in refining or incorporating new actions. The District seeks input from staff who interface with customers to gauge the effectiveness of its response actions and solicit response action ideas.

Customer water meter data may be evaluated for each customer sector or each individual customer. The District tracks water use violations and may evaluate their frequency to determine restrictions that customers may not be able to meet. This evaluation may also show water demand reduction actions that customers can implement effectively.

The District seeks input from its customers and the general public through its website, through public hearings, and through regularly scheduled Board of Directors meetings.

11.0 SPECIAL WATER FEATURE DISTINCTION

CWC §10632(b) requires that water suppliers analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls and fountains, separately from swimming pools and spas. The District distinguishes special water features, such as decorative fountains and ponds, differently from swimming pools and spas in its WSCP demand reduction actions (see Table 4 above).

12.0 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

This WSCP is adopted concurrently with the District's 2020 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 adoption, a copy of this WSCP will be available at the District's offices. A copy will also be provided to Yuba County. An electronic copy of this WSCP will also be available for public review and download on the District's website, www.opud.org

The District's WSCP is an adaptive management plan and is subject to refinements as needed to ensure that the District'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 the District Board of Directors and distribution to Yuba County, the District's customers, and the general public.

Appendix K

Water Conservation Ordinance

ORDINANCE NO. 185

AN ORDINANCE RESCINDING ORDINANCE NO. 151, ADOPTED MARCH 1, 1974, AS AMENDED, AND ESTABLISHING RULES AND REGULATIONS FOR WATER SERVICE, AND PROVIDING PROCEDURES AND PENALTIES FOR ITS ENFORCEMENT; AND RESCINDING ORDINANCE NO. 161, ADOPTED AUGUST 15, 1974, AND ESTABLISHING DEPOSIT REQUIREMENTS UPON APPLICATION FOR WATER SERVICE

BE IT ENACTED, by the Board of Directors of the Olivehurst Public Utility District as follows:

1. Ordinance No. 151, "An Ordinance Rescinding Ordinance No. 102, adopted October 3, 1968, as amended, and Establishing Rates, Rules, and Regulations for Water Service by Olivehurst Public Utility District", adopted March 1, 1973, as subsequently amended, is hereby rescinded.

2. Ordinance No. 161, "An Ordinance Rescinding Ordinance No. 141, as amended, and Establishing Deposit Requirements upon Application for Water and/or Sewer Service", adopted August 15, 1974, is hereby rescinded.

3. The rules, regulations, and deposit requirements for water service by Olivehurst Public Utility District shall be as follows:

ARTICLE I. GENERAL PROVISIONS

1. Short Title. This ordinance shall be known and may be cited as "Olivehurst Water Ordinance".

2. Words and Phrases. For the purpose of this ordinance, all words used herein in the present tense shall include the future; all words in the plural number shall include the singular number; and all words in the singular number shall include the plural numbers.

3. Water System. The District will furnish a system plant, works and undertaking used for and useful in obtaining, conserving, and distributing water for public and private uses, including all parts of said system, all appurtenances to it, and lands, easements, rights in land, water rights, contract rights, franchises, and other water supply, storage and distribution facilities and equipment.

4. Policy. The District will furnish water service in accordance with this and any other applicable ordinance or regulation

to any property within the boundaries of the District and to such other areas as the Board may designate.

5. Separability. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance.

6. Pressure Conditions. All applicants for service connections of water service shall be required to accept such conditions of pressure and service as are provided by the distribution system at the location of the proposed service connection, and to hold the District harmless for any damages arising out of low pressure or high pressure conditions or interruptions in service.

7. Tampering with District Property. No one except an employee or representative of the Board shall at any time in any manner operate the curb cocks or valves, main cocks, gates or valves of the District's system; or interfere with street mains or other parts of the water system.

8. Penalty for Violation. For the failure of the customer to comply with all or any part of this ordinance, and any ordinance, resolution or order fixing rates and charges of this District, a penalty for which has not hereafter been specifically fixed, the customer's service shall be discontinued and the water shall not be supplied such customer until he shall comply with the rule or regulation, rate or charge which he has violated, or, in the event that he cannot comply with said rule or regulation, until he shall have satisfied the District that in the future he will comply with all the rules and regulations established by ordinance of the District and with all rates and charges of this District. In addition thereto, he shall pay the District the sum of Five Dollars ($5.00) plus all costs of repairs and enforcement, for renewal of his service.

9. Ruling Final. All rulings of the Board shall be final.

10. Relief on Application. When any person, by reason of special circumstances, is of the opinion that any provision of this ordinance is unjust or inequitable as applied to his premises, he

may make written application to the Baord stating the special circumstances, citing the provision complained of, and requesting suspension or modification of that provision as applied to his premises. If such application be approved, the Board may, by resolution, suspend or modify the provision complained of, as applied to such premises, to be effective as of the date of the application and continuing during the period of the special circumstances.

11. Relief on Own Motion. The Board may, on its own motion, find that by reason of special circumstances any provision of this regulation and ordinance should be suspended or modified as applied to a particular premise and may, by resolution, order such suspension or mofidication for such premises during the period of such special circumstances, or any part thereof.

12. Effective Date and Posting. This ordinance shall take effect thirty (30) days from its passage, and at least one week before the expiration of said thirty (30) days, copies shall be posted in three public places in the District.

ARTICLE II. DEFINITIONS

1. Board means the Board of Directors of the District.

2. Cost means the cost of labor, material, transportation, supervision, engineering and all other necessary overhead expenses.

3. Cross Connection means any physical connection between the piping system from the District service and that of any other water supply that is not, or cannot be, approved as safe and potable for human consumption, whereby water from the unapproved source may be forced or drawn into the District distribution mains.

4. Distribution Mains means water lines in streets, highways, alleys, and easements used for public and private fire protection and for general distribution of water.

5. District means Olivehurst Public Utility District.

6. Owner means the person owning the fee, or the person in whose name the legal title to the property appears, by deed duly recorded in the County Recorder's office, or the person in possession of the property or buildings under claim of, or exercising acts of ownership

over same for himself, or as executor, administrator, guardian or trustee of the owner.

7. Person means any human being, individual, firm, company, partnership, association and private or public or municipal corporations, the United States of America, the State of California, districts and all political subdivisions, governmental agencies and mandatories thereof.

8. Premises means a lot or parcel of real property under one ownership except that any separate structure under one roof and where there are well defined boundaries or partitions such as fences, hedges or other restrictions preventing the common use of the property by the several tenants, shall be deemed separate premises, apartment houses, motels, office buildings and structures of like nature may be classified as single premises.

9. Private Fire Protection Service means water service and facilities for building sprinkler systems, hydrants, hose reels and other facilities installed on private property for fire protection and the water available therefor.

10. Public Fire Protection Service means the service and facilities of the entire water supply, storage and distribution system of the District, including the fire hydrants affixed thereto, and the water available for fire protection, excepting house service connections and appurtenances thereto.

11. Regular Water Service means water service and facilities rendered for normal domestic, commercial and industrial and fire protection purposes on a permanent basis, and the water available therefor, for which the general rates and regulations are applicable.

12. Limited Term Service means water service and facilities rendered for normal domestic purposes on a limited term basis not to exceed one month, and the water available therefor, for which the general rates and regulations are applicable, excluding deposit requirements, provided:

(a) application for limited term service is made;

(b) Payment in full is made for the full period of the

limited term at time of application;

(c) disconnection order is signed for specified date at time of application.

13. Service or Service Connection means the pipeline and appurtenant facilities such as the curb stop, meter and meter box, if any, all as used to extend water service from a distribution main to premises. Where services are divided at the curb or property line to serve several customers, each such branch service shall be deemed a separate service.

14. Temporary Water Service means water service and facilities rendered for construction work and other uses of limited duration, and the water available therefor.

15. Water Department means the Board of Directors of the District performing functions related to the District water service, together with authorized representatives.

16. Holiday means any day observed by the District whereby the business office is closed, and any day that banks observe as a holiday.

17. Week-end means all Saturdays and Sundays, to include the normal 24-hour day.

ARTICLE III. NOTICES

1. Notices from Customers. Notice from the customer to the District shall be given by him or his authorized representative in writing at the District's business office.

ARTICLE IV. APPLICATION FOR REGULAR WATER SERVICE WHERE NO MAIN EXTENSION REQUIRED

1. Application for Water Service. Applications for regular water service, where no main extension is required, shall be made upon a form provided by the District.

2. Undertaking of Applicant. Such application will signify the customer's willingness and intention to comply with this and other ordinances or regulations relating to the regular water service and to make payment for water service required.

3. Payment for Previous Service. An application will not be honored unless payment in full has been made for water service

previously rendered to the applicant by the District.

4. Installation of Services. Regular water services will be installed at the location desired by the applicant where requests are reasonable. Service installations will be made only to property abutting on public streets or abutting on such distribution mains as may be constructed in alleys or easements, at the convenience of the Water Department. Services installed in new subdivisions prior to the construction of streets or in advance of street improvements must be accepted by the applicant in the installed location.

5. Changes in Customer's Equipment. Customers making any material change in size, character or extent of the equipment or operation utilizing water service, or whose change in operation results in a large increase in the use of water, shall immediately give the District written notice of the nature of the change and, if necessary, amend their application.

6. Meters Required and Charges for Meters. Applications for all future services must be metered and applicants for such services shall deposit, in addition to any other required charges, a sum equivalent to the cost of the meter and installation charges. The District will own all meters installed. In addition to the above connection charges and any other charges of the District for the installation of the service, the District shall collect for each and every water service applied for hereafter, fees and charges for the purchases, and acquisition of meter boxes, couplings, fittings and water meters or other devices for measuring quantities of water, as required for the installation of a water meter and/or other devices sufficient to record the consumption of water. Such charges including a 15% handling expense, shall be the actual cost to District of purchase of such materials at the time of acceptance of the application for water service by District, also such charges shall include cost of labor and administration at the time of acceptance of the application. As soon as practicable after receipt of such fees, District shall install the meter box and fittings preparatory to installation of such meter. District shall

purchase the water meter or other water measuring devices, fittings and couplings necessary for the service for which application is made. District shall possess the right to elect to install the meter, device, fittings and couplings at the time of payment of the schedule of charges of District, but shall not be required to install such meter, fittings or couplings and may delay such installation for any period of time set by the District.

ARTICLE V. APPLICATIONS FOR REGULAR WATER SERVICE WHEN MAIN EXTENSION REQUIRED

1. Main Extensions. The following rules are established for making main extensions:

(a) Determination. Upon receipt of any application for water service or request for an application form, the Water Department shall determine whether a main extension is necessary to provide service. A main extension shall be installed in the manner provided in this Article whenever, in the judgement of the Water Department and the Board, such main extension is necessary to provide regular water service to property described in such application or request.

(b) Application. Any owner of one or more lots or parcels or subdivider of a tract of land where, in the opinion of the Water Department, one or more main extensions is required, desiring regular water service to service such property, shall make a written application therefore to the District, said application to contain the legal description of the property to be served and tract number thereof, and any additional information which may be required by the District, and be accompanied by a map showing the location of the proposed connections.

(c) Investigations. Upon receipt of the applications, the Water Department shall make an investigation and survey of the proposed extension and submit his opinion and the estimated cost thereof to the Board.

(d) Ruling. The Board shall thereupon consider such application and report and, after such consideration, reject, amend, or approve the application.

(e) District Lines. All extensions thus provided for, in accord ance with these regulations, shall be and remain the property of the District.

(f) Dead-end Lines. No dead-end lines shall be permitted, except as recommended by the Water Department and approved by the Board. In cases where, subsequent to the approval of a dead-end line by the Board, another dead-end line is planned in sufficient proximity to make connection feasible and such connection is recommended by the Engineer, and approved by the Board, the dead-end lines shall be connected. In cases where circulation lines are necessary they shall be designed and installed by the Water Department as a part of the cost of the extension.

(g) Extent and Design. All main extensions shall extend to the fair property line of developed property. If additional property is developed on the same lot after installation of a main extension, the main extension shall be extended to the fair property line of the additionally developed property. All main extensions shall be subject to design approval by the Engineer and Board.

2. General. The District will provide all main extensions upon application for service and approval thereof by the Board.

3. Determination. If, in the opinion of the Board, the cost thereof is in excess of what it is prepared to advance, or it questions the economic advantage to the District of making such advance, it shall determine the cost of such extension including all engineering, inspection and other expenses attributable to the line.

4. Advance Cost. When the Board so determines, the applicant shall advance the amount of such estimate, and the line shall be installed by the District. If the amount of the advance deposit exceeds the actual cost of construction, engineering, legal,

inspection and other charges attributable to the extension, the balance shall be refunded to the property owner. If the amount of the deposit is insufficient to pay all the costs of construction, engineering, legal, inspection and other charges attributable to the extension, the property owner shall advance a sum sufficient to pay all such costs to the District prior to the acceptance of the extension by the District.

5. Refund Agreement. Refunds will be made to the property owner or owners who have paid for an extension as follows: where one cost of the extension has been deposited or paid for as per set forth in Section 4, the District shall thereafter, but not for longer than ten (10) years after the date such extension is originally connected to the District's water system, collect from any applicable water user connecting to such main extension, that fraction of the cost contributed for such extension, as approved by the District, as one-half the number of lineal feet of property owned by such water user along said extension bears to the total number of lineal fee of property held by potential water users along such extension as determined by the District at the time such extension is connected to the District's water system. Those exempted from making payment toward the fraction of the cost contributed for such extension would be those who already have service from the District's water system. Such sums as are thus actually received by the District shall be paid by the District only to the property owner or owners who originally advanced funds toward the cost of such extension. Where different property owners contributed toward the making of the extension, such sums shall be refunded to such property owners or their successors in interest pro rata according to the amounts which they severally contributed toward the cost of the extension. The District shall in no way be obligated to assure that the property owner or owners making such extension are paid the total or any costs thereof nor to initiate any action nor incur any expense to collect any sum to be paid such property owner or owners; nor shall refund be made from any revenues derived from water service.

6. Other Charges. In addition to the above connection charges and any other charges of the District for the installation of the service, the District shall collect for each and every water service applied for hereafter, fees and charges for the purchase, and acquisition of meter boxes, couplings, fittings and water meters or other devices for measuring quantities of water, as required for the installation of a water meter, and/or other devices sufficient to record the consumption of water. Such charges including a 15% handling charge shall be the actual cost to the District of purchase of such materials at the time of acceptance of the application for water service by District. As soon as practicable after receipt of such fees, District shall install the meter box and fittings preparatory to installation of such meter. District shall purchase the water meter or other water measuring devices, fittings and couplings necessary for the service for which application is made. District shall possess the right to elect to install the meter, device, fittings and couplings at the time of payment of the schedule of charges to District, but shall not be required to install such meter, fittings or couplings and may delay such installation for any period of time set by the District.

ARTICLE VI. SUBDIVISIONS

1. Application. A person desiring to provide a water system within a tract of land which he proposes to subdivide, shall make written application therefor.

2. Id. - Contents. The application shall state the number of the tract, the name of the subdivision and its location. It shall be accompanied by a copy of the tentative map, and the plans, profiles and specifications for the street work and sanitary and storm sewer work therein.

3. Investigation. Upon receiving the application, the water Department shall make an investigation and survey of the proposed subdivision and shall make its findings to the Board, including a recommendation as to the facilities required and the estimated cost of the proposed water system therefor. To assist the Water Department in making said investigation and report, the Board may

engage the services of a consulting engineer. The size, type and quality of materials shall be in accordance with the District's Water Distribution System Standards and Specifications in effect at the time of application.

4. Specifications and Construction. Location of the lines shall be specified by the Water Department and the actual construction will be done, at the expense of the subdivider in accordance with an approved subdivision agreement. Fire hydrants shall be located at intervals of 500 feet along the distribution man.

5. Subdivision, Tracts or Housing Projects - Deposit. A deposit sufficient to cover engineering costs, legal costs, District staff costs and other appropriate charges attributable to the project, which are incurred in developing and reviewing plans, specifications, subdivision agreements, administration and project inspections in accordance with the subdivision agreement shall be advanced to the District by the subdivider.

6. Adjustment. If the amount of the deposit exceeds the actual costs of engineering, legal, inspections, and District staff costs, and other appropriate charges attributable to the project, the balance shall be refunded to the subdivider. If the amount of the deposit is insufficient to pay all such costs, the subdivider shall advance a sum sufficient to pay all such costs to the District prior to the acceptance of the subdivision by the District.

7. Property of District. All facilities shall be the property of the District and shall be conveyed to the District by a proper instrument in writing prior to acceptance by the District.

8. Connections. The subdivider shall, at his cost, provide all connections to houses constructed by him, as provided herein and in the District's Water Distribution System Standards and Specifications in effect at the time of the application.

9. Costs and Expenses. All costs and expenses incurred by the District under this Article, including the cost of investigation, inspection and consulting engineers services, shall be paid to the District by the subdivider prior to approval of the application.

10. Further Requirements. In granting an application, the Board may make whatever further requirements which may appear to it to be necessary.

ARTICLE VII. GENERAL USE REGULATIONS

1. Water Use Limitations. District water shall be limited in use to domestic use including normal yard upkeep only. The use of District water for extensive irrigation is prohibited.

2. Number of Services per Premises. The applicant may apply for as many services as may be reasonably required for his premises, provided that the pipe line system from each service be independent of the others and that they not be interconnected. The cost of all services shall be borne by the applicant.

3. Supply to Separate Structures. Each house or structure for which application for water service is hereafter made which fronts on a public street or private road shall have a separate service connection.

4. Supply to Separate Lots or Parcels. Each lot or parcel shall have a separate connection to the main. In the case of a lot split, the buyer and/or seller shall install a separate service to the dominant tenement before service is granted.

5. Water Waste. No customer shall knowingly permit leaks or waste of water. Where water is wastefully or negligently used on a customer's premises, seriously affecting the general service, the District may discontinue the service if such conditions are not corrected within five (5) days after giving the customer written notice.

6. Responsibility for Equipment on Customer Premises. All facilities installed by the District on private property for the purpose of rendering water service shall remain the property of the District and may be maintained, repaired or replaced by the Water Department without consent or interference of the owner or occupant of the property. The property owner shall use reasonable care in the protection of the facilities. No payment shall be made for placing or maintaining said facilities on private property. No

persons shall place or permit the placement of any object in a manner which will interfere with the free access to a meter box or will interfere with the reading of a meter where installed.

7. Damage to Water System Facilities. The customer shall be liable for any damage to the District-owned customer water service facilities when such damage is from causes originating on the premises by an act of the customer or his tenants, agents, employees, contractors, licensees or permittees, including the breaking or destruction of locks by the customer or others on or near a meter, and any damage to a meter that may result from hot water or steam from a boiler or heater on the customer's premises. The District shall be reimbursed by the customer for any such damage promptly upon presentation of a bill.

8. Ground Wire Attachments. All persons are forbidden to attach any ground wire or wires to any plumbing which is or may be connected to a service connection or main belonging to the District; the District will hold the customer liable for any damage to its property occasioned by such ground wire attachments.

9. Control Valve on the Customer's Property. The customer shall provide a valve on his side of the service installation as close as is practicable to the street, highway, alley or easement in which the water main serving the customer's property is located, to control the flow of water to the piping on his premises. The customer shall not use the service curb stop to turn water on and off for his convenience.

10. Cross-Connections. The customer must comply with the State and Federal laws governing the separation of dual water systems or installations of back flow protective devices to protect the public water supply from the danger of cross-connections. Back flow protective devices must be installed as near the service as possible and shall be open to test and inspection by the Water Department. Plans for installation of back flow protective devices must be approved by the Water Department prior to installation.

In special circumstances, when the customer is engaged in the handling of especially dangerous or corrosive liquids or industrial

or process waters, the District may require the customer to eliminate certain plumbing or piping connections as an additional precaution and as a protection of the back flow preventive devices.

As a protection to the customer's plumbing system a suitable pressure relief valve must be installed and maintained by him, at his expense, when check valves or other protective devices are used. The relief valve shall be installed between the check valve and the water heater.

Whenever back flow protection has been found necessary on a water supply line entering a customer's premises, then any and all water supply lines from the District's mains entering such premises, buildings or structures shall be protected by an approved back flow device, regardless of the use of the additional water supply lines.

The double check valve or other approved back flow protection devices may be inspected and tested periodically for water tightness by the District. The devices shall be serviced, overhauled, or replaced whenever they are found defective and all costs of repair and maintenance shall be borne by the customer.

The service of water to any premises may be immediately discontinued by the District if any defect is found in the check valve installation or other protective devices, or if it is found that dangerous unprotected cross-connections exist. Service will not be restored until such defects are corrected.

11. Interruptions in Service. The District shall not be liable for damage which may result from an interruption in service from a cause beyond control of the Water Department. Temporary shutdowns may be made by the Water Department to make improvements and repairs. Whenever possible and as time permits, all customers affected will be notified prior to making such shutdowns. The District will not be liable for interruption, shortage or insufficiency of supply, or for any loss or damage occasioned thereby, if caused by accident, act of God, fire, strikes, riots, war or any other cause not within its control.

12. Ingress and Egress. Representatives from the Water Department shall have the right of ingress and egress to the customer's

premises at reasonable hours for any prupose reasonably connected with the furnishing of water service.

ARTICLE VIII. METERS

1. Installation - Where Required. All industrial services shall have meters installed, and applicants for such services shall deposit, in addition to any other required charges, a sum equivalent to the cost of the meter. In addition, the Water Department reserves the right to install meters on any other service where and when it deems such installation necessary.

2. Installation of Request of Customer - Deposit. A customer may request the installation of a meter at any time provided that he deposit a sum equivalent to the cost of the meter. The District will own all meters installed. After requesting and obtaining a meter, the customer may revert to a flat rate after one year of continuous meter usage. No refund will be made for meters removed.

3. Meter Installations. Meters will be installed at the curb, property line or in sidewalk basements by the District.

4. Change in Location of Meters. Meters moved for the convenience of the customer will be relocated at the customer's expense. Meters moved to protect the District's property will be moved at its expense. If the lateral distance which the customer desires to have the meter moved exceeds eight (8) feet he will be required to pay for new service at the desired location.

5. Meter Reading. Meters will be read as nearly as possible on the same day of the month.

6. Meter Tests - Deposit. All meters will be tested prior to installation and no meter will be installed which registers more than two per cent (2%) fast. If a customer desires to have the meter service to his premises tested, he shall first deposit twenty-five dollars ($25.00) for meters up to one (1) inch in size and ten dollars ($10.00) per inch or any portion thereof for each larger size meter and shall be present when the meter is tested in the meter shop of the Water Department. Should the meter register more than two percent (2%) fast, the deposit will be refunded but should the

meter register less than two percent (2%) fast, the deposit will be retained by the Water Department.

7. Adjustment for Meter Errors. If a meter tested at the request of a customer pursuant to Section 6 is found to be more than two per cent (2%) fast, the excess charges for the time service was rendered the customer requesting the test, or for a period of six (6) months, whichever shall be the lesser, shall be refunded to the customer.

8. Non-registering Meters. If a meter is found to be non-registering the charges for service shall be based on consumption as estimated by the Water Superintendent. Such estimates shall be made from previous consumption for a comparable period.

9. Other Charges. In addition to the above connection charges and any other charges of the District for the installation of the service, the District shall collect for each and every water service applied for hereafter, fees and charges for the purchase, and acquisition of meter boxes, couplings, fittings and water meters or other devices for measuring quantities of water, as required for the installation of a water meter, and/or other devices sufficient to record the consumption of water. Such charges including a 15% handling charge shall be the actual cost to the District of purchase of such materials at the time of acceptance of the application for water service by the District. As soon as practicable after receipt of such fees, District shall install the meter box and fittings preparatory to installation of such meter. District shall purchase the water meter or other water measuring devices, fittings and couplings necessary for the service for which application is made. District shall possess the right to elect to install the meter, device, fittings and couplings at the time of payment of the schedule of charges to District, but shall not be required to install such meter, fittings or couplings and may delay such installation for any period of time set by the District.

ARTICLE IX. CREDIT

1. Establishment and Maintenance. Each applicant for service

shall establish and maintain credit to the satisfaction of the Water Department before any service will be rendered.

ARTICLE X. DEPOSIT REQUIREMENTS

1. Except as hereinafter otherwise provided, upon application for water service, the applicant shall deposit, as a condition of obtaining service, a sum equal to the amount of the charges of the District, as estimated by the District staff, for providing such service, for a two-month period. In addition to the charges as estimated by the District's staff for a two month period for the services applied for, the applicant shall further pay a deposit in the amount of the discontinuance charge for the service applied for and an amount equal to the charges for a delinquent account and the amount of penalty and interest for one month from and after the date of delinquency, all at the rate set from time to time by ordinance of the District.

2. The deposit shall be used only as a credit to the account of applicant against any unpaid charges upon termination of service. Upon termination of service, or after twelve (12) consecutive months of non-delinquency service charge payments, the deposit, or the portion thereof not applied as a credit to unpaid charges, shall be refunded, without interest, to the applicant.

3. Except as hereinafter otherwise provided, this ordinance shall apply to all applications for water service made on or after the effective date hereof, including applications for reestablishing services following discontinuance or termination by the District for nonpayment of fees and charges.

4. The deposit requirement herein established shall not apply to:

(a) Applicants who pay in advance, at the time of application the estimated amount of the charges for providing the services applied for for a minimum period of six months; and

(b) applicants who have previously taken service at another address within the District and who have paid all billings, by their due dates, during the immediately preceding

twelve month period; and

(c) applicants who, at the time of application, pay in advance in full, for limited term service not to exceed one month, and executes a discontinuance of service order for a specific date.

5. Any deposit required pursuant to this ordinance shall be in addition to, and not in lieu of, any other fees and charges, and penalties thereon, established by other ordinances, rules and regulations of the District.

ARTICLE XI. BILLING

1. Service Period. The regular service period for which a charge will be made will be one (1) calendar month.

2. Opening and Closing Charges. Opening and closing charges for less than the monthly service period shall be prorated as follows:

For services connected on any day of the month other than the first day, the charge shall be prorated on a daily basis starting with the day service is rendered and extending through the remainder of the month. For services disconnected on any day of the month other than the last day of the month, the charge shall be prorated on a daily basis backwards through the first day of the month or to the day service was rendered, whichever is the shortest period of time. All months shall be considered as having 30 days.

3. Payment of Charges. Charges for water service shall be due and payable on the first day of each service period. Charges not paid by 5:00 P.M. of the last day of the service period, excluding holidays and week-ends, whereby the time will be extended until 5:00 P.M. the following work day, will be subject to a service charge of ten percent (10%) of the amount thereof. An additional penalty of one and one-half percent (1½%) per month may accrue on the first day of each month thereafter until the charges are paid. No payment of less than the previous balance as shown on the current statement will be accepted.

4. Notification of Charges. Monthly notification of charges

for a service period will be rendered by mail. Monthly notification is for the convenience of the customer and does not obligate the District in any way. The failure of a customer to receive the monthly notification does not alleviate the customer from the responsibility for payment of the charges. At the time a connection is made, the customer will be notified of the rate applicable to the connection being made and that the same is due and payable according to Section 3 hereof.

5. Bad Check Charge. A service charge, as approved by the Board of Directors, will be levied for each check returned to the District, for any reason, except a bank error.

ARTICLE XII. DISCONTINUANCE OF SERVICE

1. Disconnection for Non-Payment. Service may be discontinued for non-payment of charges on or before the twentieth day of the second unpaid month of service. At least five (5) days prior to such discontinuance, the customer will be sent a final notice informing him that discontinuance will be enforced if payment is not made within the time specified in said notice. The failure of the District to send or any such person to receive said notice shall not affect the District's power hereunder. A customer's water service may be discontinued if water service furnished at a previous location is not paid within the time herein fixed for the payment of bills. If a customer receives water service at more than one location and the bill for services at any one location is not paid within the time provided for payment, water service at all locations may be turned off. Domestic services, however, will not be turned off for non-payment of charges for other classes of service.

2. Discontinuance Charge. A discontinuance charge of ten dollars ($10.00) will be made if payment for services is not made within the time specified in the final notice sent to the customer pursuant to the provisions of Section 1 hereof, whether or not service is actually discontinued. If service is discontinued, such discontinuance charge, plus all accrued charges and panalties to date, will be made and collected prior to renewing service following discontinuance.

3. Unsafe Apparatus. Water service may be refused or discontinued to any premises where apparatus or appliances are in use which might endanger or disturb the service to other customers.

4. Cross-Connections. Water service may be refused or discontinued to any premises where there exists a cross-connection in violation of State or Federal laws.

5. Fraud or Abuse. Service may be discontinued if necessary to protect the District against fraud or abuse.

6. Non-Compliance with Regulations. Service may be discontinued for non-compliance with this or any other ordinance or regulation related to the water service.

7. Upon Vacating Premises. Customers desiring to discontinue service shall so notify the Water Department. Unless discontinuance of service is ordered the customer shall be liable for charges whether or not any water is used.

8. Service Calls for Customer's Convenience. Service calls for a customer's convenience will be performed without charge during normal working hours. Service calls for a customer's convenience which requires District personnel to work overtime will be performed for a Twelve Dollar ($12.00) service charge per service call.

9. Service Turn-ons and Turn-offs. Turn-on or turn-off of service will be made at no charge for applications for water service which are received before 4:30 P.M. Applications received after 4:30 P.M. will be turned on the following day. When District staff is required to work overtime to perform a turn-on or turn-off of service, a service charge of Twelve Dollars ($12.00) will be made for such service.

ARTICLE XIII. COLLECTION BY SUIT

1. Penalty. Charges not paid by the last day of the service period, excluding holidays and week-ends, whereby the time will be extended until 5:00 P.M. the following work day, will be subject to a service charge of ten percent (10%) of the amount thereof. An additional penalty of one and one-half percent (1½%) per month may accrue on the first day of each month thereafter until the charges are paid.

2. Suit. All unpaid rates and charges and penalties herein provided may be collected by suit.

3. Costs. Defendant shall pay all costs of suit and reasonable attorney's fees in any judgment rendered in favor of the District.

ARTICLE XIV. PUBLIC FIRE PROTECTION

1. Use of Fire Hydrants. Fire hydrants are for use by the District or by organized fire protection agencies pursuant to contract with the District. Other parties desiring to use fire hydrants for any purpose must first obtain written permission from the Water Department prior to use and shall operate the hydrant in accoreance with instructions issued by the Water Department. Unauthorized use of hydrants will be prosecuted according to law.

2. Hydrant Rental. A charge to be determined by contract between the District and organized fire protection agencies will be imposed for hydrant maintenance and water used for public fire protection.

3. Moving of Fire Hydrants. When a fire hydrant has been installed in the location specified by the proper authority, the District has fulfilled its obligation. If a property owner or other party desires a change in size, type or location of the hydrant, he shall bear all costs of such changes, without refund. Any change in the location of a fire hydrant must be approved by the proper authority.

ARTICLE XV. PRIVATE FIRE PROTECTION

1. Payment of Cost. The applicant for private fire protection service not now installed shall pay the total actual cost of installation of the service from the distribution main to the customer's premises including the cost of a detector check meter or other suitable and equivalent device, valve and meter box, said installation to become the property of the District.

2. No Connection to Other System. There shall be no connections between this fire protection system and any other water distribution system on the premises.

3. Use. There shall be no water used through the fire protectio service except to extinguish accidental fires and for testing the

fire fighting equipment.

4. Water for Fire Storage Tanks. The District assumes no responsibility for loss or damage due to lack of water or pressure and merely agrees to furnish such quantities and pressures as are available in its general distribution system. The service is subject to shutdowns and variations required by the operation of the system.

ARTICLE XVI. LIMITED TERM AND TEMPORARY SERVICE

1. Limited Term Service. Limited term service may be rendered for normal domestic purposes not to exceed one month when the applicant at the time of application, pays in advance in full for such service, and executes a disconnection of service order for a specific date. No deposit is required for such service.

2. Temporary Service. Temporary service connections shall be disconnected and terminated within six (6) months after installation unless an extension of time is granted in writing by the District.

3. Temporary Service Deposit. The applicant shall deposit, in advance, an amount equal to One Hundred Thirty Seven Dollars and Thirty Cents ($137.30) for each inch or portion thereof of service desired. Upon discontinuance of service the actual cost of installing and removing the facilities required to furnish said service, exclusive of the cost of salvageable material, shall be determined and an adjustment made as an additional charge, refund or credit. If service is supplied through a fire hydrant, the applicant will be charged in accordance with the following rate schedule:

Flat charge per connection, for both installation and removal of service facilities, including the meter	$48.45
Each additional move of facilities to another location	$13.85

4. Installation and Operation. All facilities for temporary service to the customer connection shall be made by the Water Department and shall be operated in accordance with its instructions.

5. Responsibility for Installation. The customer shall use all possible care to prevent damage to any loaned facilities of the

District which are involved in furnishing the temporary service from the time they are installed until they are removed, or until forty-eight (48) hours notice in writing has been given to the District that the contractor or other person is through with the installation. If the facilities are damaged, the cost of making repairs shall be paid by the customer.

6. Temporary Service from a Fire Hydrant. If temporary service is supplied through a fire hydrant, a permit for the use of the hydrant shall be obtained from the proper authority and the District. It is specifically prohibited to operate the valve of any fire hydrant other than by the use of a spanner wrench designed for this purpose.

7. Unauthorized use of Hydrants. Tampering with any fire hydrant for the unauthorized use of water therefrom, or for any other purpose, is a misdemeanor, punishable by law.

8. Rates. The rates for temporary service shall be established by the District at the time application for such service is made. Where a meter is used, the rates for regular service shall be increased by fifty percent (50%) for temporary service.

ARTICLE XVI. GENERAL PROVISIONS

1. Pools and Tanks. When an abnormally large quantity of water is desired for filling a swimming pool or for other purposes, arrangements must be made with the District prior to taking such water. The rate to be charged for such water shall be determined by the District in relation to the quantity of water desired.

Permission to take water in unusual quantities will be given only if it can be safely delivered through the District's facilities and if other consumers are not inconvenienced thereby.

2. Responsibility for Equipment. The customer shall, at his own risk and expense, furnish, install and keep in good safe condition all equipment that may be required for receiving, controlling, applying and utilizing water, and the District shall not be responsible for any loss or damage caused by the improper installation of such equipment, or the negligence or wrongful act of the customer

or of any of his tenants, agents, employees, contractors, licensees or permittees in installing, maintaining, operating or interfering with such equipment. The District shall not be responsible for damage to property caused by faucets, valves and other equipment that are open when water is turned on either originally or when turned on after a temporary shutdown.

President of
OLIVEHURST PUBLIC UTILITY DISTRICT

ATTEST:

Clerk & ex-officio Secretary

Appendix L

Water Rate Schedule

OLIVEHURST PUBLIC UTILITY DISTRICT

RESOLUTION NO. 2332

RESOLUTION OF THE BOARD OF DIRECTORS OF THE OLIVEHURST PUBLIC UTILITY DISTRICT, FOLLOWING PUBLIC HEARING, PROVIDING FOR AN INCREASE IN WATER SERVICE CHARGES

WHEREAS, the Olivehurst Public Utility District ("District") owns and operates a Domestic Water System which operates under permits issued by the Department of Health Services of the State of California; and

WHEREAS, the Board has commissioned a study by Bartle Wells Associates related to the costs of services provided by said system, and the charges sufficient to provide for the proper operation and maintenance thereof (hereafter "the Rate Study"); and,

WHEREAS, at a regular public meeting duly called and agendized on May 17, 2018, the Board did review and take public comment on the Rate Study and at the regular public meeting duly called and agendized on May 17, 2018, did adopt said study as representing the independent opinion of the Board of Directors and authorized the increased rates recommended therein subject to the notice and hearing requirements of California Constitution, Article XIII D; and

WHEREAS, the Board of Directors, in accordance with Article XIII D, Section 6, of the California Constitution, on June 21, 2018, caused notice to the property owners affected by said increases to be given by regular mail to the record owner of each identified parcel upon which the increased charges are proposed for imposition, notifying them of the proposed charges, the basis for calculation thereof, the reason for the increase, and the date, time, and place of a public hearing, at least 45 days thereafter, where such increase would be considered; and

WHEREAS, at a public hearing duly called and agendized, on August 16, 2018, the Board did conduct a public hearing, and considered written and oral protests submitted in connection with said increases in rates; and

WHEREAS, the Board finds that written protests submitted and not withdrawn by the close of the public hearing do not represent a majority of the owners of the identified parcels; and

WHEREAS, the Board finds that the increased charges described in Exhibit A, attached hereto, are required to meet the ongoing and reasonably anticipated operational expenses of the District, including meeting its reasonable financial reserve requirements of the District and are further needed to secure funds as reasonably necessary to operate, maintain, repair and replace the facilities installed to provide water service within the District and are therefore exempt from the requirements of the California Environmental Quality Act in accordance with Public Resources Code Section 21080(b)(8)(C) and (D); and,

WHEREAS, the Board finds that revenues from the proposed increases shall not exceed the funds required to provide water service to the customers receiving said service; that revenues from the proposed increases shall not be used for any other purpose other than those purposes for which they were imposed; and the amount of the proposed charges for water service shall not exceed the proportional cost of service attributable to the parcels on which the increases will be imposed.

N**OW, THEREFORE, BE IT RESOLVED** by the Board of Directors of Olivehurst Public Utility District that the Water Service Charges, described in Exhibit A, attached hereto and incorporated herein, are hereby approved and authorized as the fees and charges of the District, effective with the first billing cycle commencing on or after September 1, 2018.

BE IT FURTHER RESOLVED that the Board does find that establishment of the water a service charges described in Exhibit A is exempt from the provisions of the California Environmental Quality Act under Section 21080(b) of the California Public Resource Code.

PASSED AND ADOPTED this 16th Day of August, 2018.

OLIVEHURST PUBLIC UTILITY DISTRICT

_____
President, Board of Directors

ATTEST:

_____
District Clerk & ex-officio Secretary

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

_____
Legal Counsel

* * * * * * * * * * *

I hereby certify that the foregoing is a full, true and correct copy of a Resolution duly adopted and passed by the Board of Directors of the Olivehurst Public Utility District, Yuba County, California, at a meeting thereof held on the 16th day of August, 2018, by the following vote:

AYES, AND IN FAVOR THEREOF:		Director White, Griego, Burbank, Floe, and Carpenter.
NOES	:	None.
ABSTAIN	:	None.
ABSENT	:	None.

_____

District Clerk & ex-officio Secretary

EXHIBIT A

OLIVEHURST PUBLIC UTILITY DISTRICT
SCHEDULE OF WATER SERVICE CHARGES

Water Service Charges			
	Water Service Charges Effective on or After		
	September 1 2018	January 1 2020	January 1 2021
METERED RATE ACCOUNTS			
3/4-Inch Meter Accounts			
Fixed Monthly Charge	$16.50	$18.00	$19.50
Water use included (not billed)	*6 ccf*	*6 ccf*	*6 ccf*
Consumption Charge ($/ccf)	$1.65	$1.80	$1.95
1-Inch to 4-Inch Meter Accounts			
Fixed Monthly Charge	$27.50	$30.00	$32.50
Water use included (not billed)	*10 ccf*	*10 ccf*	*10 ccf*
Consumption Charge ($/ccf)	$1.65	$1.80	$1.95
FLAT RATE ACCOUNTS			
Fixed Monthly Charge			
3/4" Service	$44.55	$45.90	$46.80
1" Service	68.75	71.40	75.40

Note: 1 ccf equals 100 cubic feet, or approximately 748 gallons.

- When meters are out of service, or otherwise not suitable for obtaining readings, the monthly service charges will be billed on the same basis as un-metered (flat rate) service for the appropriate service line size. (For example; a three quarter inch service would be billed $44.55/month based on rates effective September 1, 2018)

- Water service charges for meters larger than four inches shall be determined on a case-by-case basis, depending on costs and service characteristics.

OLIVEHURST PUBLIC UTILITY DISTRICT

RESOLUTION NO. 2300

RESOLUTION OF THE BOARD OF DIRECTORS OF THE OLIVEHURST PUBLIC UTILITY DISTRICT, FOLLOWING PUBLIC HEARING, PROVIDING FOR DROUGHT EMERGENCY WATER SERVICE SURCHARGES AND THE ADOPTION OF A TIERED DROUGHT EMERGENCY WATER RATE SYSTEM

WHEREAS, the Olivehurst Public Utility District ("District") owns and operates a Domestic Water System which operates under permits issued by the California State Water Resources Control Board; and

WHEREAS, the Board of Directors, pursuant to Water Code sections 375, et seq. and OPUD's 2010 Urban Water Management Plan and Public Utilities Code section 16461, on May 21, 2015, adopted Resolution 2292, declaring the existence of a Drought Emergency within the boundaries of the District and, resolved that the Board may therefore adopt mandatory restrictions and prohibitions on the delivery and consumption of water within the service area so that the water supply can be conserved for the greater public benefit; and,

WHEREAS, in connection with the fiscal impact of the ongoing drought emergency on the operating budget of the water system, the Board has commissioned a study by Bartle Wells and Associates related to the costs of services provided by said system, and the drought surcharges sufficient to offset the loss of revenue due to decreased water sales and provide for the proper operation and maintenance thereof (hereafter "the Rate Study"); and,

WHEREAS, at a regular public meeting duly called and agendized on August 20, 2015, the Board did review and take public comment on the Rate Study and at the regular public meeting duly called and agendized on August 20, 2015, did adopt said study as representing the independent opinion of the Board of Directors and authorized the drought surcharges recommended therein subject to the notice and hearing requirements of California Constitution, Article XIII D; and

WHEREAS, the Board of Directors, in accordance with Article XIII D, Section 6, of the California Constitution, on August 31, 2015, caused notice to the landowners affected by said surcharges to be given by regular mail to the record owner of each identified parcel upon which the surcharges are proposed for imposition, notifying them of the proposed charges, the basis for calculation thereof, the reason for the implementation, and the date, time, and place of a public hearing, at least 45 days thereafter, where such surcharge would be considered; and

WHEREAS, at a public hearing duly called and agendized, on October 15, 2015, the Board did conduct a public hearing, and considered written and oral protests submitted in connection with said implementation of surcharges; and

WHEREAS, the Board finds that written protests submitted and not withdrawn by the close of the public hearing do not represent a majority of the owners of the identified parcels;

and,

WHEREAS, the Board finds that the surcharges described in Exhibit A, attached hereto, are required to meet the ongoing and reasonably anticipated operational expenses of the District, including meeting its reasonable financial reserve requirements of the District and are further needed to secure funds as reasonably necessary to operate, maintain, repair and replace the facilities installed to provide water services within the District and are therefore exempt from the requirements of the California Environmental Quality Act in accordance with Public Resources Code Section 21080(b)(8)(C) and (D); and,

WHEREAS, the Board finds that revenues from the proposed surcharges shall not exceed the funds required to provide water services; that revenues from the proposed surcharges shall be used in accordance with the Rate Study and shall not be used for any other purpose other than those purposes for which they were imposed; and the amount of the proposed surcharges for water services shall not exceed the proportional cost of the services attributable to the parcels on which the increases will be imposed.

N**OW, THEREFORE, BE IT RESOLVED** by the Board of Directors of Olivehurst Public Utility District that the Drought Emergency Water Sewer Service Surcharges, described in Exhibit A, attached hereto and incorporated herein, are hereby approved and authorized as the fees and charges of the District, effective with the first charge for service commencing on and after November 1, 2015.

BE IT FURTHER RESOLVED that the Board does find that establishment of the water service surcharges described in Exhibit A is exempt from the provisions of the California Environmental Quality Act under Section 21080(b) of the California Public Resource Code.

FURTHERMORE, BE IT FURTHER RESOLVED that the Board of Directors of OPUD hereby directs staff to perform the following:
If the State Water Resources Control Board takes any formal action to reduce the mandatory conservation requirements currently adopted through emergency regulations, an item will be placed on the first subsequent OPUD Board meeting agenda to allow the OPUD Board to consider reducing the surcharge.

PASSED AND ADOPTED this 15th Day of October, 2015.

OLIVEHURST PUBLIC UTILITY DISTRICT

Dennis E. Burbank
President, Board of Directors

ATTEST:

Elizabeth Mallen
District Clerk & ex-officio Secretary

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

Legal Counsel

* * * * * * * * * * *

I hereby certify that the foregoing is a full, true and correct copy of a Resolution duly adopted and passed by the Board of Directors of the Olivehurst Public Utility District, Yuba County, California, at a meeting thereof held on the 15th day of October, 2015, by the following vote:

AYES, AND IN FAVOR THEREOF:		Director Carpenter, Burbank, Floe, and Bradford.
NOES	:	None.
ABSTAIN	:	None.
ABSENT	:	None.

Elizabeth Mallen
District Clerk & ex-officio Secretary

EXHIBIT A

OLIVEHURST PUBLIC UTILITY DISTRICT
TARIFF OF WATER SURCHARGES
(Effective 10/15/2015)

On 10/15/15, the Olivehurst Public Utility District Board of Directors adopted a Water Demand Reduction Target of Stage 1: 20%.

Proposed Maximum Emergency Drought Water Rates ***Usage Charges Billed Based on Metered Water Consumption for Metered Accounts***				
Water Demand Reduction Target (From Baseline: June 2013 - May 2014 Metered Use)	**STAGE 1** **20%**	**STAGE 2** **30%**	**STAGE 3** **40%**	**STAGE 4** **50%**
2015 EMERGENCY DROUGHT WATER RATES: Effective on or after 11/01/2015 ($/ccf)*				
Emergency Drought Water Rate Surcharges per ccf				
3/4" Meters Water Use in Tier				
Tier 1 0 - 12 ccf	$0.00	$0.20	$0.50	$0.90
Tier 2 13 - 30 ccf	0.30	0.50	0.90	1.40
Tier 3 Over 30 ccf	0.70	0.80	1.40	2.20
1" and Larger Meters				
All Water Use	0.21	0.39	0.72	1.10
2016 EMERGENCY DROUGHT WATER RATES: Effective on or after 01/01/2016 ($/ccf)*				
Emergency Drought Water Rate Surcharges per ccf				
3/4" Meters Water Use in Tier				
Tier 1 0 - 9 ccf	$0.00	$0.25	$0.50	$0.95
Tier 2 10 - 30 ccf	0.30	0.50	1.00	1.45
Tier 3 Over 30 ccf	0.70	0.80	1.45	2.45
1" and Larger Meters				
All Water Use	0.25	0.45	0.82	1.24
2017 EMERGENCY DROUGHT WATER RATES: Effective on or after 01/01/2017 ($/ccf)*				
Emergency Drought Water Rate Surcharges per ccf				
3/4" Meters Water Use in Tier				
Tier 1 0 - 6 ccf	$0.00	$0.30	$0.60	$1.00
Tier 2 7 - 30 ccf	0.30	0.55	0.95	1.50
Tier 3 Over 30 ccf	0.70	0.80	1.60	2.50
1" and Larger Meters				
All Water Use	0.28	0.50	0.90	1.37

** 1 ccf = one hundred cubic feet or approximately 748 gallons.*

Proposed Maximum Emergency Drought Water Rates *Fixed Monthly Surcharge for Flat Rate Accounts (Without Meters)*			
Water Demand Reduction Target (From Baseline: June 2013 - May 2014 Metered Use)	**STAGE 2** **30%**	**STAGE 3** **40%**	**STAGE 4** **50%**
Flat Monthly Drought Water Rate Surcharge			
3/4" Service	$0.37	$2.28	$3.10
1" Service	0.56	3.50	4.76
1-1/2" Service	0.85	5.31	7.22
2" Service	1.22	7.65	10.40
3" Service	2.55	15.92	21.66
4" and Larger Service	3.57	22.29	30.31

Flat Rate Accounts without meters would be billed fixed monthly drought surcharges based on the size of water service. It is important to note that the surcharges for Flat Rate Accounts do not need to make-up for lost revenues due to conservation since these accounts pay the a fixed monthly charge regardless of the level of conservation.

OLIVEHURST PUBLIC UTILITY DISTRICT

RESOLUTION NO. 2300

RESOLUTION OF THE BOARD OF DIRECTORS OF THE OLIVEHURST PUBLIC UTILITY DISTRICT, FOLLOWING PUBLIC HEARING, PROVIDING FOR DROUGHT EMERGENCY WATER SERVICE SURCHARGES AND THE ADOPTION OF A TIERED DROUGHT EMERGENCY WATER RATE SYSTEM

WHEREAS, the Olivehurst Public Utility District ("District") owns and operates a Domestic Water System which operates under permits issued by the California State Water Resources Control Board; and

WHEREAS, the Board of Directors, pursuant to Water Code sections 375, et seq. and OPUD's 2010 Urban Water Management Plan and Public Utilities Code section 16461, on May 21, 2015, adopted Resolution 2292, declaring the existence of a Drought Emergency within the boundaries of the District and, resolved that the Board may therefore adopt mandatory restrictions and prohibitions on the delivery and consumption of water within the service area so that the water supply can be conserved for the greater public benefit; and,

WHEREAS, in connection with the fiscal impact of the ongoing drought emergency on the operating budget of the water system, the Board has commissioned a study by Bartle Wells and Associates related to the costs of services provided by said system, and the drought surcharges sufficient to offset the loss of revenue due to decreased water sales and provide for the proper operation and maintenance thereof (hereafter "the Rate Study"); and,

WHEREAS, at a regular public meeting duly called and agendized on August 20, 2015, the Board did review and take public comment on the Rate Study and at the regular public meeting duly called and agendized on August 20, 2015, did adopt said study as representing the independent opinion of the Board of Directors and authorized the drought surcharges recommended therein subject to the notice and hearing requirements of California Constitution, Article XIII D; and

WHEREAS, the Board of Directors, in accordance with Article XIII D, Section 6, of the California Constitution, on August 31, 2015, caused notice to the landowners affected by said surcharges to be given by regular mail to the record owner of each identified parcel upon which the surcharges are proposed for imposition, notifying them of the proposed charges, the basis for calculation thereof, the reason for the implementation, and the date, time, and place of a public hearing, at least 45 days thereafter, where such surcharge would be considered; and

WHEREAS, at a public hearing duly called and agendized, on October 15, 2015, the Board did conduct a public hearing, and considered written and oral protests submitted in connection with said implementation of surcharges; and

WHEREAS, the Board finds that written protests submitted and not withdrawn by the close of the public hearing do not represent a majority of the owners of the identified parcels;

and,

WHEREAS, the Board finds that the surcharges described in Exhibit A, attached hereto, are required to meet the ongoing and reasonably anticipated operational expenses of the District, including meeting its reasonable financial reserve requirements of the District and are further needed to secure funds as reasonably necessary to operate, maintain, repair and replace the facilities installed to provide water services within the District and are therefore exempt from the requirements of the California Environmental Quality Act in accordance with Public Resources Code Section 21080(b)(8)(C) and (D); and,

WHEREAS, the Board finds that revenues from the proposed surcharges shall not exceed the funds required to provide water services; that revenues from the proposed surcharges shall be used in accordance with the Rate Study and shall not be used for any other purpose other than those purposes for which they were imposed; and the amount of the proposed surcharges for water services shall not exceed the proportional cost of the services attributable to the parcels on which the increases will be imposed.

N**OW, THEREFORE, BE IT RESOLVED** by the Board of Directors of Olivehurst Public Utility District that the Drought Emergency Water Sewer Service Surcharges, described in Exhibit A, attached hereto and incorporated herein, are hereby approved and authorized as the fees and charges of the District, effective with the first charge for service commencing on and after November 1, 2015.

BE IT FURTHER RESOLVED that the Board does find that establishment of the water service surcharges described in Exhibit A is exempt from the provisions of the California Environmental Quality Act under Section 21080(b) of the California Public Resource Code.

FURTHERMORE, BE IT FURTHER RESOLVED that the Board of Directors of OPUD hereby directs staff to perform the following:
If the State Water Resources Control Board takes any formal action to reduce the mandatory conservation requirements currently adopted through emergency regulations, an item will be placed on the first subsequent OPUD Board meeting agenda to allow the OPUD Board to consider reducing the surcharge.

PASSED AND ADOPTED this 15th Day of October, 2015.

OLIVEHURST PUBLIC UTILITY DISTRICT

Dennis E. Burbank
President, Board of Directors

ATTEST:

Elizabeth Mallen
District Clerk & ex-officio Secretary

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

Legal Counsel

* * * * * * * * * * *

I hereby certify that the foregoing is a full, true and correct copy of a Resolution duly adopted and passed by the Board of Directors of the Olivehurst Public Utility District, Yuba County, California, at a meeting thereof held on the 15th day of October, 2015, by the following vote:

AYES, AND IN FAVOR THEREOF:		Director Carpenter, Burbank, Floe, and Bradford.
NOES	:	None.
ABSTAIN	:	None.
ABSENT	:	None.

Elizabeth Mallen
District Clerk & ex-officio Secretary

EXHIBIT A

OLIVEHURST PUBLIC UTILITY DISTRICT
TARIFF OF WATER SURCHARGES
(Rev. 1 Effective 10/01/2016)

On September 15, 2016, subsequent to the State Water Resources Control Board formal action, the OPUD Board of Directors revised the Water Demand Reduction Target to 10%. Accordingly, the Board reduced the stipulated surcharge by increasing the number of units allowed by residential customers (3/4" meters) to 20 ccf before the surcharge is applied. The Board also reduced the commercial (1" and larger meters) surcharge to $0.16/ccf. The reduction in commercial account surcharge is proportional to the reduction in residential account surcharge The change in Water Demand Reduction Target does not affect flat rate accounts. This change is effective for water consumed on and after October 01, 2016.

Proposed Maximum Emergency Drought Water Rates Usage Charges Billed on Metered Water Consumption for Metered Accounts		
Water Demand Reduction Target	STAGE 1A	
(From Baseline: June 2013 - May 2014 Metered Use)	10%	
2016 EMERGENCY DROUGHT WATER RATES: Effective for consumption on and after 10/01/2016 ($/ccf)*		
Emergency Drought Water Rate Surcharges per ccf		
3/4" Meters	Water Use in Tier	
Tier 1	0 -20 ccf	$0.00
Tier 2	21-30 ccf	$0.30
Tier 3	Over 30 ccf	$0.70
1" and Lager Meters		
All Water Use		$0.16
* 1 ccf = one hundred cubic feet or approximately 748 gallons		

On 10/15/2015, the Olivehurst Public Utility District Board of Directors adopted a Water Demand Reduction Target of Stage 1: 20% (which was modified on 09/15/2016, see Rev 1 above).

Proposed Maximum Emergency Drought Water Rates ***Usage Charges Billed Based on Metered Water Consumption for Metered Accounts***				
Water Demand Reduction Target (From Baseline: June 2013 - May 2014 Metered Use)		**STAGE 1** **20%**	**STAGE 2** **30%**	**STAGE 3** **40%**	**STAGE 4** **50%**
2015 EMERGENCY DROUGHT WATER RATES: Effective on or after 11/01/2015 ($/ccf)*					
Emergency Drought Water Rate Surcharges per ccf					
3/4" Meters	Water Use in Tier				
Tier 1	0 - 12 ccf	$0.00	$0.20	$0.50	$0.90
Tier 2	13 - 30 ccf	0.30	0.50	0.90	1.40
Tier 3	Over 30 ccf	0.70	0.80	1.40	2.20
1" and Larger Meters					
All Water Use		0.21	0.39	0.72	1.10
2016 EMERGENCY DROUGHT WATER RATES: Effective on or after 01/01/2016 ($/ccf)*					
Emergency Drought Water Rate Surcharges per ccf					
3/4" Meters	Water Use in Tier				
Tier 1	0 - 9 ccf	$0.00	$0.25	$0.50	$0.95
Tier 2	10 - 30 ccf	0.30	0.50	1.00	1.45
Tier 3	Over 30 ccf	0.70	0.80	1.45	2.45
1" and Larger Meters					
All Water Use		0.25	0.45	0.82	1.24
2017 EMERGENCY DROUGHT WATER RATES: Effective on or after 01/01/2017 ($/ccf)*					
Emergency Drought Water Rate Surcharges per ccf					
3/4" Meters	Water Use in Tier				
Tier 1	0 - 6 ccf	$0.00	$0.30	$0.60	$1.00
Tier 2	7 - 30 ccf	0.30	0.55	0.95	1.50
Tier 3	Over 30 ccf	0.70	0.80	1.60	2.50
1" and Larger Meters					
All Water Use		0.28	0.50	0.90	1.37

** 1 ccf = one hundred cubic feet or approximately 748 gallons.*

Proposed Maximum Emergency Drought Water Rates ***Fixed Monthly Surcharge for Flat Rate Accounts (Without Meters)***			
Water Demand Reduction Target (From Baseline: June 2013 - May 2014 Metered Use)	**STAGE 2** **30%**	**STAGE 3** **40%**	**STAGE 4** **50%**
Flat Monthly Drought Water Rate Surcharge			
3/4" Service	$0.37	$2.28	$3.10
1" Service	0.56	3.50	4.76
1-1/2" Service	0.85	5.31	7.22
2" Service	1.22	7.65	10.40
3" Service	2.55	15.92	21.66
4" and Larger Service	3.57	22.29	30.31

Flat Rate Accounts without meters would be billed fixed monthly drought surcharges based on the size of water service. It is important to note that the surcharges for Flat Rate Accounts do not need to make-up for lost revenues due to conservation since these accounts pay the a fixed monthly charge regardless of the level of conservation.

Appendix M

UWMP Adoption Resolution

Not included with this submittal