DRAFT REPORT | JUNE 2023

2020 Urban Water Management Plan

PREPARED FOR

City of Manteca

PREPARED BY

WEST YOST
Water. Engineered.

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Project No. 265-60-22-12

Project Manager: Rhodora Biagtan	Date
QA/QC Review: Monique Day	Date

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Fahrenheit
AB	Assembly Bill
Act	Urban Water Management Planning Act
AF	Acre-Feet
AFY	Acre-Feet of Water Annually
AMI	Advanced Metering Infrastructure
AMR	Automatic Meter Reading
AWWA	American Water Works Association
Bay-Delta Plan Amendment	San Francisco Bay/Sacramento-San Joaquin Delta Estuary
CALGreen	California Green Building Standards Cod
CalWEP	California Water Efficiency Partnership
CAP	Climate Action Plan
CEQA	California Environmental Quality Act
CFD	Community Facility District
CII	Commercial, Industrial, and Institutional

CIMIS	California Irrigation Management Information System
City	City of Manteca
DDW	Department of Drinking Water
DMM	Demand Management Measures
DOF	Department of Finance
DRA	Drought Risk Assessment
DWR	Department of Water Resources
DWR Guidebook	2020 Urban Water Management Plans Guidebook for Urban Water Suppliers
EIR	Environmental Impact Report
ESJ	Eastern San Joaquin
ESJGWA	Eastern San Joaquin Groundwater Authority
ET	Evapotranspiration
FTE	Full Time Equivalent
GP	2022 Revised Draft General Plan
GPCD	Gallons Per Capita Per Day
gpd	Gallons Per Day
gpm	Gallons Per Minute
GSP	Groundwater Sustainability Plan
HECW	High-Efficiency Clothes Washers
HET	High-Efficiency Toilets
ILI	Infrastructure Leakage Index
kWh	Kilowatt Hour
MCL	Maximum Contaminant Level
MMC	Manteca Municipal Code
MUSD	Manteca Unified School District
NAICS	North American Industry Classification System
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
OID	Oakdale Irrigation District
RUWMP	Regional Urban Water Management Plan
RWFMP	Reclaimed Water Facilities Master Plan
SB X7-7	Senate Bill Seven of the Senate's Seventh Extraordinary Session of 2009
SCWSP	South County Water Supply Program
SGMA	Sustainable Groundwater Management Act
SOI	Sphere of Influence
SSJID	South San Joaquin Irrigation District
SWRCB	State Water Resources Control Board
target	Urban Water Use Target
TDS	Total Dissolved Solids
USBR	United States Bureau of Reclamation
USEPA	U.S. Environmental Protection Agency
UWMP	Urban Water Management Plan

WQCF	Wastewater Quality Control Facility
WSA	Water Supply Agreement
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant
WUE	Water Use Efficiency

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 impact water supply availability and development is occurring throughout the State resulting in increased needs for reliable water supplies. The Urban Water Management Planning Act (Act) requires larger water suppliers that provide water to urban users (whether directly or indirectly) to develop UWMPs every five years. UWMPs evaluate conditions for the next 20 years, so these regular updates ensure continued long-term planning. The City of Manteca (City) provides water service directly to more than 3,000 connections in its water service area and is therefore required to prepare a UWMP.

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

CALIFORNIA WATER CODE REQUIREMENTS

The California Water Code (CWC) documents specific requirements for California water suppliers. The Act is included in the CWC and specifies the required elements of a UWMP, including discussing an agency's water system and facilities, calculating how much water its customers use (i.e., water demand) and how much it can supply, and detailing how it would respond during a drought or other water supply shortage. Also, 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 (also known as SB X7-7) required retail water agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. In their 2020 UWMPs, retail water agencies (i.e., those distributing water to end users like residences and businesses) are required to report on their compliance with SB X7-7.

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

- **Five Consecutive Dry-Year Water Reliability Assessment**: Analyze water supply reliability for five consecutive dry years over the planning period of this plan (see Chapter 7).
- **Drought Risk Assessment:** Assess water supply reliability from 2021 to 2025 assuming they are dry years (see Chapter 7).
- **Seismic Risk:** Identify the seismic risk to the agency's water facilities and have a plan to address identified risks (see Chapter 8).
- **Energy Use Information:** If data are available, include reporting on the amount of electricity used to obtain, treat, and distribute water (see Chapter 6).
- **Water Shortage Contingency Plan (WSCP):** Update the agency's plan to include an annual process for assessing potential gaps between planned water supply and demands; conform with the State's standard water shortage levels (including a shortage level greater than 50 percent) for consistent messaging and reporting; and provide water shortage responses that are locally appropriate (see Chapter 8).

- **Lay Description:** Provide a lay description of the findings of the UWMP; this Executive Summary serves as the lay description for this plan.

Major components and findings of the City's 2020 UWMP are summarized below.

CITY OF MANTECA WATER SYSTEM

The City is located in the Central Valley of California in San Joaquin County, approximately 60 miles south of Sacramento, 76 miles east of San Francisco and 90 miles west of Yosemite National Park. The City serves drinking water within the current City limits and includes residential, commercial, industrial, institutional/governmental, landscape, and fire service connections.

The City's potable water system consists of seventeen (17) potable groundwater wells, a pump station, a storage tank, South San Joaquin Irrigation District (SSJID) turnouts, and approximately 296 miles of pipelines. Fourteen (14) of the wells are treated for arsenic and/or manganese, and six (6) are treated for 1,2,3-trichloropropane (1,2,3 TCP).

WATER USE BY CITY CUSTOMERS

As the City continues to develop, the demand for water will increase. Thorough and accurate accounting of current and future water demands is critical for the City's planning efforts. To continue delivering safe and reliable drinking water, the City must know how much water its customers currently use and how much they expect to use in the future. The City's 2020 Revised Draft General Plan Update developed water demand projections for a buildout of the plan (i.e., fully developed within City limits), which is expected in 2040. Overall, the City's water demand could increase by approximately 30 percent (from 2020 levels) by 2040. The 2020 Revised Draft General Plan Update anticipates continued growth within the City's Sphere of Influence beyond 2040. For the purposes of this plan, growth is assumed to continue at a similar rate through 2045.

CITY OF MANTECA WATER SUPPLIES

The City's current potable water supplies include purchased treated surface water from SSJID conveyed from the Stanislaus River and groundwater pumped by the City from City-owned and operated wells. The City also uses irrigation wells for non-potable water demands such as landscaping, and recycled water from the City's Wastewater Quality Control Facility (WQCF) for irrigation demands at the Great Wolf Lodge.

Historically, the City has not utilized its full allocation of surface water due to system constraints and State and SSJID supply limits in response to the 2012-2016 drought. Additionally, the City's allocation from SSJID is expected to increase by 60 percent around 2040 as a result of a planned expansion of the surface water treatment plant. The City plans to upgrade its water system to allow utilization of the full allotment of this treated surface water. The City also plans to increase recycled water production to meet future demands and continue to pump groundwater in accordance with the approved Groundwater Sustainability Plan.

CONSERVATION TARGET COMPLIANCE

In its 2015 UWMP, the City confirmed its baseline per capita water use, documented meeting its 2015 water use target, and established and adopted its water use target of 179 gallons per capita per day (gpcd) for 2020. In this 2020 plan, the City uses 2020 Census data to verify that it achieved its 2020 water use target in accordance with SB X7-7. The City's per capita water use in 2020 was 164 gpcd, well below the

confirmed 2020 water use target of 179 gpcd. This achievement was the result of continued water conservation by the City's customers following the 2012–2016 drought.

CITY OF MANTECA WATER SERVICE RELIABILITY

The CWC asks agencies to evaluate their water service reliability by examining the impact of drought on their water supplies and comparing those reduced supplies to water demands. Specifically, agencies should calculate their water supplies during a single dry year and five consecutive dry years using historical records. The City used 2020 conditions to represent a single dry year and 2012-2016 conditions to represent a five-consecutive-year drought. The City's surface water reliability is assumed to be consistent with SSJID's urban water supply reliability during a single dry year and multiple dry years, as identified in SSJID's 2020 UWMP. Local groundwater pumping and recycled water are assumed to be 100 percent reliable through these hydrologic conditions.

The City is well-positioned to withstand the effects of a single dry year and a five-consecutive dry year drought for any period between 2025 and 2045, even without additional water conservation measures. The City's drought risk was specifically assessed between 2021 and 2025, assuming that the next five years are dry years. In each case, water supplies comfortably meet water demands. The City is able to reliably provide water service whether the drought occurs in 2021, 2045, or any year between.

WATER SHORTAGE CONTINGENCY PLAN

A WSCP describes an agency's plan for preparing for and responding to water shortages. The City's WSCP has been updated from the 2015 WSCP so that it is consistent with the 2018 Water Conservation Legislation requirements. The City updated its WSCP to include its process for assessing potential gaps between planned water supply and demands for the current year and the following (assumed dry) year. Also, the City updated its water shortage levels to better align with the State's standard stages. The WSCP may be used for foreseeable and unforeseeable events. The WSCP is adopted as a separate document concurrently with this plan, by separate resolution, to allow for updates to be made outside of the UWMP preparation process.

UWMP PREPARATION, REVIEW, AND ADOPTION

The City prepared this 2020 UWMP in coordination with the public. While preparing this plan, the City also notified other stakeholders (e.g., San Joaquin County, local developers) of its preparation, its availability for review, and the public hearing prior to adoption. The City encouraged community participation in the development of the 2020 UWMP using mailings and the City's website. These public notices included the time and place of the public hearing, as well as where the plan would be available for public inspection. The public hearing provided an opportunity for the City's water users and the general public to become familiar with the 2020 UWMP, including the WSCP, and ask questions about the City's plans for continuing to provide reliable, safe, high-quality water and mitigating potential water shortages. Following the public hearing, the City of Manteca City Council adopted this 2020 UWMP and the associated WSCP on XXXX XX, 2023. A copy of the adopted UWMP, including the WSCP, was submitted to the Department of Water Resources and to the California State Library, and is available on the City's website: https://www.manteca.gov/departments/engineering/water-system.

CHAPTER 1
Introduction

This chapter provides an introduction and overview of the City of Manteca (City) 2020 Urban Water Management Plan (UWMP) including the importance and extent of the City's water management planning efforts, changes since the preparation of the City's 2015 UWMP, a lay description of the City's 2020 UWMP, and the organization of the City's 2020 UWMP. This 2020 UWMP has been prepared jointly by City staff and West Yost.

1.1 INTRODUCTION

The Urban Water Management Planning Act (Act) was originally established by Assembly Bill (AB) 797 on September 21, 1983. 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 10657 of the California Water Code, is provided in Appendix A of this plan.

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

The purpose of the UWMP is to provide a planning tool for the City for developing and delivering municipal water supplies to the City's water service area. This UWMP provides the City 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 City'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 City has had a long history of providing clean and reliable water to its customers. The City's UWMP is a comprehensive guide for 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 since the City'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 hydrological 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 is discussed in Chapter 7 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 City'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 City'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 City'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 Water Shortage Contingency Plan (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 City's WSCP is presented in Chapter 8 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 go-to 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 presented in Chapter 9 of this plan.

1.4 PLAN ORGANIZATION

This 2020 UWMP 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 2020 UWMP, 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 2020 UWMP is organized into the following chapters:

- Chapter 1: Introduction and Lay Description
- 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 2020 UWMP also contains the following appendices of supplemental information and data related to the City'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: Distribution System Water Loss Audits
- Appendix F: SB X7-7 Verification and Compliance Forms
- Appendix G: Water Shortage Contingency Plan
- Appendix H: City Code 13.04.210 Unlawful Water Use
- Appendix I: City Code 13.04.060 Monthly Rates
- Appendix J: Water Conservation Outreach
- Appendix K: UWMP Adoption Resolution

Furthermore, this 2020 UWMP 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 City'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 of water annually (AFY).

The City manages Water System CA3910005. As shown in Table 2-1, the City provided water to 23,436 customer connections and supplied 15,320 acre-feet (AF) of water in 2020 to its customers. The City primarily supplies water to retail customers; therefore, the City is required to prepare a UWMP. The City's last UWMP, the 2015 UWMP, was adopted by the City Council on September 20, 2016.

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

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020*[(a)]
Add additional rows as needed			
CA3910005	Manteca, City of	23,436	15,282
	TOTAL	23,436	15,282
**** Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*			
NOTES: (a) Volumes are in AF.			

2.2 REGIONAL PLANNING

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

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

This 2020 UWMP has been prepared on an individual reporting basis covering only the City's service area, as shown in Table 2-2. The City did not participate in a regional alliance for the preparation of this 2020 UWMP and, therefore, has not prepared a Regional Urban Water Management Plan (RUWMP). As described in Section 2.5, the City has notified and coordinated planning and compliance with appropriate regional agencies and constituents.

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

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

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

The City is a water retailer.

The City'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 2020 UWMP are reported in units of AF.

The City's reporting methods for this 2020 UWMP 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
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP * (select from drop down)	
Unit	AF
**** 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 City's inter-agency coordination and coordination with the general public. The UWMP Act requires the City to coordinate the preparation of its UWMP and WSCP with other appropriate agencies and all departments within the City, including other water suppliers that share a common source, water management agencies, and relevant public agencies. These agencies, as well as the public, participated in the coordination and preparation of this 2020 UWMP and are summarized in the sections that follow.

2.5.1 Wholesale and Retail Coordination

The City receives wholesale water supply from the South San Joaquin Irrigation District (SSJID), as listed in Table 2-4. In accordance with CWC Section 10631, the City provided SSJID with water use projections in five-year increments from 2020 to 2045, as further discussed in Section 4.2. SSJID provided the City information on projected water available over the same time period and during various water-year types, discussed in Sections 6.1 and 7.1.

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

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
Add additional rows as needed
South San Joaquin Irrigation District

2.5.2 Coordination with Other Agencies and the Community

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

As part of the 2020 UWMP update and WSCP preparation, the City facilitated a public review period. Public noticing, pursuant to Section 6066 of the Government Code, was conducted prior to commencement of this public comment period. Public hearing notices are included in Appendix D of this plan. During the public comment period, the Draft UWMP and Draft WSCP were made available on the City's website and in hard-copy form at the City's Office of Public Works and at the local library.

The City also coordinated the preparation of its 2020 UWMP and WSCP with several agencies, including relevant public agencies that utilize the same water supplies. These agencies included the following:

- City of Escalon
- City of Lathrop
- City of Ripon
- City of Tracy
- San Joaquin County
- South San Joaquin Irrigation District
- Mountain House Community Service District

The public hearing provided an opportunity for all City water users and the general public to become familiar with the UWMP, including the WSCP, and ask questions about the City's water supply, in addition to the City'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 January 2023, a notice of preparation was sent to the cities and counties and other stakeholders, to inform them of the UWMP update process and schedule, and to solicit input for the 2020 UWMP and WSCP. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10 of this report.

CHAPTER 3
System Description

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

3.1 GENERAL DESCRIPTION

The City is located in the Central Valley of California in San Joaquin County, approximately 60 miles south of Sacramento, 76 miles east of San Francisco and 90 miles west of Yosemite National Park. The City occupies 21.5 square miles and is surrounded by industrial land to the west and agricultural lands to the north, east, and south. State Highway 120 crosses through the middle of City limits and Highway 99 crosses along the eastern part of City limits. Union Pacific Railroad runs diagonally from southeast to northwest through the City. The location of the City is shown in Figure 3-1.

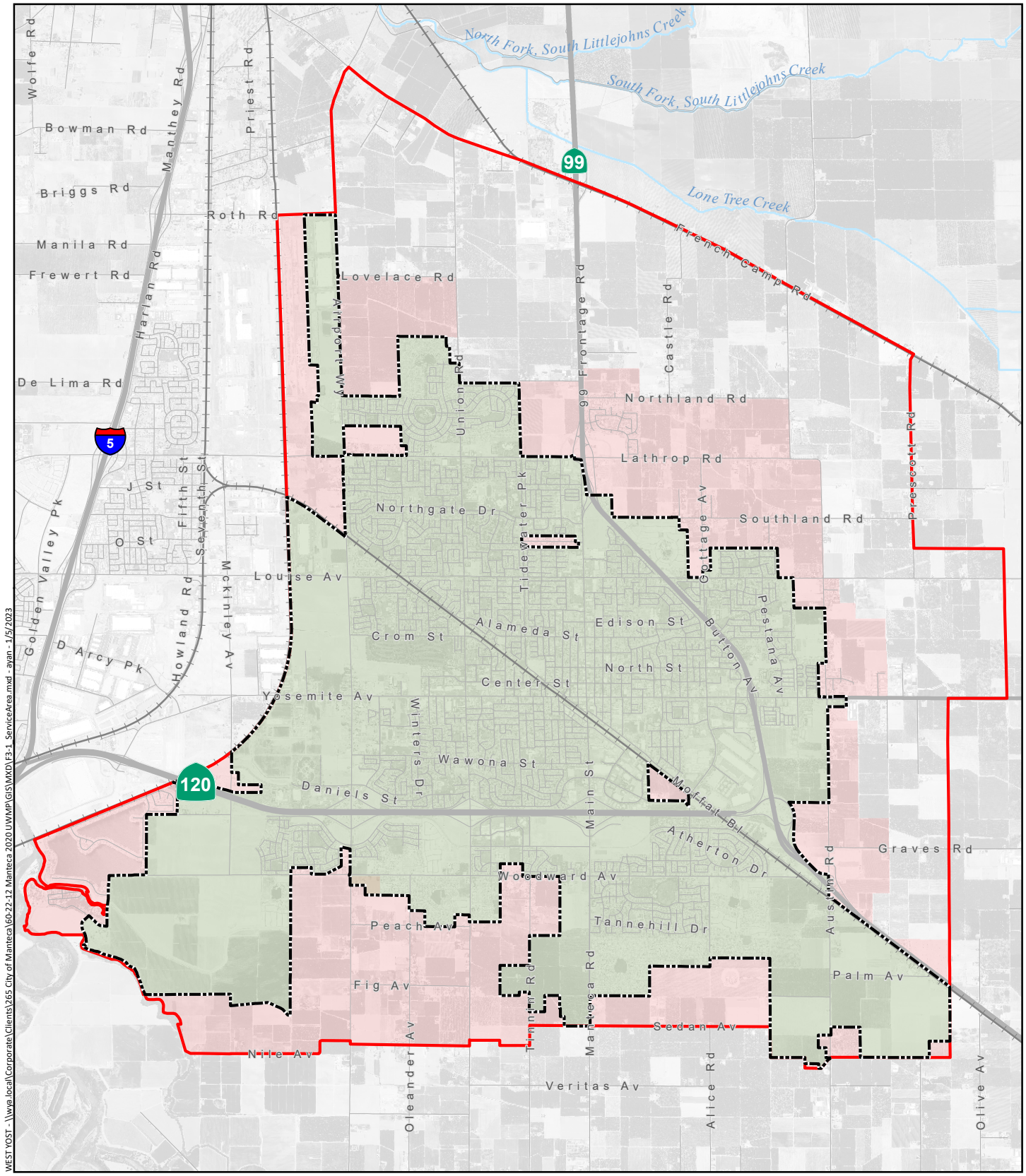
The City's water supply sources consist of local groundwater and surface water purchased from SSJID. The City's potable water system consists of groundwater wells, a pump station, a storage tank, SSJID turnouts, and distribution and transmission pipelines.

The City has seventeen (17) potable groundwater wells: fifteen (15) wells are active, and two (2) wells are on standby. Fourteen (14) of the wells are treated for arsenic and/or manganese, and six (6) are treated for 1,2,3-trichloropropane (1,2,3 TCP). The City also owns thirty-seven (37) non-potable irrigation wells to use for on-site irrigation at local parks and other irrigated areas. These irrigation wells are not connected to the City's potable water system and their use is excluded from this 2020 UWMP.

The City's 3.8 MG storage tank stores water primarily from SSJID and the City's Well 24, and has a pump station located at the tank site to pump water into the distribution system. The City maintains approximately 296 miles of distribution and transmission pipelines ranging from 1 to 30 inches in diameter. Figure 3-2 shows the locations of the major facilities of the City's existing water system.

3.2 SERVICE AREA BOUNDARY

The City's water service area coincides with current City limits, and includes residential, commercial, industrial, institutional/governmental, landscape, and fire service connections. The City's water service area boundary is shown on Figure 3-1.



WEST YOST - \\wya.local\Corporate\Clients\265 City of Manteca\60-22-12 Manteca 2020 UWMP\GIS\MXD\F3-1_ServiceArea.mxd - ayan - 1/5/2023

City Limits
City Planning Area
City Sphere of Influence
City Water Service Area

N

0 3,000 6,000
Scale in Feet

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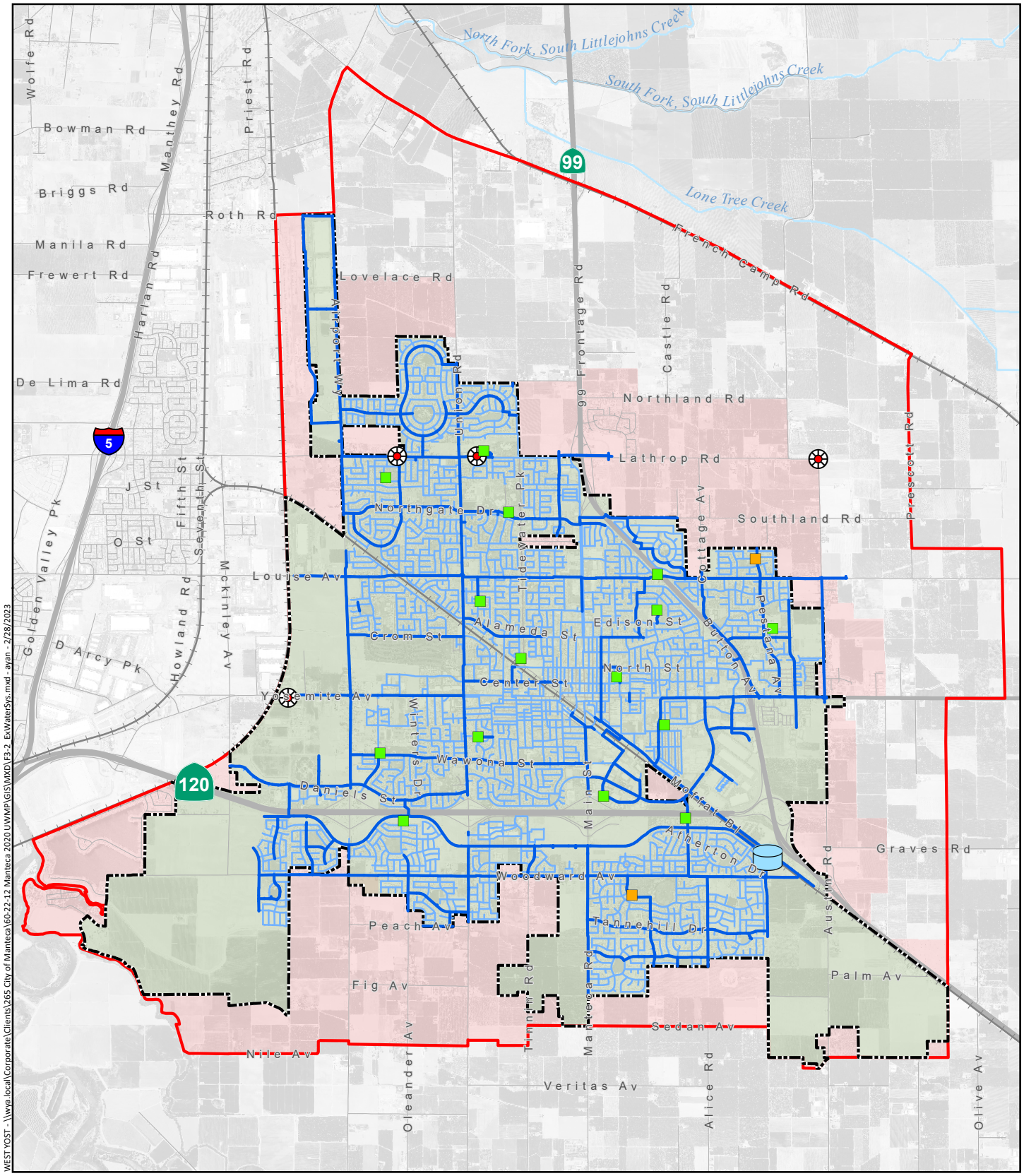
DRAFT **Figure 3-1**

City of Manteca
Water Service Area

City of Manteca
2020 Urban Water
Management Plan



DRAFT **Figure 3-2**

City of Manteca
Existing Potable Water System

City of Manteca
2020 Urban Water Management Plan

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3.3 SERVICE AREA CLIMATE

The City has a Mediterranean climate characterized by hot, dry summers and cool winters, with an annual average precipitation of approximately 13 inches. The climate ranges from summer temperatures occasionally exceeding 100 degrees Fahrenheit (°F) with low humidity, and winter temperatures dropping into the 30°F range. Based on the historical data obtained from the California Irrigation Management Information System (CIMIS), the City's average monthly temperatures are as low as 37°F and as high as 91°F.

Water use within the City's service area is dependent on various climate factors such as temperature, precipitation, and evapotranspiration (ET). Climate data, including temperature and precipitation estimates, were obtained for the City from CIMIS. The period of record was 1988 to 2022.

ET describes the combined water lost through evaporation from the soil and surface water bodies and plant transpiration. In general, the ET is given for turf grass, and then corrected for a specific crop type. Local ET data was obtained from the CIMIS monitoring station within the City (Station #70). The historical climate characteristics affecting water management in the City's water service areas is shown in Table 3-1.

Table 3-1. Monthly Average Climate Data Summary[a]

Month	Standard Monthly Average ET, inches	Average Total Rainfall, inches	Average Temperature, degrees Fahrenheit	
			Minimum	Maximum
Manteca (CIMIS Station No. 70)				
January	1.12	2.48	37.9	59.3
February	1.97	1.87	39.4	62.8
March	3.56	1.71	42.3	68.3
April	5.08	0.99	45.6	73.1
May	6.81	0.52	50.1	79.7
June	7.67	0.09	54.9	86.0
July	8.04	0.01	57.5	91.3
August	7.08	0.02	56.8	90.0
September	5.24	0.13	53.7	88.4
October	3.47	0.68	47.4	82.2
November	1.73	1.21	40.3	70.4
December	1.06	2.30	37.3	60.4
Total	**52.84**	**12.02**	-	-

Source: California Irrigation Management Information System (CIMIS).

(a) Period of record is 1988 to 2022.

These climate characteristics highly influence the City's water use. As described in Chapter 4, the City's water use in the summer months is significantly higher than that in the winter, reflecting increased water use for irrigation purposes during the hot, dry summers.

3.4 SERVICE AREA POPULATION AND DEMOGRAPHICS

3.4.1 Service Area Population

Because the City's water service area aligns with current City limits, the City's water service area population for 2020 was estimated using population data published by the California Department of Finance (DOF), which was benchmarked based on the 2020 Census.[1] The City's 2020 service area population was approximately 83,470.

Population projections for the City were calculated based on annual population projections estimated by the California DOF for San Joaquin County. San Joaquin County's projected population growth rate for each 5-year increment between 2025 to 2045 was applied to the City's 2020 population to project the City's population for 2025 to 2045. The City's current and projected populations for its water service area are shown in Table 3-2.

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

Population Served[(a)]	2020	2025	2030	2035	2040	2045*(opt)*
	83,470	87,173	91,816	95,901	99,310	102,067

NOTES:
(a) Population is from California Department of Finance Estimates, benchmarked to the 2020 Census. Population projections are based on DOF Report P-2A and projections for San Joaquin County, applied to the City of Manteca's 2020 population.

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 sociodemographic groups in the City have 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 profile of Manteca for 2016-2020.[2]

- The average number of people per household in the five-year period analyzed was 3.13.
- The median household income in Manteca was $76,846, while 10.2 percent of all individuals and 12.6 percent of youth under the age of 18 lived in poverty.
- The average unemployment rate was 5.7 percent.

[1] State of California Department of Finance (DOF). May 2022. *E-4 Population Estimates for Cities, Counties, and the State, 2021-2022 with 2020 Census Benchmark*. Accessed at https://dof.ca.gov/forecasting/demographics/estimates/e-4-population-estimates-for-cities-counties-and-the-state-2021-2022-with-2020-census-benchmark/.dated on September 26, 2022.

[2] United States Census Bureau. *American Community Survey, 2020: ACS 5-Year Estimates Data Profiles for Manteca City, California.* Accessed at https://data.census.gov/cedsci/table?g=1600000US0645484&tid=ACSDP5Y2020.DP05 on September 21, 2022.

- The owner-occupied housing unit rate was 65.2 percent.
- The median gross rent was $1,588 per month.
- The median age was 36.4 years.
- Of persons 25 years or older in Manteca, 85.2 percent had earned at least a high school diploma or equivalent and 17.0 percent had earned a bachelor's degree or higher.
- Of persons under 65 years of age, 8.6 percent had a disability and 5.5 percent did not have health insurance.
- 93.8 percent of households had one or more type of computer, and 89.1 percent had a broadband internet subscription.
- By race/ethnicity, 61.2 percent of people were White, 4.3 percent were Black, 0.8 percent were American Indian or Alaska Native, 11.3 percent were Asian, 1.3 percent were Hawaiian Native or Pacific Islander, 11.8 percent were two or more races, and 9.2 percent were some other races.
- Of the total City population, 40.4 percent were Hispanic or Latino and 59.6 were not Hispanic or Latino.
- Approximately 17.5 percent of Manteca residents were foreign born, and 29.6 percent of people ages five years and older spoke a language other than English at home.

3.5 LAND USES WITHIN SERVICE AREA

This section describes the City's current and projected land uses in its water service area. Information for this section is based on the City's 2022 Revised Draft General Plan (GP) Update and 2022 Recirculated Draft Environmental Impact Report (EIR) for the 2022 GP Update. The 2022 Revised Draft GP Update covers a 20- to 30-year planning horizon.

The City's 2022 Revised Draft GP Update describes land use updates for the entirety of City limits, areas within the City's Sphere of Influence (SOI), and areas outside of City limits and the SOI, collectively called the "Planning Area." It is important to note that the City will expand water service within the City's SOI and within the Planning Area as land is annexed into the City.

3.5.1 Current Land Uses

The City's current land use ratios within City limits are as follows: 43 percent residential, 25 percent agricultural, 11 percent public, 10 percent commercial, 7 percent industrial, and 4 percent parks and open space, per the City's 2022 Recirculated Draft EIR.[3]

3.5.2 Projected Land Uses

The City's anticipated service area is projected to expand to 17,720 acres by the 2022 GP Horizon of 2040. Based on the proposed land use map from the 2022 Revised Draft GP Update, shown in Figure 3-3, the City's planned urban land use ratios within the Planning Area are as follows: 56 percent residential,

[3] City of Manteca. November 2022. *Recirculated Draft Environmental Impact Report for the Manteca General Plan Update.* Table 3.10-1: Assessed Land Uses – City of Manteca.

9 percent public, 12 percent commercial, 16 percent industrial, and 7 percent parks and open space.[4] The expanded service area acreage and land use ratios do not include 4,004 acres of agricultural lands within the Planning Area which will not be irrigated by the City's water supplies. The City plans to redevelop the majority of existing agricultural lands within City limits to different land uses. An additional 2,607 acres of land are designated as "Urban Reserve" which are areas of development within the Planning Area but outside of existing City limits. These areas are planned for development beyond the time horizon in the 2022 GP Update. For the purposes of this UWMP, it is assumed that none of these areas will be developed within the time frame evaluated under this UWMP.

The 2022 Revised Draft GP Update identified four land use areas as "Policy Areas," which are strategic growth areas that either 1) have approved land use entitlements or 2) require a comprehensive approach to planning to achieve a broad goal, such as providing a high-quality transit corridor.[5] Each Policy Area is outlined and numbered in Figure 3-3.

Policy Area 1 is located south of Louise Avenue, west of Airport Way, and east of City limits. Anticipated development in Policy Area 1 is residential with neighborhood commercial and park uses.

Policy Area 2 is located along West Yosemite Avenue and Airport Way. The goal of Policy Area 2 is to expand the existing Kaiser Permanente facility and to create a high-transit use corridor for improved connectivity. Planned developments in Policy Area 2 are transit-oriented development, medical offices, commercial use, recreational areas, and medium- to high-density residential development.

Policy Area 3 is the Austin Road Business Park and Residential Community Master Plan area located along Highway 99. Policy Area 3 will be a planned residential community with parks, commercial uses, and low to high density residential development.

Policy Area 4 is the Lovelace Materials Recovery Facility and Transfer Station area located along Lovelace Road. The goal of Policy Area 4 is to provide a buffer to nearby planned residential uses from the more intensive uses and traffic associated with the facility.

[4] City of Manteca. November 2022. *Recirculated Draft Environmental Impact Report for the Manteca General Plan Update.* Table 2.0-1: Acreage By Land Use Designation In The Proposed Land Use Map.

[5] City of Manteca. November 2022. *Revised Draft General Plan Update.* Chapter 2 Land Use.

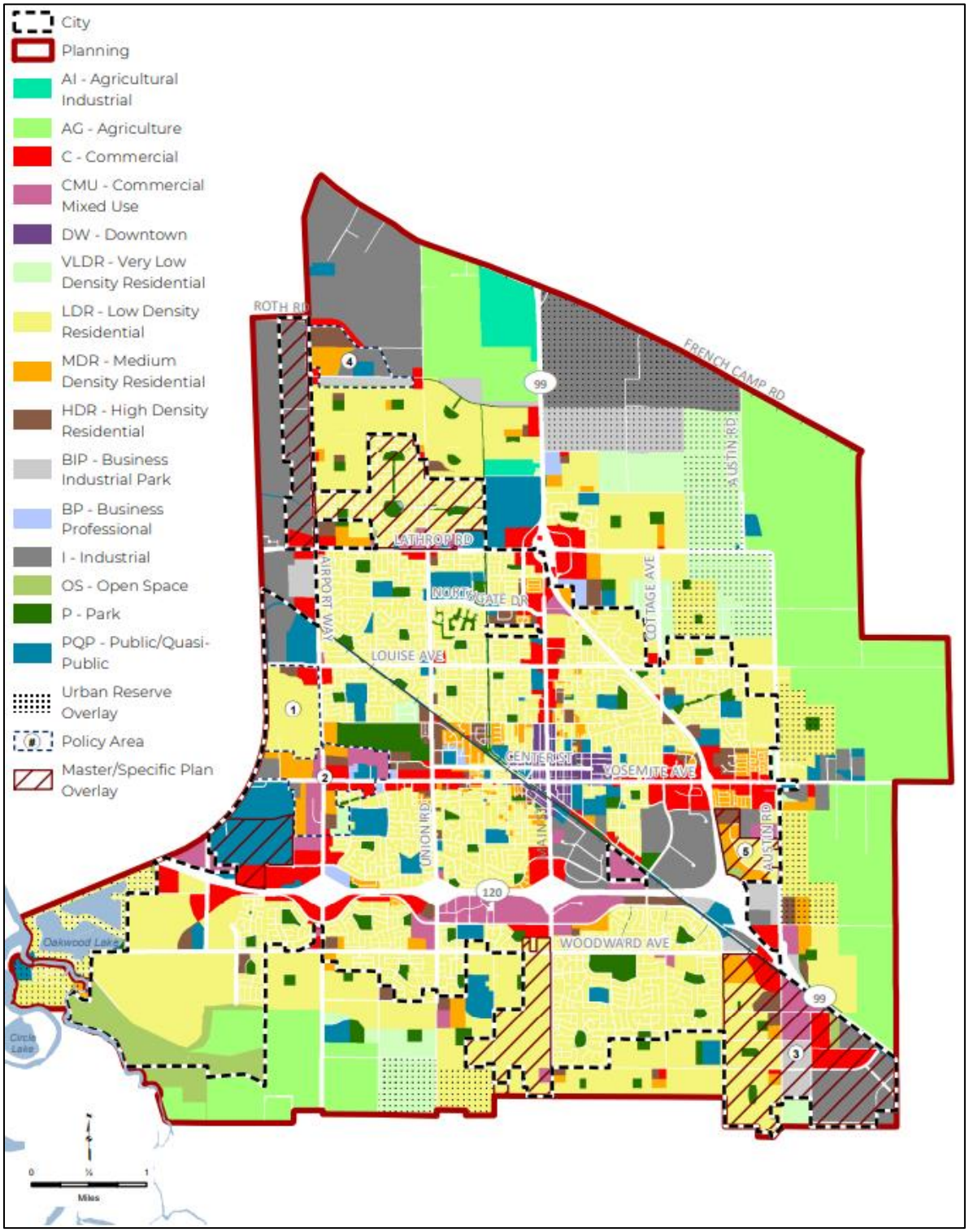


Figure 3-3. 2022 General Plan Update Land Use[6]

[6] City of Manteca. November 2022. *Revised Draft General Plan Update.* Figure LU-2: Land Use Map.

CHAPTER 4
Customer Water Use

This chapter describes and quantifies the City's historical, current, and projected water uses. Water demand projections are based on the projected growth within the City's water service area.

4.1 NON-POTABLE VERSUS POTABLE WATER USE

Potable water is water that is safe to drink and has had various levels of treatment and/or disinfection. The City provides treated potable water to customers within its water service area from City-owned and operated groundwater wells and water purchased from SSJID.

Recycled water is municipal wastewater that has been treated to a specified quality for beneficial reuse. As discussed in Chapter 6 of this plan, the City treats its wastewater to Title 22 disinfected tertiary recycled water standards suitable for unrestricted non-potable use. The City distributes recycled water for use within its water service area for agricultural irrigation, landscape irrigation, and process water at the City's Wastewater Quality Control Facility (WQCF).

Raw water is non-potable, untreated water that is used in its natural state or with minimal treatment. The City uses raw water from on-site wells at several local parks to meet approximately 2,252 AFY[1] of irrigation demands. These wells are not part of the City's potable water system, and their use is excluded from this 2020 UWMP. However, if the City implements its recycled water expansion project, further discussed in Chapter 6, the City will use recycled water to serve these irrigation demands which will eliminate the use of raw water for irrigation by 2030.

Potable water demands are discussed below.

4.2 WATER USE BY SECTOR

This section describes the City's past, current, and projected water use by water use sector, as listed in CWC §10631(d) and defined in the DWR Guidebook. These classifications were used to analyze current consumption patterns among the various types of City water customers. Each water use sector is listed and defined below.

- **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)).

[1] Woodard & Curran. January 2023. *City of Manteca Reclaimed Water Facilities Master Plan*. Table 6-1 Recommended Project Target Users.

- **Institutional/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.
- **Other:** Any other water demand that is not adequately described by the water sectors defined above, including fire flows and construction water. System water losses are not to be reported in the "Other" category.

The City does not have any current plans to use water for groundwater recharge, saline water intrusion barriers, agricultural irrigation, wetlands, or wildlife habitat.

4.2.1 Historical Potable Water Use

Past water demand by water use type for 2015 through 2019 is shown in Table 4-1. Water use in 2015 is actual water use as reported in the City's 2015 UWMP, while 2016-2019 data is from consumption data provided by the City. Losses are based on annual submitted American Water Works Association (AWWA) worksheets. The City was fully metered for the years shown in Table 4-1.

Table 4-1. Historical Water Demand by Water Use Sector, AF

Water Use Sector	2015	2016	2017	2018	2019
Single-Family	7,468	7,976	9,015	9,417	9,421
Multi-Family	964	900	926	941	907
Commercial[a]	1,109	1,286	1,048	1,675	1,651
Industrial	235	85	871	206	113
Landscape	603	142	850	760	571
Other	800	29	161	170	166
Losses[b]	55	1,119	551	441	455
Total	**11,234**	**11,536**	**13,422**	**13,610**	**13,285**

(a) "Commercial" use includes institutional water use consistent with the City's annual water reporting.
(b) Losses are based on annual American Water Works Association (AWWA) Audit Worksheets.

4.2.2 Current Water Use

Water demand by sector for the year 2020 is reported in Table 4-2. As shown, all water deliveries were treated to a level of "drinking water." The City did not supply water to wholesale customers in 2020 and has no plans to do so in the future. The total water demand for 2020 was 15,282 AF, including system losses. Table 4-2 does not include City use of recycled water; see Chapter 6 for discussion of the City's recycled water use and demands.

Table 4-2. Actual Demands for Potable and Non-Potable Water (DWR Table 4-1)

Use Type[1]	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,a,b)]
Add additional rows as needed			
Single Family		Drinking Water	10,716
Multi-Family		Drinking Water	970
Commercial		Drinking Water	1,540
Industrial		Drinking Water	146
Landscape		Drinking Water	802
Losses[(c)]		Drinking Water	1,073
Other Potable		Drinking Water	35
		TOTAL	15,282

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

NOTES:
(a) Volumes are in AF.
(b) Commercial use includes institutional uses, consistent with the City's Large Water System annual reporting. Other potable water use includes unbilled authorized consumption.
(c) Losses are based on the City's annual AWWA Audit Worksheet.

4.2.3 Projected Water Use

The City's water demand projections from 2025 through 2045 (i.e., a 25-year planning horizon) are reported in Table 4-3. Projected future water demands are based on land use projections from the City's 2022 Revised Draft GP Update and the accompanying 2022 Recirculated Draft EIR, which included buildout water use projections. Demand projections are based on the projections for the buildout of the plan, which is expected in 2040. For the purposes of this UWMP, water demands for 2025 through 2035 were linearly interpolated using 2020 demands and the 2040 water demand projection. The 2020 Revised Draft GP Update anticipates continued growth within the City's Sphere of Influence beyond 2040; therefore, for the purposes of this plan, growth is assumed to continue at a similar rate through 2045. The total 2045 projected water demand is 21,012 AF.

For the purposes of this UWMP, demands associated with "Open Space" land uses are assumed to be exclusively landscape demands. To remain consistent with City's annual reporting to the State Water Board, public and institutional uses are included with commercial demand projections.

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

Use Type[1]	Additional Description (as needed)	Projected Water Use[(2,a,b)] *Report To the Extent that Records are Available*				
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		11,301	11,887	12,472	13,057	13,642
Multi-Family		1,243	1,516	1,788	2,061	2,334
Commercial		1,720	1,899	2,079	2,258	2,438
Industrial		218	290	362	434	505
Landscape		818	833	849	864	880
Other Potable		36	36	37	38	38
Losses		1,093	1,114	1,134	1,154	1,175
TOTAL		16,428	17,574	18,720	19,866	21,012

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in DWR Table 6-4.*

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

NOTES:
(a) Volumes are in AF.
(b) 2040 projected water use is based on the City's 2022 Recirculated Draft EIR for the Manteca General Plan Update (Table 3.15-6), with the assumption that 15% of demands from commercial and industrial land uses are for landscaping irrigation. 5-year increments are linearly interpolated. 2045 projections assume continued growth at the same rate.

4.2.3.1 Characteristic Five-Year Water Use

Water Code Section 10635(b) requires urban suppliers to include a five-year drought risk assessment (DRA) in their UWMP. A key component of the DRA is estimating water 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 4-4. Projected water demands for 2021 through 2024 were estimated as a linear interpolation between the actual 2020 consumption by use type, reported in Table 4-2, and the 2025 projected water use, reported in Table 4-3.

Table 4-4. Projected Five-Year Water Use for Retail Customers, AF

Water Use Sector	2021	2022	2023	2024	2025
Single-Family	10,833	10,950	11,067	11,184	11,301
Multi-Family	1,025	1,079	1,134	1,188	1,243
Commercial[(a)]	1,576	1,612	1,648	1,684	1,720
Industrial	160	174	189	203	218
Landscape	805	808	811	814	818
Other	35	35	35	36	36
Losses	1,077	1,081	1,085	1,089	1,093
Total	**15,511**	**15,740**	**15,969**	**16,198**	**16,428**

(a) Commercial water use includes public and institutional land uses, consistent with the City's annual reporting.

4.3 TOTAL WATER USE

Table 4-5 summarizes the actual and projected potable water demands reported in Tables 4-2 and 4-3, respectively. Table 4-5 also summarizes projected recycled water demands. Refer to Chapter 6 for a discussion of the City's recycled water system and recycled water demand projections.

Table 4-5. Total Water Use – Potable and Non-Potable (DWR Table 4-3)

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020[(a)]	2025[(a)]	2030[(a)]	2035[(a)]	2040[(a)]	2045 (opt)[(a)]
Potable Water, Raw, Other Non-potable *From DWR Tables 4-1R and 4-2 R*	15,282	16,428	17,574	18,720	19,866	21,012
Recycled Water Demand[1] *From DWR Table 6-4*	718	718	2,692	2,693	2,694	2,695
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]						
TOTAL WATER USE	15,999	17,146	20,266	21,413	22,560	23,707

[1] Recycled water demand fields will be blank until DWR 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 DWR Table 4-3.*

NOTES:
(a) Volumes are in AF.

4.4 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 City uses the AWWA Water Audits and Loss Control Programs method to annually evaluate its distribution system losses. The water audit is an accounting exercise that tracks all sources and uses of water within a water system over a calendar year.

Table 4-6 summarizes the water system losses as reported in the AWWA water audits for the last five years starting in January 2016. Copies of the City's water audit worksheets for the last five years are provided in Appendix E.

New regulations require retail water suppliers to include potable distribution system water losses for the preceding five years (to the extent records are available). At the time of preparation of this UWMP, DWR and the State Water Board were in the process of adopting water loss standards. The City's programs to assess and manage water loss are discussed further in Chapter 9.

Table 4-6. Last Five Years of Water Loss Audit Reporting (DWR Table 4-4 Retail)

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss [1,2,a,b]
01/2016	1,119
01/2017	551
01/2018	441
01/2019	455
01/2020	1,073
[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: (a) Volumes are in AF. (b) From Annual AWWA Audit Worksheets.	

4.5 ESTIMATING FUTURE WATER SAVINGS

The water use projections presented in Table 4-4 are based on land use projections within the City's water service area. In accordance with the City's 2022 Revised Draft GP Update and its 2013 Climate Action Plan, water conservation is encouraged within the City. Urban water suppliers may consider the passive savings from codes, standards, ordinances, or transportation and land use plans. Such water savings decrease the water use projections for new and future customers compared to historical customers. As indicated in Table 4-7 below, these potential passive savings have not been included in the City's water demand projections to be conservative.

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) *Drop down list (y/n)*	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.	N/A
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes

4.6 WATER USE FOR LOWER INCOME HOUSEHOLDS

This UWMP considers current adopted codes, plans, and other policies or laws to estimate water savings projections. As indicated in Table 4-7, projected water use for lower income households in the City's water service area are included.

A lower income household is considered to be a household with an income below 80 percent of an area median income, adjusted for family size. Projected water demands for low income, single family, and multi-family residential water uses are included in the total water demands described in Section 4.2.

The City's 2015-2023 Housing Element Update includes the number of existing lower income households. The Housing Element indicates approximately 37 percent of the City's households are Low Income (16 percent), Very-Low Income (11 percent), or Extremely-Low Income (10 percent).[2] The City assumes that lower income households will continue to represent approximately 37 percent of the City's total residential customers through 2045 but is subject to change as demographic changes occur. With this percentage assumption, the projected water demand from lower income households will be approximately 5,900 AFY of residential water use by 2045.

4.7 CLIMATE CHANGE CONSIDERATIONS

Climate change has the potential to alter local climatic patterns and meteorology. A Climate Action Plan (CAP) was prepared for the City in 2013 to identify strategies and actions to adapt to the effects of climate change.[3] Some examples of these actions related to water include implementing water conservation measures and maximizing the beneficial uses of recycled water.

The City's future water demand and use patterns may be impacted by climate change. Warmer temperatures are expected to increase landscape irrigation demand. In addition, climate change may increase the frequency and intensity of wildfires, which would increase water demands for firefighting. The water demand projections included in this 2020 UWMP reflect anticipated increases in demands. Current and ongoing water use efficiencies and water conservation by the City's water customers, discussed in Chapter 9, and expanded use of recycled water, discussed in Chapter 6, could mitigate the effects of climate change on water demands.

The City continues to evaluate methodologies to correlate climate change impacts to water demands within its service area and will incorporate climate change impacts on demands in future UWMPs.

The potential impacts of climate change on the City's water supplies are described in Chapter 6.

[2] City of Manteca. November 2015. *Housing Element Update 2015 – 2023. Table 2 Residential Holding Capacity Compared to RHNA by Income.*

[3] Michael Brandman Associates. August 2013. *City of Manteca Climate Action Plan.*

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

In November 2009, Senate Bill X7-7 (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"). In order 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 also provides a review of the methodology the City used to calculate its 2020 Urban Water Use Target (target), its baseline, and how the baseline was calculated. The City 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*).

This Chapter demonstrates that the City 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 F in this plan.

5.1 OVERVIEW AND BACKGROUND

The City's compliance with SB X7-7 was first addressed in the City's 2015 UWMP. The City's baseline per capita water use was determined, and urban water use targets for 2015 and 2020 were established and adopted. Actual water use data and California DOF population estimates were used to calculate GPCD water use. In its 2015 UWMP, the City demonstrated that it successfully achieved its 2015 interim target and confirmed its 2020 target.

In this 2020 UWMP, the City 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 City did not deliver any recycled water; therefore, the City's baseline GPCD had to be calculated over a 10-year period. In its 2015 UWMP, the 10-year baseline period that the City selected was 1996 through 2005 (see Appendix F).

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 City'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 City selected Method 1 to calculate its 2020 target in its 2015 UWMP.

Daily average water use is divided by the service area population to obtain baseline and target GPCD. To calculate the City's compliance year GPCD and compare it to the 2020 target, the population is updated to reflect population estimates for 2020. Details of determining 2020 service area population are provided in Section 5.3.

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

5.3 SERVICE AREA POPULATION

To correctly calculate its compliance year GPCD, the City must determine the population that it served in 2020.

The method used to estimate the service area population is shown on Table 5-1. The DOF uses U.S. Census data, combined with changes to the housing stock, estimated occupancy of housing units, and the number of persons per household to estimate annual population within jurisdictional boundaries. Because the City's current water service area is the same as the City limits, DOF population data for the City of Manteca is valid for use as the service area population. The DOF estimate for the City of Manteca 2020 population is shown in Table 5-2.

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

Method Used to Determine 2020 Population (may check more than one)	
☑	**1. Department of Finance** (DOF)[(a)] or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES: (a) DOF population for 2020 was benchmarked to the 2020 Census.	

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

2020 Compliance Year Population[(a)]	
2020	83,470
NOTES: (a) 2020 population from Department of Finance, benchmarked to the 2020 Census.	

5.4 GROSS WATER USE

Annual gross water use, as defined in CWC §10608.12 (h), is the water that enters the City's distribution system over a 12-month period (calendar year) with certain exclusions. This section discusses the City's annual gross water use for each year in the baseline periods, as well as 2020, in accordance with Methodology 1: Gross Water of DWR's *Methodologies* document.

Annual gross water use for the baseline periods and 2020 are summarized in Appendix F. The baseline values reported in Appendix F are the same as documented in the 2015 UWMP. The City's 2020 actual gross potable water use for Calendar Year 2020 is 15,282 AF 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 for each year in the baseline periods. As discussed in Section 5.1, the City confirmed its 2020 target in its 2015 UWMP. The City's 10-year base daily per capita water use is 223 GPCD. Using Method 1 for 2020 water use target calculation as described in Section 5.2, the City's confirmed 2020 compliance target is 179 GPCD. The City's baseline and target are summarized in Table 5-3.

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

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	1996	2005	223	179
5 Year	2003	2007	221	
**All cells in this table should be populated manually from the supplier's SBX7-7 Verification Form and reported in Gallons per Capita per Day (GPCD)*				
NOTES: (a) Data from SBX7-7 Verification Form in City's 2015 UWMP.				

5.6 2020 COMPLIANCE DAILY PER CAPITA WATER USE

In Sections 5.3 and 5.4, the City's 2020 population and gross water use are presented, respectively. The City calculated its actual 2020 water use for the 2020 calendar year in accordance with the DWR Methodologies document. As shown in Table 5-4, urban per capita water use in 2020 was 164 GPCD, which is well below the confirmed 2020 water use target of 179 GPCD. Therefore, the City has met its 2020 final water use target.

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

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)*		
164	0	164	179	Y
**All cells in this table should be populated manually from the supplier's SBX7-7 2020 Compliance Form and reported in Gallons per Capita per Day (GPCD)*				

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 City 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 City's service area was reduced as compared to baseline years as a result of increased water conservation efforts by the City and its customers. The complete set of SB X7-7 tables used to document this compliance is included in Appendix F.

5.7 REGIONAL ALLIANCE

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

CHAPTER 6
Water Supply Characterization

This chapter characterizes the City's water supply portfolio. Currently available water supplies, as well as future anticipated water supplies, are described and quantified. The management of each water supply is discussed, along with the measures that the City has taken to develop planned sources of water.

The City's existing water supply facilities are described in Chapter 3 of this UWMP, and its water supplies consist of the following:

- Treated surface water from the SSJID conveyed from the Stanislaus River through the South County Water Supply Program (SCWSP)
- Groundwater pumped by the City from City-owned and operated wells
- Recycled water from the City's WQCF

Anticipated availability of the City's water supplies under a normal water year is provided in this chapter. The availability of the City's water supplies under a single dry year and a drought lasting five years, as well as more frequent and severe periods of drought, are described in detail in Chapter 7 of this UWMP, along with the basis of those estimates.

6.1 PURCHASED OR IMPORTED WATER

The City purchases treated potable water from SSJID as described in this section.

SSJID is a wholesale water supplier that provides treated potable water to the City and the Cities of Ripon, Escalon, Lathrop, and Tracy within San Joaquin County. The five cities signed water supply agreements (WSAs) with SSJID in the 1990s. In 2005, SSJID constructed the Nick C. DeGroot Water Treatment Plant (WTP), commissioned for the SCWSP. SSJID supplies raw water for the WTP from Woodward Reservoir. SSJID currently operates the Nick C. DeGroot WTP with a total Phase 1 capacity of 40,350 AFY. Phase 2 is anticipated to start production in 2040 due to the need for additional capacity when the City of Escalon is expected to connect to the WTP. The WTP capacity is planned to increase with the addition of a pump station and two tanks.

Currently the City is allotted 11,500 AFY under Phase 1 and a total of 18,500 AFY under Phase 2. In December 2020, a new WSA was signed between the City and SSJID, extending the term of the WSA to December 2049. In 2050, operations of the WTP will revert to the cities (Manteca, Escalon, Lathrop, and Tracy) unless the WSA is renewed.

Historically, the City has not utilized its full allocation of surface water due to system constraints and State and SSJID supply limits in response to the 2013-2015 drought. Future water distribution system upgrades to improve system capacity are anticipated to allow utilization of the full allotment of treated surface water.

The City's actual and projected normal year water supplies from SSJID are shown in Table 6-1 in 5-year increments from 2020 to 2045. The availability of these sources under single dry, five-year droughts, and other water year conditions are discussed in Chapter 7.

Table 6-1. Purchased or Imported Water Supplies – Actual and Projected (AF)

Water Supplier	Additional Detail on Water Supply	Actual and Projected Water Supply Volume[a,b]					
		2020	2025	2030	2035	2040	2045
SSJID	SCWSP Treated Surface Water	9,244	11,500	11,500	11,500	18,500	18,500

(a) Actual purchased water supply for 2020 is from the City's 2020 Electronic Annual Report.
(b) Projected purchased water supply for 2023-2035 and 2040-2045 is equal to the allocated water supply in the WSA with SSJID under Phase 1 and Phase 2 of the Nick C. DeGroot WTP, respectively.

As described in Chapter 7, surface water supply curtailments are possible in dry years and may be offset with additional groundwater use and/or demand reduction through implementation of the City's WSCP, described in Chapter 8.

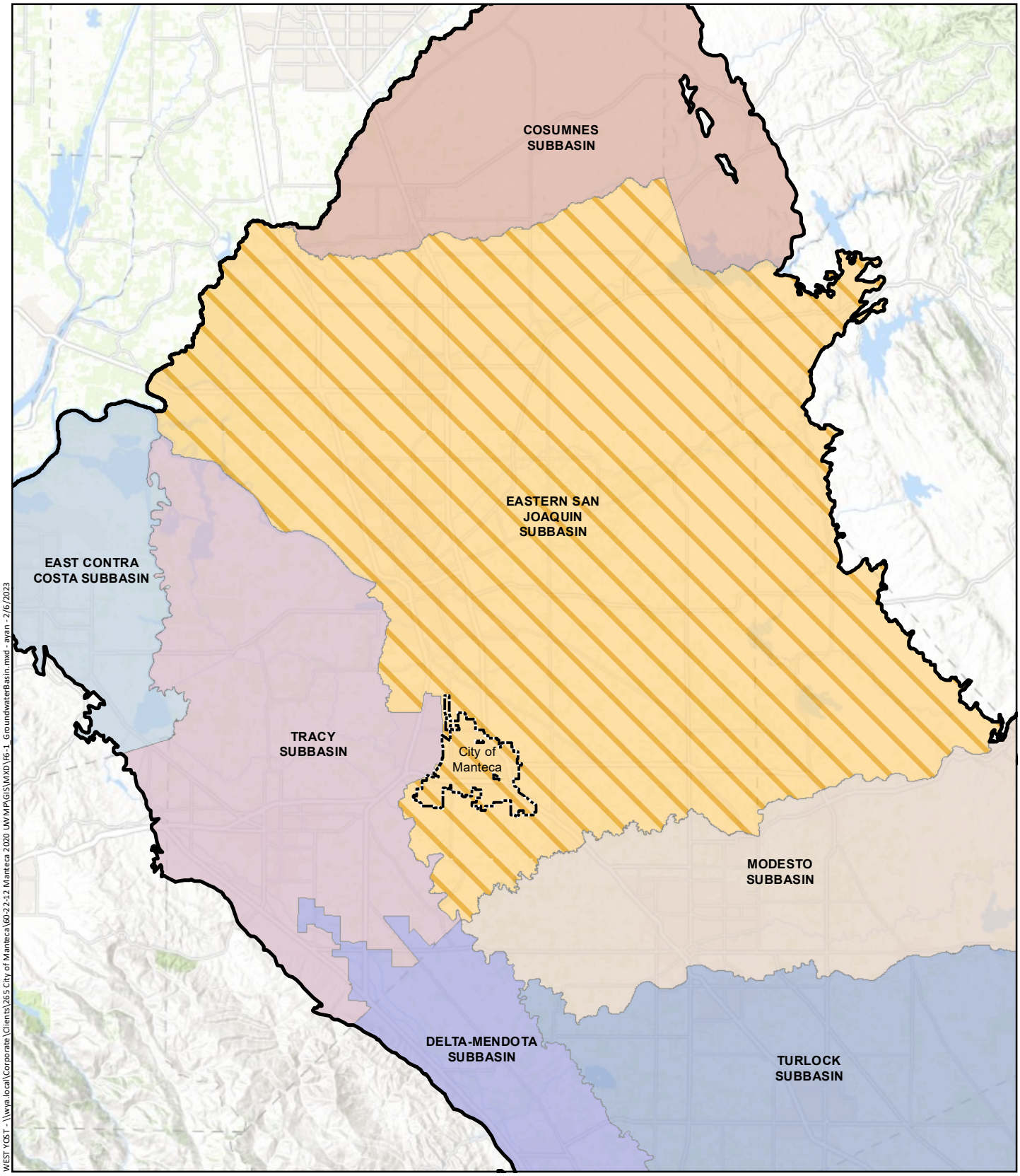
6.2 GROUNDWATER

As described in Chapter 3, the City has seventeen (17) potable groundwater wells throughout the City. The City uses these groundwater wells conjunctively with available purchased surface water from SSJID, with plans to limit groundwater use to 47 percent of total water supply. The City has also constructed thirty-seven (37) dedicated non-potable irrigation wells at several parks in an effort to reduce the demand for treated water. However, since the irrigation wells are not connected to the City's potable water system, their use is excluded from this 2020 UWMP. It should be noted that the City is exploring the implementation of a recycled water expansion project, further discussed in Section 6.5.4, which will eliminate the irrigation well demand of 2,252 AFY[1] by 2030. The City has partnered with other users through the Eastern San Joaquin Groundwater Authority (ESJGWA) to manage the groundwater basin.

6.2.1 Groundwater Basin Management

The groundwater basin underlying the City is the San Joaquin Valley Basin, Eastern San Joaquin (ESJ) Subbasin (DWR Basin No. 5-22.01), as shown on Figure 6-1. The ESJ Subbasin is not adjudicated. The ESJ Subbasin is defined by the areal extent of unconsolidated to semi-consolidated sedimentary deposits that are bounded by the Mokelumne River on the north and northwest; San Joaquin River on the west; Stanislaus River on the south; and consolidated bedrock on the east.

[1] Woodard & Curran. January 2023. *City of Manteca Reclaimed Water Facilities Master Plan*. Table 6-1 Recommended Project Target Users.



WEST YOST - \\wya.local\Corporate\Clients\265 City of Manteca\60-22-12 Manteca 2020 UWMP\GIS\MXD\F6-1_GroundwaterBasin.mxd - ayan - 2/6/2023

San Joaquin Valley Subbasin
- Eastern San Joaquin Subbasin
- Cosumnes Subbasin
- Delta-Mendota Subbasin
- East Contra Costa Subbasin
- Modesto Subbasin
- Tracy Subbasin
- Turlock Subbasin

- San Joaquin Valley Basin
- City Limits

N

0 4 8

Scale in Miles

DRAFT **Figure 6-1**

San Joaquin Valley Groundwater Basin

City of Manteca
2020 Urban Water Management Plan

WEST YOST

In 2014, the California legislature enacted the Sustainable Groundwater Management Act (SGMA) in response to continued overdraft of California's groundwater resources. The ESJ Subbasin is one of twenty-one basins and subbasins identified by DWR as being in a state of critical overdraft and is classified by DWR to be a high-priority subbasin. SGMA requires preparation of a groundwater sustainability plan to address measures necessary to attain sustainable conditions in the Subbasin. Sustainability is generally defined as long-term reliability of the groundwater supply and the absence of undesirable results, frequently caused by over-pumping.

The City has partnered with other users through ESJGWA to manage the groundwater basin. The City, along with fifteen other groundwater users and groundwater sustainability agencies, formed the ESJGWA in 2017 in response to SGMA. In 2019, ESJGWA completed the Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan (GSP) identifying actions to achieve groundwater sustainability in the Subbasin by 2040.[2] In general, the GSP shows that groundwater elevations have declined since the 1950s. Water quality issues were detected on the west side of the Subbasin, some of which are from wells underlying the City. The GSP outlined the need to reduce overdraft conditions and identified twenty-three projects for potential development, along with management actions, that either replace groundwater use or supplement groundwater supplies to meet current and future water demands. The list of twenty-three potential projects included in the GSP represent a variety of project types including direct and in-lieu groundwater recharge, intra-basin water transfers, demand conservation, water recycling, and stormwater reuse to be undertaken by the member agencies. The GSP determined an estimated pumping offset and/or recharge need of 78,000 AFY Subbasin-wide to achieve sustainability. This amount may be reevaluated after additional data are collected and analyzed.

One of the projects identified in the GSP to reduce groundwater demand is implementation of advanced metering infrastructure (AMI) within the City. The City's AMI Project is currently underway and anticipated to be completed by 2030.[3] The City also manages its groundwater demands by implementing demand management measures outlined in Chapter 9 of this UWMP. The demand management measures include water waste prevention ordinance, metering, conservation pricing, public education and outreach, programs to assess and manage distribution system real loss, water conservation program coordination and staffing support, water survey programs for residential customers, residential plumbing retrofits, and landscape conservation programs and incentives.

From 2020 to 2040, members of ESJGWA, including the City, will be monitoring and reporting their progress on implementing project and studies and the impacts of their outreach. Evaluations will be conducted every five years.

The GSP estimates the sustainable yield of the ESJ Subbasin at 715,000 AFY plus or minus 10 percent over the subbasin area of 1,195 square miles (approximately 0.94 AFY/acre). This sustainable yield amount is equivalent to a groundwater yield of approximately 12,925 AFY based on the City's current water service area of approximately 13,750 acres. However, not all of this groundwater yield is currently available to the City's potable water system because 4,760 AFY is pumped by City-owned and SSJID-owned irrigation

[2] Eastern San Joaquin Groundwater Authority. November 2019. *Eastern San Joaquin Groundwater Subbasin Groundwater Sustainability Plan*. Accessed at http://www.esjgroundwater.org/Documents/GSP on September 20, 2022.

[3] Eastern San Joaquin Groundwater Authority. March 2022. *Eastern San Joaquin Groundwater Subbasin Water Year 2021 Annual Report*. Accessed at http://www.esjgroundwater.org/Documents/GSP on September 20, 2022.

wells within City limits, as described in the City's 2023 Reclaimed Water Facilities Master Plan (RWFMP).[4] This reduction leaves approximately 8,165 AFY of groundwater available for use within the City's water system. If the City fully develops the area within its designated SOI by buildout (2040) of the 2022 GP Update (20,400 acres), the estimated groundwater yield, excluding the projected irrigation groundwater use, is approximately 16,615 AFY.

6.2.2 Groundwater Use – Past Five Years

Historically, the local groundwater basin provided all of the City's water supply. However, since 2005 with the construction of the Nick C. DeGroot WTP by SSJID and associated SSJID surface water deliveries, the City's reliance on groundwater has been significantly reduced.

The volume of groundwater pumped by the City over the past five years is summarized in Table 6-2. Groundwater supply provided an average of 5,161 AF, 39 percent of the City's water supply between 2016 and 2020. In 2020, the City pumped 6,038 AF from the groundwater basin, about 40 percent of the City's total water supply. There were no limitations or challenges for obtaining groundwater during the past five years as the City has been operating well within the sustainable yield, and the available groundwater quantity was sufficient.

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

Groundwater Type ***Drop Down List*** *May use each category multiple times*	Location or Basin Name	2016*[(a)]	2017*[(a)]	2018*[(a)]	2019*[(a)]	2020*[(a)]
Add additional rows as needed						
Alluvial Basin	San Joaquin Valley Groundwater Basin - ESJ Subbbasin	5,499	4,729	5,093	4,446	6,038
	TOTAL	5,499	4,729	5,093	4,446	6,038
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in DWR Table 2-3.*						
NOTES: (a) Volumes are in AF.						

6.2.3 Groundwater Use – Projected

The City plans to continue groundwater use to help meet peak demand and in dry years to make up for anticipated reductions in surface water deliveries. Generally, the City's goal is to achieve a 53 percent to 47 percent annual balance of surface water to groundwater, respectively.

[4] Woodard & Curran. January 2023. *City of Manteca Reclaimed Water Facilities Master Plan*. Section 2.2 Non potable Water Supply and Table 2-3: Non potable Water Demands in Manteca.

The City's projected normal year supplies for groundwater through 2045 are provided in Table 6-3. As discussed in 6.2.1, the total projected groundwater supplies are the difference between the linear interpolation of the total safe yield of groundwater available from the ESJ Subbasin between 2020 and 2040 and the estimated groundwater use by City-owned and SSJID-owned irrigation wells within City limits from the City's 2023 RWFMP.

Projected groundwater supplies in Table 6-3 will be used conjunctively with purchased surface water from SSJID from Table 6-1. The total projected water supply available for the City to meet projected water demands is further discussed in Section 6.9. The availability of groundwater under single dry, five-year droughts, and any other water year conditions is discussed in Chapter 7.

Table 6-3. Groundwater Supplies – Projected (AF)

Groundwater Type	Location or Basin Name	Projected Water Supply Volume[a,b]				
		2025	2030	2035	2040	2045
Alluvial Basin	San Joaquin Valley Groundwater Basin – ESJ Subbasin	9,727	13,490	15,052	16,615	18,178

(a) Projected groundwater supply is assumed to be equal to the calculated total safe yield from the ESJ Subbasin minus the projected demands from City-owned non-potable irrigation wells serving parks and schools and from SSJID-owned non-potable wells within City limits.

(b) Projected total safe yield for 2040 is estimated based on the ESJ Subbasin sustainable yield of 0.94 AFY/acre and the City's water service area acreage of 20,400 acres by buildout of the 2022 GP Update. The projected groundwater supplies for 2025 to 2035 were linearly interpolated between the 2020 total safe yield (12,925 AFY) and estimated 2040 total safe yield. Projected groundwater supply for 2045 was linearly extrapolated. Non-potable irrigation well groundwater use was based on Table 2-3 of the City's RWFMP.

6.3 SURFACE WATER

The City does not currently use or plan to use self-supplied surface water. However, the City purchases surface water from SSJID through SCWSP as discussed in Section 6.1.

6.4 STORMWATER

The City does not currently use or plan to use stormwater for beneficial reuse.

6.5 WASTEWATER AND RECYCLED WATER

The City is responsible for the collection, treatment, and disposal of wastewater for the City as well as Raymus Village, Oakwood Lake Community Facility District, and a portion of the neighboring City of Lathrop. The City owns and operates the WQCF.

6.5.1 Recycled Water Coordination

As the City is both the water supplier and the wastewater collection and treatment agency, any changes in the use of recycled water as a water supply would be coordinated within the City. The City may also coordinate recycled water use with the City of Lathrop, as a contributor to a portion of the wastewater treated at the WQCF.

6.5.2 Wastewater Collection, Treatment, and Disposal

In this section, the City's collection system, treatment, and disposal services are described.

6.5.2.1 Wastewater Collected Within Service Area

The City is served by a system of gravity sewers, lift stations, and force mains to collect wastewater. The collection system transports wastewater to the WQCF, located southwest of downtown Manteca.

A summary of the wastewater generated in the City's wastewater service area is provided in Table 6-4. The volume of wastewater collected from the City of Lathrop, Raymus Village, and Oakwood Lake Community Facility District is included in the volume presented in Table 6-4 because flows are not metered separately.

Table 6-4. Wastewater Collected Within Area in 2020 (DWR Table 6-2)

100	Percentage of 2020 service area covered by wastewater collection system *(optional)*
100	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*[(a)]	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*
City of Manteca	Metered	7,886	City of Manteca	City of Manteca Wastewater Quality Control Facility	Yes	No
Total Wastewater Collected from Service Area in 2020:		7,886				

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

NOTES:
(a) Volumes are in AF.

6.5.2.2 Wastewater Treatment and Discharge Within Service Area

The City owns and operates the WQCF, which treats wastewater from the City as well as Raymus Village, Oakwood Lake Community Facility District, and a portion of the City of Lathrop to Title 22 standards. Approximately 85 percent of the influent to the WQCF is from the City, and approximately 15 percent is from the other three minor sources. The WQCF includes an influent pump station and primary, secondary, and tertiary treatment facilities. The WQCF has a permitted treatment capacity of 9.87 MGD (11,000 AFY).

Between 2016 and 2020, the WQCF collected and treated an average of 6.6 MGD (7,398 AFY) of wastewater with peak flows typically occurring in the late fall and early winter months. During the wet season (late fall to early spring), treated wastewater is primarily discharged to the San Joaquin River. This effluent is treated to the tertiary level in compliance with Title 22 surface water discharge standards.

During the dry season (late spring to early fall), the WQCF produces secondary-treated recycled water to irrigate fodder crops on City-owned and leased agricultural lands surrounding the WQCF and for construction dust control. The WQCF also produces tertiary-treated recycled water for distribution within the City for non-potable uses as further discussed in Section 6.5.4.

Table 6-5 provides information on the wastewater treated and discharged within the City's water service area in 2020. The City's wastewater service area is larger than its water service area, as it includes a portion of the City of Lathrop's water service area. The volume shown in Table 6-5 includes wastewater effluent from both water service areas.

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

☐	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:	City of Manteca
Name of Supplier Operating the Recycled Water Distribution System:	City of Manteca
Supplemental Water Added in 2020 (volume) *Include units*	0 AF
Source of 2020 Supplemental Water	N/A

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*[1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020[(1,a)]	2025[(1,a)]	2030[(1,a)]	2035[(1,a)]	2040[(1,a)]	2045[(1,a)] (opt)
Agricultural irrigation[(b)]	Irrigation of fodder crops		Irrigation of fodder crops	Secondary, Disinfected - 23	677	677	0	0	0	0
Landscape irrigation[(c)] (exc golf courses)	Irrigation of ornamental landscape			Tertiary	36	36	2,280	2,280	2,280	2,280
Golf course irrigation	Irrigation of turf			Tertiary	0	0	406	406	406	406
Commercial use[(d)]	Dust control, soil compaction, concrete mixing, pressure testing new utility lines, trench backfill consolidation, etc.		Dust control at construction sites	Tertiary	5	5	6	7	8	9
				Total:	718	718	2,692	2,693	2,694	2,695
				2020 Internal Reuse[(e)]	476					

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

NOTES:
(a) Volumes are in AF.
(b) Agricultural irrigation is expected to continue at the current level until construction of the City's Family Entertainment Zone replaces agricultural lands, identified in Phase 4 of the City's RWFMP.
(c) Projected recycled water use volumes for landscape irrigation are summarized from Table 6-1 of the City's RWFMP (Janurary 2023).
(d) Commercial is assumed to increase by an average of 2.5% annually due to increased construction.
(e) Internal reuse is process water at the WQCF which is projected to reach a maximum of 550 AF by 2030 based on Table 4-7 of the City's RWFMP.

6.5.3 Recycled Water System Description

On January 24, 2023, the City adopted the 2023 RWFMP to establish a phased implementation plan for recycled water use from the WQCF over the next 20 to 25 years. Currently, the City's existing recycled water system consists of a 12-inch diameter recycled water pipeline that runs 2,600 feet along Daniels Street from the Big League Dreams facility to Airport Way.[5] This pipeline conveys recycled water from the WQCF to the Great Wolf Lodge. As detailed in Chapter 6 of the 2023 RWFMP, the City opted to proceed with the Alternative 2 recycled water expansion project which will expand the City's recycled water system to serve local demands within the City's 2022 GP Update Planning Area.[6]

As discussed in Section 6.5.2.2, treated effluent from the WQCF has primarily been discharged to the San Joaquin River, with some being used for fodder crop irrigation and construction dust control. The following section discusses the current and projected recycled water use within the City.

6.5.4 Potential, Current, and Projected Recycled Water Uses

Historically, the City has used recycled water to irrigate fodder crops on City-owned and leased lands during the dry season.

Two recycled water fill stations for construction dust control were constructed in 2015, which had an annual recycled water use of 5 AFY in 2020. This quantity varies significantly year-to-year based on the level of local construction activities. As the City experiences growth and development, an annual 2.5 percent increase of recycled water use for construction purposes is expected.

Beginning in mid-2020, the Great Wolf Lodge began utilizing recycled water for landscape irrigation and is anticipated to have an increase in recycled water use in 2021 after being fully operational for an entire calendar year.

Starting in 2020, the WQCF shifted from raw groundwater and backup potable water to recycled water for process water use, such as equipment wash-down during the tertiary treatment process.

As part of the 2023 RWFMP, the City evaluated the expansion of recycled water use for landscape irrigation of City parks, Manteca Park Golf Couse, and open spaces, cleaning of sanitary sewer lines, pressure testing new sewer lines, and consolidating backfill in trenches. The utilization of recycled water for these uses would shift demand from potable water sources (SSJID surface water and potable groundwater wells) and non-potable sources (irrigation groundwater wells). The City is also requiring new developments to install recycled water pipelines sufficient for connecting new parks to future recycled water distribution pipelines. Potential funding opportunities for the expansion of the recycled water system include grant and low-interest loan programs administered by various state and federal agencies as discussed in the 2023 RWFMP.

Table 6-6 summarizes the City's current and planned recycled water direct beneficial uses within the City's service area for 2020 to 2045.

[5] Woodard & Curran. January 2023. *City of Manteca Reclaimed Water Facilities Master Plan*. Section 3.4 Existing Recycled Water Facilities.

[6] Woodard & Curran. January 2023. *City of Manteca Reclaimed Water Facilities Master Plan*. Chapter 6 Recommended Facilities Project Plan.

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

☐	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:	City of Manteca
Name of Supplier Operating the Recycled Water Distribution System:	City of Manteca
Supplemental Water Added in 2020 (volume) *Include units*	0 AF
Source of 2020 Supplemental Water	N/A

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*[1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020[(1,a)]	2025[(1,a)]	2030[(1,a)]	2035[(1,a)]	2040[(1,a)]	2045[(1,a)] (opt)
Agricultural irrigation[(b)]	Irrigation of fodder crops		Irrigation of fodder crops	Secondary, Disinfected - 23	677	677	0	0	0	0
Landscape irrigation[(c)] (exc golf courses)	Irrigation of ornamental landscape			Tertiary	36	36	2,280	2,280	2,280	2,280
Golf course irrigation	Irrigation of turf			Tertiary	0	0	406	406	406	406
Commercial use[(d)]	Dust control, soil compaction, concrete mixing, pressure testing new utility lines, trench backfill consolidation, etc.		Dust control at construction sites	Tertiary	5	5	6	7	8	9
				Total:	718	718	2,692	2,693	2,694	2,695
				2020 Internal Reuse[(e)]	476					

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

NOTES:
(a) Volumes are in AF.
(b) Agricultural irrigation is expected to continue at the current level until construction of the City's Family Entertainment Zone replaces agricultural lands, identified in Phase 4 of the City's RWFMP.
(c) Projected recycled water use volumes for landscape irrigation are summarized from Table 6-1 of the City's RWFMP (Janurary 2023).
(d) Commercial is assumed to increase by an average of 2.5% annually due to increased construction.
(e) Internal reuse is process water at the WQCF which is projected to reach a maximum of 550 AF by 2030 based on Table 4-7 of the City's RWFMP.

Table 6-7 compares the 2015 UWMP recycled water use projections to 2020 actual recycled water use. Actual recycled water use in 2020 is greater than the quantities projected in the 2015 UWMP. The 2015 UWMP projected recycled water use for landscape irrigation to start in 2035; however, recycled water use for some landscape irrigation began in 2020. In addition, the City began to use recycled water for internal use (i.e., process water at the WQCF) starting in 2020, which was not projected in the 2015 UWMP. Actual 2020 recycled water use for construction dust control (commercial use) was lower than projected in the 2015 UWMP. This slowdown in use may be due to stalled construction activity due to COVID-19 since recycled water use was significantly higher in 2019.

Table 6-7. 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual (DWR Table 6-5R)

☐	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[1,a]	2020 Actual Use[1,a]
Insert additional rows as needed.		
Agricultural irrigation	870	677
Landscape irrigation (exc golf courses)	0	36
Golf course irrigation		
Commercial use	30	5
Total	900	718

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

NOTE:
(a) Volumes are in AF.

As established in the Manteca Municipal Code (MMC) Section 13.04.150, potable water use for construction is prohibited except on projects of less than twenty acres in total project acreage and physically located further than one mile from the WQCF recycled water fill station. For projects greater than 20 acres or within one mile of the WQCF, the contractor for the project may use the City's recycled water fill station for their project. Under MMC Section 13.04.150, the City requires water truck operators to obtain a certification card from the public works department for recycled water handling by attending a mandatory workshop on recycled water use in order to receive recycled water. Currently, drivers who attend the workshop will receive recycled water free of charge.

The City's identified actions to expand recycled water use within its service area are summarized in Table 6-8.

Table 6-8. Methods to Expand Future Recycled Water Use (DWR Table 6-6)

6-8	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use*[a]
Add additional rows as needed			
RWFMP Phase 1[b]	Install booster chlorination system and complete retrofits at the WQCF	2024	336
RWFMP Phase 2[b]	Construct pump station at WQCF, rehabilitate existing sanitary sewer force mains, install pipe and complete retrofits at Big League Dreams	2025	Varies
RWFMP Phase 3[b]	Install recycled water pipelines to serve all additional existing customers, complete retrofits for existing customers, construct storage tank at WQCF	2027	Varies
RWFMP Phase 4[b]	Install recycled water pipelines to serve future customers, upsize WQCF pump station, construct additional storage tank at WQCF	2030-2040	Varies
		Total	336
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*			

NOTES:
(a) Volumes are in AF.
(b) RWFMP Phases 1-4 to expand the City's recycled water system are summarized from Table 6-5 of the City's RWFMP.

6.6 DESALINATED WATER

Desalination is the process of removing dissolved minerals from brackish or saltwater to produce freshwater that can be used for municipal needs such as drinking water and industrial uses. It is one of several elements that may be included in a community's water supply portfolio.

Although saline groundwater aquifers have been identified 600 feet below the City, the saline aquifers could cross-contaminate freshwater aquifers at higher elevations if utilized. Brine disposal requires either transportation to the ocean or deep well injection which are expensive options. Additionally, the City is not located in a coastal area, so seawater desalination is not applicable to the City and is not considered a technically or economically feasible opportunity to explore. Therefore, the City did not include or consider desalinated water in planning for its future supply sources.

6.7 WATER EXCHANGES AND TRANSFERS

In the WSAs signed between SSJID and the four participating cities, the cities are allowed to transfer a portion or all of their water allotment to another participating city without the need for approval by SSJID.

The City has not yet needed to utilize any water supply exchanges or transfers.

6.8 FUTURE WATER PROJECTS

The City has several options for additional potable water supplies should the need arise. The primary near-term (within ten years) sources of additional supply include:

- **Groundwater:** Additional groundwater pumping up to the safe yield of 0.94 AFY/acre estimated in the ESJ GSP.
- **Recycled water:** Completion of RWFMP Phase 1 (i.e., retrofits at the WQCF) by 2024 will provide an increase of 336 AFY of recycled water supply. Planned implementation of RWFMP Phases 2 to 3 (i.e., upgrades to the WQCF and installation/retrofits of recycled water pipelines for existing customers) by 2027, will bring a varied increase in recycled water supply. Additional detail on RWFMP Phase 1-3 is found in Table 6-8.

Once the City is utilizing all of the near-term sources of additional water supply listed above, the following long-term additional water supply options are available:

- **Water Distribution System Upgrades:** Future water distribution system upgrades are anticipated to improve system capacity and allow utilization of the full allotment (11,500 AFY) of the Phase 1 allocation from SSJID.
- **Phase 2 expansion of the WTP**: Completion of Phase 2 (i.e., expansion of the Nick C. DeGroot WTP), will increase the capacity of the Nick C. DeGroot WTP and increase allotment from the SCWSP by 7,000 AFY (total 18,500 AFY), assumed to be available by 2040.
- **RWFMP Phase 4:** Completion of RWFMP Phase 4 (i.e., additional WQCF upgrades and installation of recycled water pipelines for future customers), and thus the completion of all RWMFP Phases, will provide an approximate 10,000 AFY (total 11,000 AFY) in recycled water supply, assumed available by 2030 to 2040. Additional detail on RWFMP Phase 4 is found in Table 6-8.
- **Additional untreated surface water**: Most of the lands that will be developed and annexed by the City currently rely on groundwater or raw water through SSJID for irrigation purposes. With each annexation, the City's volume of allowable groundwater pumping within the 0.94 AFY/acre sustainable yield will increase relative to the area annexed.
- **Additional treated surface water**: Prior to the WSA renewal with SSJID due in 2050, the City has the option to renegotiate the terms and obtain additional water supply from the SCWSP.

Table 6-9 summarizes the future water supply projects to increase water supply as described above.

Table 6-9. Expected Future Water Supply Projects or Programs (DWR Table 6-7R)

☐	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.
6-15	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*[(a)] *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
Nick C. DeGroot WTP Phase 2	Yes	SSJID and Cities of Tracy, Lathrop, and Escalon	Assumes 2040 completion of Phase 2 WTP expansion	2040	All Year Types	7,000
RWFMP Phase 1-4	Yes	City of Lathrop	Assumes completion of RWFMP Phase 1-4 to expand the City's recycled water system and maximize recycled water use within the City's service area.	2030-2040	All Year Types	10,282

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

NOTES:
(a) Volumes are in AF.
(b) Expected increase in recycled water supply for use within the City's service area is equivalent to the available recycled water supply in 2040 (11,000 AFY) minus the actual 2020 recycled water use volume.

6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

As discussed in Section 6.2.2, the commission of the WTP by SSJID and the SCWSP in 2005 reduced the City's reliance on groundwater and brought the pumping rates within City limits within the sustainable yield, greatly increasing the water supply reliability for the City by diversifying its supply portfolio. In general, the City's goal is to maintain an annual water supply balance of 53 percent surface water to 47 percent groundwater.

In 2015, the City began to utilize recycled water from the WQCF for construction purposes, shifting use away from potable water. In 2020, the City also began utilizing recycled water for landscape irrigation and internal use at the WQCF. Shifts to recycled water utilization provide further diversification and increased reliability of the City's water supply sources and offset potable water demand, helping reduce the amount of surface water purchased from SSJID and/or the amount of groundwater pumped. The City anticipates producing recycled water supply equivalent to recycled water demands.

The City's existing water supplies and future projected normal year water supplies are summarized in Table 6-10 and Table 6-11, respectively.

Table 6-10. Water Supplies – Actual (DWR Table 6-8)

Water Supply	Additional Detail on Water Supply	2020		
Drop down list May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool		Actual Volume*[a]	Water Quality Drop Down List	Total Right or Safe Yield*[a] (optional)
Add additional rows as needed				
Purchased or Imported Water	SCWSP Treated Surface Water	9,244	Drinking Water	11,500
Groundwater (not desalinated)	ESJ Subbasin	6,038	Drinking Water	8,164
Recycled Water	Secondary Treated	677	Recycled Water	2,000
Recycled Water	Tertiary Treated[b]	41	Recycled Water	5,000
	Total	16,000		26,664
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*				

NOTES:
(a) Volumes are in AF.
(b) Tertiary treated recycled water use does not include 476 AF used for internal reuse at the WQCF.

Table 6-11. Water Supplies – Projected (DWR Table 6-9)

Water Supply	Additional Detail on Water Supply	Projected Water Supply*(a,b,c,d) Report To the Extent Practicable									
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		**2025**		**2030**		**2035**		**2040**		**2045** (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Add additional rows as needed											
Purchased or Imported Water	SCWSP Treated Surface Water	11,500	11,500	11,500	11,500	11,500	11,500	18,500	18,500	18,500	18,500
Groundwater (not desalinated)	ESJ Subbasin	9,727	9,727	13,490	13,490	15,052	15,052	16,615	16,615	18,178	18,178
Recycled Water	Tertiary Treated	718	5,150	2,692	11,000	2,693	11,000	2,694	11,000	2,695	11,000
	Total	21,945	26,377	27,682	35,990	29,245	37,552	37,809	46,115	39,373	47,678
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*											

NOTES:
(a) Volumes are in AF.
(b) Purchased water reasonably available volume based on Table 4-2 from SSJID 2020 UWMP.
(c) Projected groundwater supply is assumed to be equal to the calculated total safe yield from the ESJ Subbasin minus the City-owned non-potable irrigation wells serving parks and schools, and SSJID-owned non-potable wells within City limits. The projected groundwater supplies for 2025 to 2035 were linearly interpolated between the 2020 total safe yield (12,925 AFY/acre) and estimated 2040 total safe yield. Projected groundwater supply for 2045 was linearly extrapolated. Non-potable irrigation well groundwater use from Table 2-3 of the City's RWFMP (January 2023) was subtracted from the projected total safe yields for each year.
(d) Reasonably available volume for recycled water is assumed to be equivalent to projected recycled water demands within the City's water service area. The total safe yield of recycled water is assumed to be equivalent to the available recycled water supply from Table 3-2 in the City's RWFMP (January 2023).

6.10 CLIMATE CHANGE IMPACTS TO SUPPLY

Climate change is the most uncertain variable affecting future water supply and reliability. The following climate change impacts to San Joaquin Valley's water resources were discussed in the State's *San Joaquin Valley Report for California's Fourth Climate Change Assessment*:[7]

- Warming temperatures
- Shrinking snowpack
- Shorter and more intense wet seasons
- More variable precipitation
- Increased drought
- Rising sea levels

San Joaquin Valley heavily relies on the Sierra snowpack to provide water supply during the drier season in the late spring. However, as temperatures increase, the timing of the snowpack melt will likely shift earlier in the year by two to four months, causing a misalignment between when water is available (winter-spring) and when water is used (summer). San Joaquin Valley water suppliers will be required to increase storage capacities to hold water for longer periods to meet drier summer demands.

As the dry seasons become longer and drier and summer landscape irrigation demand increases, supply availability will likely decrease simultaneously. This increase in demand may lead to increased groundwater pumping to compensate for the decreased surface water supplies. As wet seasons become shorter and more intense, the risk of flooding increases and the need for additional storage capacity also increases to capture the rainfall to last through the drier months.

The San Joaquin Valley already experiences droughts, which will only become more frequent and severe. Increased groundwater pumping to meet increased groundwater demand for agriculture will further exacerbate groundwater overdraft and increase land subsidence which will reduce groundwater basin storage capacity. This decrease in available groundwater supply will increase difficulty for using groundwater to compensate for the reduction in surface water.

Additional implementation of rigorous water regulatory policies can also reduce the quantity of available water supplies and restrict water management adaptation strategies.

Since available surface water and groundwater may be impacted by climate change as described above, it can be assumed that the quantity of the City's purchased surface water supply from SSJID and the City's groundwater supply may be negatively impacted from climate change.

As discussed in Section 4.6, the City prepared a Climate Action Plan (CAP) in 2013 to identify strategies and actions to adapt to the effects of climate change. The CAP identified that not all climate change effects, such as increased flooding and sea level rise, may impact the City.[8] However, to mitigate effects

[7] State of California. January 2022. *San Joaquin Valley Report for California's Fourth Climate Change Assessment.*

[8] Michael Brandman Associates. October 2013. *City of Manteca Climate Action Plan.*

of climate change on water supply reliability, the City will implement water conservation measures described in Chapter 9 and maximize the beneficial use of recycled water.

The quantitative consideration of the effects of climate change on projected water supply are discussed in Chapter 7. The projections presented in this chapter assume no limitations on the availability of the City's water supply sources during a normal year. Chapter 7 addresses the water system reliability for the City during a single dry year and five consecutive dry years to consider the near-term effects of climate change on projected supplies and to direct planning for the WSCP.

6.11 ENERGY INTENSITY

In accordance with California Water Code §10631.2(a), the energy intensity to provide water service to the City's water customers over a one-year period is presented in this section to the extent that the information is available. The amount of energy to pump, treat, and distribute the City's water supply within the system it owns and operates is included. For the purposes of the UWMP required energy intensity reporting, water suppliers are only expected to report the energy use associated with water management processes occurring within their operational control; thus, any energy use embedded in the extraction, treatment, storage, and distribution of treated surface water supplied to the City by SSJID through the SCWSP is not included in this analysis.

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

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

Annual energy use quantities were obtained from monthly PG&E billing data for the following assets:

- Groundwater well pumps for Wells 12-29 (17 wells total), including both pumping and treatment at each wellhead
- Atherton Tank booster pumps (four 125-hp pumps and one 75-hp pump)
- Central Area Treatment Facility, including both pumping and treatment

In Table 6-12, the energy intensity of the City's water service for each of the above-mentioned assets is calculated as an annual utility total for 2020. The total energy intensity for the City's water service area is 499 kWh/AF. The City does not currently utilize any non-consequential hydropower.

Table 6-12. Energy Intensity – Total Utility Approach (DWR Table O-1B)

Enter Start Date for Reporting Period	1/1/2020	**Urban Water Supplier Operational Control**		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*6,038*	*0*	*6,038*
Energy Consumed (kWh)		*3,010,452*	*0*	*3,010,452*
Energy Intensity (kWh/volume)		*498.6*	*0.0*	*498.6*

Quantity of Self-Generated Renewable Energy

0 kWh

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

Metered Data

Data Quality Narrative:

Monthly electrical energy data was provided for groundwater wells and storage tank pump stations.

Narrative:

The energy data provided summarizes the monthly energy consumption for operating the City's groundwater wells and storage tanks. Energy use for water purchased from SSJID is not under the City's operational control, and therefore is not included in this table. Recycled water energy use is in Table O-2.

As discussed in Section 6.5.2, the City provides wastewater collection, treatment, and disposal services to customers within its limits as well as Raymus Village, Oakwood Lake Community Facility District, and a portion of the City of Lathrop. The City owns and operates the wastewater collection, treatment, and disposal system. The energy intensity associated with the City's wastewater services for 2020 is provided in Table 6-13. The energy intensity associated with the collection and conveyance is 67 kWh/AF, and the energy intensity associated with the wastewater treatment process is 1,251 kWh/AF.

Table 6-13. Energy Intensity – Wastewater & Recycled Water (DWR Table O-2)

Urban Water Supplier: *City of Manteca*

Table O-2: Recommended Energy Reporting - Wastewater & Recycled Water					
Enter Start Date for Reporting Period 1/1/2020 End Date 12/31/2020		Urban Water Supplier Operational Control			
		Water Management Process			
☐ Is upstream embedded in the values reported?		Collection / Conveyance	Treatment	Discharge / Distribution	Total
Volume of Water Units Used	AF				
Volume of Wastewater Entering Process (volume units selected above)		*7,886*	*7,886*	*7,168*	*7,886*
Wastewater Energy Consumed (kWh)		*530,294*	*9,864,696*	*0*	*10,394,990*
Wastewater Energy Intensity (kWh/volume)		*67.2*	*1250.9*	*0.0*	*1,318.2*
Volume of Recycled Water Entering Process (volume units selected above)		*0*	*718*	*718*	*718*
Recycled Water Energy Consumed (kWh)		*0*	*0*	*0*	*0*
Recycled Water Energy Intensity (kWh/volume)		*0.0*	*0.0*	*0.0*	*0.0*

Quantity of Self-Generated Renewable Energy related to recycled water and wastewater operations

kWh

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

Metered Data

Data Quality Narrative:

Monthly electrical data provided for the WQCF and wastewater lift stations owned by the City.

Narrative:

The energy data provided summarizes the monthly energy consumption for operating the City's WQCF and wastewater lift stations. The energy use for the treatment and distribution of recycled water is not metered separately, therefore, recycled water energy consumed is shown as zero and is included in the total wastewater energy consumed. The volume of recycled water shown does not include the 476 AF of internal reuse at the WQCF.

CHAPTER 7
Water Service Reliability and Drought Risk Assessment

This chapter discusses the City's water supply reliability under varying conditions through 2045. Factors impacting long-term reliability of water supplies are discussed. In assessing the City's water supply reliability, a comparison of projected water supplies and projected water demand in normal, single dry, and five consecutive dry years is provided for the City's water service area. This chapter also includes the City's Drought Risk Assessment (DRA) for the next five years. Findings show that the City's water supplies are sufficient to meet the existing and projected water demands during normal and dry conditions.

7.1 WATER SERVICE RELIABILITY ASSESSMENT

The City's water supply reliability reflects its ability to meet the needs of its water customers with its water supply under varying conditions. Details from Chapter 4, which describes the City's water use, and Chapter 6, which describes the City's water supply, are incorporated in this chapter to conduct the assessment. Findings from this assessment influence the City's water management decisions.

7.1.1 Constraints on Water Sources

The City's existing water supplies are described in Chapter 6 of this UWMP and consist of the following:

- Treated surface water purchased from the SSJID
- Groundwater pumped by the City from the ESJ Subbasin
- Recycled water from the City's WQCF

This section presents the constraints on SSJID's water supply, the City's groundwater supply, and the City's recycled water supply.

7.1.1.1 Purchased Water from SSJID

The City purchases treated surface water from SSJID. The constraints on SSJID's water supply source that affect its reliability and SSJID's strategies for managing the risks associated with its supply are discussed in this section and are directly taken from Section 7.1.1 from SSJID's 2020 UWMP.[1]

7.1.1.1.1 Stanislaus River Water Supply Constraints

SSJID's water supply for the SCWSP is obtained exclusively from the Stanislaus River. This supply is based on SSJID's senior, pre-1914 appropriative water rights to the Stanislaus River, coupled with an agreement with the United States Bureau of Reclamation (USBR) to store water in the New Melones Reservoir. The reliability of the SCWSP water is influenced by variations in annual weather patterns which affect the volume of the Sierra snowpack and the resulting runoff in the spring and summer months. Furthermore, supply reliability is complicated by regulatory conditions, as described below.

7.1.1.1.1.1 Impacts of Bay-Delta Plan Amendment

In December 2018, the State Water Board adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) which, if and when implemented, may have an impact on the Stanislaus River. The State Water Board is required by law to regularly review this plan. The adopted Bay-Delta Plan Amendment was developed with the stated

[1] EKI Environment & Water Inc. June 2021. *2020 Urban Water Management Plan for South San Joaquin Irrigation District.* Section 7.1.1 Service Reliability – Constraints on Water Sources.

goal of increasing salmonid populations in three San Joaquin River tributaries (the Stanislaus, Merced, and Tuolumne Rivers) and the Bay-Delta. The Bay-Delta Plan Amendment requires the release of up to 30 to 50 percent of the unimpaired flow on the three tributaries from February through June in every year type.

If the Bay-Delta Plan Amendment is implemented as adopted, there are significant impacts in some years to the ability of the USBR to meet its obligations under the 1988 Stipulation and Agreement to provide formula water to both the Oakdale Irrigation District (OID) and SSJID in years when inflow into New Melones is below 600,000 AFY. This condition typically occurs in dry and critically dry years. This pending requirement to limit diversions could reduce the minimum projected supply amount of 26,448 AFY as planned for by SSJID as discussed in Section 7.1.2 of SSJID's UWMP. Implementation of the Bay-Delta Plan Amendment remains uncertain for multiple reasons.

Over a dozen lawsuits have been filed in both state and federal courts, including challenges filed by the OID and SSJID, challenging the State Water Board's adoption of the Bay-Delta Plan Amendment. These lawsuits are in early stages and there have been no consequential court rulings as of this date. Secondly, the Bay-Delta Plan Amendment did not include an allocation of responsibility for meeting the flow requirements. Such an allocation of responsibility must consider the senior water rights of both OID and SSJID who have adjudicated pre-1914 rights and other senior appropriative rights. In recognition of the difficult legal process ahead, many stakeholders throughout California including the State and Federal Government have opted to explore the possibility of voluntary agreements to achieve outcomes comparable to those described in the Bay-Delta Plan Amendment balancing the needs of all water users. Both OID and SSJID have participated in voluntary agreement negotiations.

Based on these uncertainties, SSJID has opted to make no near-term planning assumptions related to the implementation of the Bay-Delta Plan Amendment for the purposes of their 2020 UWMP. Should conditions change or consequential resolution of the issues aforementioned come to be, SSJID will revise and re-adopt a 2020 UWMP to reflect changes to its impacted water supply.

7.1.1.1.2 Water Quality Impacts

Impaired water quality has the potential to affect water supply reliability. All drinking water standards are set by the U.S. Environmental Protection Agency (USEPA) under the authorization of the Federal Safe Drinking Water Act of 1974. In California, the State Water Board Division of Drinking Water (DDW) can either adopt the USEPA standards or set more stringent standards, which are then codified in Title 22 of the California Code of Regulations. There are two general types of drinking water standards:

- **Primary Maximum Contaminant Levels (MCLs)** are health protective standards and are established using a very conservative risk-based approach for each constituent that takes into potential health effects, detectability and treatability, and costs of treatment. Public water systems may not serve water that exceeds Primary MCLs for any constituent.
- **Secondary MCLs** are based on the aesthetic qualities of the water such as taste, odor, color, and certain mineral content, and are considered limits for constituents that may affect consumer acceptance of the water.

SSJID routinely monitors its raw and treated water. The Stanislaus River water generally has high quality and low total dissolved solids (TDS) concentrations. Reservoir storage on the Stanislaus River also helps to reduce suspended solids. However, during flood events and times of elevated flows, TDS and suspended solid levels can increase. The Nick C. DeGroot WTP provides several levels of treatment for the

raw water supply. The resulting treated water is considered to be of excellent quality. SSJID has and will continue to meet all state and federal water quality regulations.

A sanitary survey for the upper portion of the Stanislaus River watershed was completed in 2021.[2] The purpose of the sanitary survey is to identify potential sources of contamination and identify remedial measures. The potential contaminant sources that present a medium risk to water quality in the Stanislaus River watershed include livestock grazing, irrigated agriculture and pesticide use, mining, recreation, and on-site wastewater treatment systems. Wildfires and wildlife present a high potential risk to water quality. Source control measures for these problems and monitoring programs have been ongoing to help preserve good water quality. These programs have been successful and are expected to maintain the existing quality of the Stanislaus River with continued implementation. If the quality begins to degrade, the watershed management program will be reevaluated and/or SSJID will evaluate whether modifications to water treatment processes are necessary.

7.1.1.1.3 Climate Change Factors

Section 6.10.1 of SSJID's 2020 UWMP provides a summary of potential climate change impacts on supplies. As described therein, SSJID's supply can potentially be impacted by reduced runoff and water quality issues due to climate change.

According to California's Climate Adaptation Strategy, also referred to as "Safeguarding California Plan: 2018 Update," climate change is likely to significantly diminish California's future water supply. As a result, the State must change its water management, as climate change will create greater competition for limited water supplies. These water management concerns will impact SSJID, the SCWSP agencies, and other neighboring water management agencies. As discussed in SSJID's 2020 Agricultural Water Management Plan, climate change is projected to result in a shift in runoff toward the winter period and reduction in total runoff. While the timing of runoff will not affect SSJID's annual allotment, which is based on the total annual inflows to New Melones Reservoir under the 1988 Agreement, reduced total runoff has the potential to impact SSJID's supply. Additionally, climate change can lead to increased erosion and warmer water, which will pose additional challenges on maintaining water quality. SSJID is committed to mitigating climate change impacts through an adaptive management approach in cooperation with the stakeholders.

7.1.1.2 Groundwater

Chapter 6 of this plan details the issues affecting the City's use of the ESJ Subbasin, specifically water quality management and prevention of overdraft.

The ESJ Subbasin is identified by DWR as being in a state of critical overdraft and is a high priority subbasin. Since the 1950s, the ESJ Subbasin has been experiencing declining groundwater elevations. Some of the City's wells on the west side of the ESJ Subbasin have water quality issues. The City, along with other members of the ESJGWA, plan to help improve the ESJ Subbasin's sustainability and reduce overdraft conditions through projects and management options outlined in the 2019 Eastern San Joaquin GSP.

The implementation of the City's AMI Project and demand management measures discussed in Chapter 9 will help the City manage and reduce groundwater demands. Every five years from 2020 to 2040, the City

[2] Water Quality and Treatment Solutions Inc. June 2021. *Stanislaus River 2021 Watershed Sanitary Survey.*

and the other members of ESJGWA will report on the implementation progress and impacts of the groundwater projects identified in the GSP.

The GSP estimates the sustainable yield of the ESJ Subbasin at approximately 0.94 AFY/acre. As discussed in Section 6.2.1, by full buildout (2040) of the City's SOI (20,400 acres), the City's estimated groundwater yield excluding irrigation groundwater use is approximately 16,615 AFY. Historically, the City has not had any limitations on operating within the sustainable yield and obtaining sufficient groundwater supply. As such, the City's groundwater supply is considered reliable under all hydrologic conditions.

The City plans to continue using groundwater in conjunction with purchased surface water supply from SSJID at the goal ratio of 53 to 47 percent of surface water to groundwater, respectively. Any reduction in surface water deliveries during dry years will be supplemented by groundwater.

7.1.1.3 Recycled Water

As discussed in Section 6.5, the City produces recycled water at the WQCF fully compliant with Title 22 disinfected tertiary recycled water requirements. The City's tertiary treated water meets all water quality requirements listed in the City's National Pollutant Discharge Elimination System (NPDES) permit and although these water quality limits are not legally applicable to recycled water, it heavily implies that the recycled water is safe for irrigation use.[3]

Salt and nutrient content is a water quality concern for using recycled water for irrigation and the suitable level of salt and nutrient content depends on the salt sensitivity of the plants being irrigated. Described in the City's 2023 RWFMP, the City's recycled water meets the required salt and nutrient concentration for irrigating all landscape plants and agricultural crops within the City, except for the most sensitive agricultural crops, without the need of blending.[4] No crop yield reduction is expected for most crop types with proper irrigation practices. Additional information about the City's recycled water salinity and proper irrigation practices the City can implement to reduce salt content can be found in Section 3.3.1 of the City's 2023 RWFMP.

Since the City's recycled water supply is appropriate for irrigation use, the City does not expect recycled water quality issues to impact its ability to reliably deliver recycled water to its customers during and after the expansion of their recycled water program, discussed in Section 6.3.4.

7.1.2 Year Type Characterization

Water supply reliability is assessed based on the characteristics of the City's water supplies during various water year types which are provided in this section. CWC §10635(a) requires that the City's water service reliability be assessed based on the following three water year types:

1. **Normal Year** – A single year or averaged range of years in the historical sequence that most closely represents the average water supply available to the City.
2. **Single Dry Year** – The year that represents the lowest water supply available to the City.

[3] Woodard & Curran. January 2023. *City of Manteca Reclaimed Water Facilities Master Plan*. Section 3.3 Wastewater Quality.

[4] Woodard & Curran. January 2023. *City of Manteca Reclaimed Water Facilities Master Plan.* Section 3.3.1 Salts and Nutrients.

3. **Five-Consecutive-Year Drought** – The period that represents the lowest average water supply availability to the City for a consecutive multiple year period (five years or more).

SSJID's water supply reliability is used to represent the City's available surface water supply during the above hydrologic conditions. The projected yield of SSJID's water source under these three scenarios, as detailed in SSJID's 2020 UWMP, is summarized below along with the projected yield of the City's groundwater and recycled water.

For simplicity, this plan leaves Table 7-1 blank and summarizes the City's base year information and water supply availability in Table 7-2 and Table 7-3, respectively.

Table 7-1. Basis of Water Year Data (Reliability Assessment) (DWR Table 7-1)

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: Table 7-2 and Table 7-3
		☐	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available *	% of Average Supply
Average Year			100%
Single-Dry Year			
Consecutive Dry Years 1st Year			
Consecutive Dry Years 2nd Year			
Consecutive Dry Years 3rd Year			
Consecutive Dry Years 4th Year			
Consecutive Dry Years 5th Year			

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

Years that the City identifies as the normal year, single driest year, and driest multi-year period are shown in Table 7-2. The normal year used in the City's 2015 UWMP is assumed to be the same for this 2020 UWMP.[5] The City assumes the same single dry year and multiple drought years described in Section 7.1.2 of SSJID's 2020 UWMP.[6]

[5] Kennedy/Jenks Consultants. September 2016. *City of Manteca 2015 Urban Water Management Plan.* Table 7-1: Bases of Water Year Data.

[6] EKI Environment & Water Inc. June 2021. *2020 Urban Water Management Plan for South San Joaquin Irrigation District.* Section 7.1.2 Service Reliability - Year Type Characterization.

Table 7-2. Basis of Water Year Data	
Water Year Type	Base Year(s)
Normal Water Year[a]	2010
Single Dry Water Year[b]	2020
Five-Consecutive-Year Drought[b]	2012 - 2016

(a) Normal water year is based on Table 7-1 from the City's 2015 UWMP (September 2016).
(b) Single dry water year and five-consecutive-year drought years is based on Section 7.1.2 from SSJID's 2020 UWMP (June 2021).

The City's surface water reliability is assumed to be consistent with SSJID's urban water supply reliability during a single dry year and multiple dry years, as identified in SSJID's 2020 UWMP. Groundwater pumped by City-owned wells is assumed to be 100 percent reliable through the three hydrologic conditions and is used to supplement reductions in purchased SSJID water supply. Recycled water produced by the City is assumed to be 100 percent reliable through the three hydrologic conditions. Table 7-3 summarizes the water supply available for each of the City's water supply during the three water year conditions.

Table 7-3. Water Supply Volume Available (AF)

Year Type		2025	2030	2035	2040	2045
SSJID Surface Water[a]						
Normal Year		11,500	11,500	11,500	18,500	18,500
Single-Dry Year		9,649	10,566	11,483	14,592	15,671
Five-Year Drought	Year 1	11,500	11,500	11,500	18,500	18,500
	Year 2	11,500	11,500	11,500	18,500	18,500
	Year 3	9,649	10,566	11,483	14,592	15,671
	Year 4	9,649	10,566	11,483	14,592	15,671
	Year 5	11,500	11,500	11,500	18,500	18,500
Groundwater[b]						
Normal Year		9,727	13,490	15,052	16,615	18,178
Single-Dry Year		9,727	13,490	15,052	16,615	18,178
Five-Year Drought	Year 1	9,727	13,490	15,052	16,615	18,178
	Year 2	9,727	13,490	15,052	16,615	18,178
	Year 3	9,727	13,490	15,052	16,615	18,178
	Year 4	9,727	13,490	15,052	16,615	18,178
	Year 5	9,727	13,490	15,052	16,615	18,178
Recycled Water[c]						
Normal Year		718	2,692	2,693	2,694	2,695
Single-Dry Year		718	2,692	2,693	2,694	2,695
Five-Year Drought	Year 1	718	2,692	2,693	2,694	2,695
	Year 2	718	2,692	2,693	2,694	2,695
	Year 3	718	2,692	2,693	2,694	2,695
	Year 4	718	2,692	2,693	2,694	2,695
	Year 5	718	2,692	2,693	2,694	2,695

(a) The City's available surface water purchased from SSJID is based on Table 7-2 from SSJID's 2020 UWMP (June 2021).
(b) The City's groundwater supply is assumed to be 100 percent reliable through the three water type conditions.
(c) The City's recycled water supply is assumed to be 100 percent reliable through the three water type conditions. The City is anticipated to produce recycled water equivalent to its recycled water demand.

7.1.3 Potable Water Service Reliability

The City's potable water supplies for all water year types include:

- Treated surface water purchased from SSJID
- Groundwater pumped by the City from the ESJ Subbasin

In this section, the City's normal, single dry, and five consecutive dry years projected potable supplies and demands are integrated and compared. Projected potable water demands are detailed in Chapter 4 and projected potable water supplies are detailed in Chapter 6. Under the various water year types, the total annual potable water supply sources available are compared to the total annual projected potable water

use for the City's water service area from 2025 to 2045 in five-year increments. In this potable water service reliability assessment, potable water demands are conservatively assumed to be unconstrained.

As discussed in Chapter 6, the City's potable water supplies are expected to meet the City's projected potable water demands. Any reduction of SSJID water supply will be supplemented by the City's groundwater supply.

7.1.3.1 Potable Water Service Reliability – Normal Year

Table 7-4 compares the projected normal year potable supply from Chapter 6 and projected potable demands from Chapter 4. The City's potable water supplies are reliable during normal years. No potable water supply shortage is anticipated during normal years through 2045.

Table 7-4. Normal Year Supply and Demand Comparison – Potable (DWR Table 7-2)

	2025[a]	2030[a]	2035[a]	2040[a]	2045[a] (Opt)
Supply totals[b] *(autofill from DWR Table 6-9)*	21,227	24,990	26,552	35,115	36,678
Demand totals *(autofill from DWR Table 4-3)*	16,428	17,574	18,720	19,866	21,012
Difference	4,799	7,416	7,832	15,249	15,666
NOTES: (a) Volumes are in AF. (b) The City's potable water supplies include SSJID surface water and groundwater pumped by City owned wells.					

7.1.3.2 Potable Water Service Reliability – Single Dry Year

Table 7-5 compares projected single dry year potable supply and projected potable demands. No potable water supply shortage is anticipated during single dry years through 2045. The City's potable water supplies are reliable during single dry years.

Table 7-5. Single Dry Year Supply and Demand Comparison – Potable (DWR Table 7-3)

	2025[(a)]	2030[(a)]	2035[(a)]	2040[(a)]	2045[(a)] (Opt)
Supply totals	19,376	24,056	26,535	31,207	33,849
Demand totals	16,428	17,574	18,720	19,866	21,012
Difference	2,948	6,482	7,815	11,341	12,837
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*					
NOTES: (a) Volumes are in AF. (b) The City's potable water supplies include SSJID surface water and groundwater pumped by City owned wells.					

7.1.3.3 Potable Water Service Reliability – Five Consecutive Dry Years

Table 7-6 compares projected five consecutive dry years potable supply and projected potable demands. No potable water supply shortage is anticipated during the five consecutive dry years through 2045. The City's potable water supplies are reliable during five consecutive dry year period.

Table 7-6. Multiple Dry Years Supply and Demand Comparison – Potable (DWR Table 7-4)

		2025[a]	2030[a]	2035[a]	2040[a]	2045[a] (Opt)
First year	Supply totals[b]	21,227	24,990	26,552	35,115	36,678
	Demand totals	16,428	17,574	18,720	19,866	21,012
	Difference	4,799	7,416	7,832	15,249	15,666
Second year	Supply totals[b]	21,227	24,990	26,552	35,115	36,678
	Demand totals	16,428	17,574	18,720	19,866	21,012
	Difference	4,799	7,416	7,832	15,249	15,666
Third year	Supply totals[b]	19,376	24,056	26,535	31,207	33,849
	Demand totals	16,428	17,574	18,720	19,866	21,012
	Difference	2,948	6,482	7,815	11,341	12,837
Fourth year	Supply totals[b]	19,376	24,056	26,535	31,207	33,849
	Demand totals	16,428	17,574	18,720	19,866	21,012
	Difference	2,948	6,482	7,815	11,341	12,837
Fifth year	Supply totals[b]	21,227	24,990	26,552	35,115	36,678
	Demand totals	16,428	17,574	18,720	19,866	21,012
	Difference	4,799	7,416	7,832	15,249	15,666

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

NOTES:
(a) Volumes are in AF.
(b) The City's potable water supplies include SSJID surface water and groundwater pumped by City owned wells.

7.1.4 Non-Potable Water Service Reliability

As mentioned in Section 6.2, the City's non-potable irrigation well use and supply are excluded from this 2020 UWMP since the non-potable wells are not connected to the City's potable water system. Therefore, the City's source of non-potable water shown in this 2020 UWMP, for all water year types, is recycled water produced at the WQCF.

In this section, the City's normal, single dry, and five consecutive dry years projected recycled water supplies and demands are integrated and compared. Projected recycled water demands and supplies are detailed in Chapter 6. Under the various water year types, the total annual recycled water supply available is compared to the total annual projected recycled water use for the City's water service area from 2025 to 2045 in five-year increments. In this recycled water service reliability assessment, recycled water demands are conservatively assumed to be unconstrained.

As explained in Chapter 6, the City anticipates producing recycled water equivalent to recycled water demand. Recycled water supply is assumed to be unaffected by dry conditions. Therefore, the City's recycled water supply totals and recycled water demand totals for each water year condition are equivalent.

7.1.4.1 Non-Potable Water Service Reliability – Normal Year

Table 7-7 compares the projected normal year recycled water supply and projected recycled water demand from Chapter 6. Since the City will produce the amount of recycled water equivalent to recycled water demand, the total projected recycled water supply and total projected recycled water demand for each year are equal. The City's recycled water supply is reliable during normal years. No recycled water supply shortage is anticipated during normal years through 2045.

Table 7-7. Normal Year Supply and Demand Comparison – Non-Potable (DWR Table 7-2)

	2025[(a)]	2030[(a)]	2035[(a)]	2040[(a)]	2045[(a)] (Opt)
Supply totals *(autofill from DWR Table 6-9)*	718	2,692	2,693	2,694	2,695
Demand totals *(autofill from DWR Table 4-3)*	718	2,692	2,693	2,694	2,695
Difference	0	0	0	0	0

NOTES:
(a) Volumes are in AF.
(b) The City anticipates producing recycled water to be equivalent to their customer's recycled water demands. Therefore, the recycled water supply totals are equivalent to recycled water demand totals.

7.1.4.2 Non-Potable Water Service Reliability – Single Dry Year

Table 7-8 compares projected single dry year recycled water supply and projected recycled water demands. Since the City will produce the amount of recycled water equivalent to recycled water demand, the total projected recycled water supply and total projected recycled water demand for each year are equal. No recycled water supply shortage is anticipated during single dry years through 2045. The City's recycled water supply is reliable during single dry years.

Table 7-8. Single Dry Year Supply and Demand Comparison – Non-Potable (DWR Table 7-3)

	2025[(a)]	2030[(a)]	2035[(a)]	2040[(a)]	2045[(a)] (Opt)
Supply totals	718	2,692	2,693	2,694	2,695
Demand totals	718	2,692	2,693	2,694	2,695
Difference	0	0	0	0	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*					

NOTES:
(a) Volumes are in AF.
(b) The City anticipates producing recycled water to be equivalent to their customer's recycled water demands. Therefore, the recycled water supply totals are equivalent to recycled water demand totals.

7.1.4.3 Non-Potable Water Service Reliability – Five Consecutive Dry Years

Table 7-9 compares projected five consecutive dry years recycled water supply and projected recycled water demands. Since the City will produce the amount of recycled water equivalent to recycled water demand, the total projected recycled water supply and total projected recycled water demand for each year are equal. No recycled water supply shortage is anticipated during the five consecutive dry years through 2045. The City's recycled water supply is reliable during five consecutive dry year periods.

Table 7-9. Multiple Dry Years Supply and Demand Comparison – Non-Potable (DWR Table 7-4)

		2025[(a)]	2030[(a)]	2035[(a)]	2040[(a)]	2045[(a)] (Opt)
First year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
Second year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
Third year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
Fourth year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
Fifth year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0

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

NOTES:
(a) Volumes are in AF.
(b) The City anticipates producing recycled water to be equivalent to their customer's recycled water demands. Therefore, the recycled water supply totals are equivalent to recycled water demand totals.

7.2 DESCRIPTION OF MANAGEMENT TOOLS AND OPTIONS

As described in Section 7.1.5 of SSJID's 2020 UWMP, there remains a large uncertainty in future surface water supply availability; however, SSJID and the SCWSP agencies have developed strategies and actions to address the projected supply shortfalls such as the potential expansion of the Nick C. DeGroot WTP and

developing other sources of supplies described in their respective UWMPs.[7] Chapter 8 and Chapter 9 of SSJID's 2020 UWMP contain SSJID's WSCP that identifies methods to reduce water demands and SSJID's demand management measures, respectively.

As described in Chapter 6 and Section 7.1.1.2, the City's groundwater supply is reliable and sufficient to supplement its purchased surface water supply to meet its projected water demands during the different water years. The City will continue to monitor its existing groundwater wells and implement demand management measures, while also continuing to participate in the ESJGWA to continue groundwater management of the ESJ Subbasin.

As discussed in Section 7.1.1.2, the City will continue to produce recycled water that meets Title 22 tertiary recycled water requirements. The City will also continue to monitor its recycled water salinity concentration to ensure its recycled water is sufficient for irrigation use and implement irrigation practices, if needed, to reduce salt content.

7.3 DROUGHT RISK ASSESSMENT

CWC §10635(b) requires that the City prepare a 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.

For the purposes of this DRA, recycled water supplies are assumed to be sufficient to meet recycled water demands and therefore are excluded from the DRA and its associated tables (Table 7-10 and Table 7-11 (DWR Table 7-5)). The DRA will only be performed for the City's potable water supplies. This section reviews the data and methods used to define the DRA water shortage condition and evaluates each potable water source's reliability under the proposed drought condition. Total potable water supplies during the five-year drought are compared to projected potable water demands, accounting for any applicable supply augmentation or demand reduction measures available to the City.

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

7.3.1 Data, Methods, and Basis for Water Shortage Condition

The DRA was performed for 2021 through 2025 using the same five-consecutive-dry-year period conditions presented in Section 7.1.2. A summary of the data and basis for the water shortage condition is provided in this section.

Projected potable water demands for 2022 to 2024 were linearly interpolated between actual 2020 potable water demand of 15,282 AF and projected 2025 potable water demand of 16,428 AF (Table 4-5). Actual potable water demands are included for 2021.

The DRA assumes the available purchased surface water from SSJID for 2021 to 2025 to be equal to the available water supply volumes for a five-year consecutive drought presented in Table 7-3. Available

[7] EKI Environment & Water Inc. June 2021. *2020 Urban Water Management Plan for South San Joaquin Irrigation District.* Section 7.1.5 Description of Water Management Tools and Options.

groundwater supply for 2025 was assumed to be 9,727 AF (available during all hydrologic conditions as shown in Table 7-3). Available groundwater supply for 2021 to 2024 was linearly interpolated between actual 2020 groundwater use of 6,038 AF (Table 6-10 (DWR Table 6-8)) and projected 2025 groundwater supply volume of 9,727 AF.

7.3.2 DRA Water Source Reliability

Table 7-10 summarizes the City's available potable water supplies for each year of the DRA projected based on the methodology described in Section 7.3.1.

Table 7-10. Projected Potable Water Supplies for Drought Risk Assessment (AF)

Supply Source	2021	2022	2023	2024	2025
SSJID Surface Water[(a)]	11,500	11,500	9,649	9,649	11,500
Groundwater[(b)]	6,776	7,514	8,251	8,989	9,727
Total	**18,276**	**19,014**	**17,900**	**18,638**	**21,227**

(a) Assumed equal to five-year drought SSJID surface water allocations from Table 7-3.

(b) 2021 to 2024 groundwater supply volumes were linearly interpolated between 2020 actual groundwater use of 6,038 AF from Table 6-10 (DWR Table 6-8) and 2025 reasonably available groundwater volume of 9,727 AF from Table 7-3.

7.3.3 Total Water Supply and Use Comparison

As shown in Table 7-11, during a five-year drought beginning in 2021, the City's potable water supply is projected to be adequate to meet projected potable water demands through 2025, even without water conservation. However, the City may implement water conservation and demand management measures as mandated by the State during a state-wide drought emergency declaration.

Table 7-11. Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b) (DWR Table 7-5)

2021	Total[a]
Total Water Use[b]	15,511
Total Supplies	18,276
Surplus/Shortfall w/o WSCP Action	2,765
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	2,765
Resulting % Use Reduction from WSCP action	0%

2022	Total[a]
Total Water Use[b]	15,740
Total Supplies	19,014
Surplus/Shortfall w/o WSCP Action	3,273
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	3,273
Resulting % Use Reduction from WSCP action	0%

2023	Total[a]
Total Water Use[b]	15,969
Total Supplies	17,900
Surplus/Shortfall w/o WSCP Action	1,931
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,931
Resulting % Use Reduction from WSCP action	0%

2024	Total[a]
Total Water Use[b]	16,198
Total Supplies	18,638
Surplus/Shortfall w/o WSCP Action	2,439
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	2,439
Resulting % Use Reduction from WSCP action	0%

2025	Total[a]
Total Water Use[b]	16,428
Total Supplies	21,227
Surplus/Shortfall w/o WSCP Action	4,799
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,799
Resulting % Use Reduction from WSCP action	0%

NOTES:
(a) Volumes are in AF.
(b) Total water uses for 2021-2025 were linearly interpolated between 2020 actual water use (as shown in DWR Table 4-1) and 2025 projected water use (as shown in DWR Table 4-2), and provided in Table 4-4 of this UWMP.

CHAPTER 8
Water Shortage Contingency Plan

This chapter discusses the City's Water Shortage Contingency Plan (WSCP), seismic risk to City facilities, and WSCP adoption procedures. To allow for WSCP updates to be made outside of the UWMP preparation process, the City's WSCP is included in this plan as Appendix G.

8.1 BACKGROUND

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

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

8.2 CITY WATER SHORTAGE CONTINGENCY PLAN

The City'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 City's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting.

The City intends for its WSCP to be an adaptive management plan so that it may assess response action effectiveness and adapt to foreseeable and unforeseeable events. Therefore, the City's WSCP is included in this plan as Appendix G to allow for updates to be made outside of the UWMP update 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. Information on the City's seismic risk assessment and mitigation plan are provided in Appendix G, Section 5.6.

8.4 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

The City's WSCP (Appendix G) is adopted concurrently with this 2020 UWMP, 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, an electronic copy of the WSCP will be available for public review and download on the City's website, https://www.manteca.gov/. An electronic copy will also be provided to San Joaquin County.

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

CHAPTER 9
Demand Management Measures

The City implements demand management measures to sustainably manage its water resources. If not mitigated, reliability may be reduced from an increase in water demand and/or changes in water supplies due to climate change and other factors. The implementation of demand management measures can help improve water service reliability and help meet City and State water conservation goals. This chapter describes the City's historical and existing water conservation program, status of implementation of Demand Management Measures (DMMs), and projected future conservation implementation.

9.1 DEMAND MANAGEMENT MEASURES

The City is required to describe the following six DMMs in this UWMP:

- Water waste prevention ordinances
- Metering
- Conservation pricing
- Public education and outreach
- Programs to assess and manage distribution system real loss
- Water conservation program coordination and staffing support

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

The following sections present a narrative description of the utility based DMMs that the City has been implementing since the 2015 UWMP reporting cycle, which are currently all implemented as standard practices. Section 9.1.7 also presents the non-utility based DMMs that are actively implemented that aid in the reduction of total system water demands.

For each DMM, implementation over the past five years is described and planned implementation over the next five years is discussed.

9.1.1 Water Waste Prevention Ordinances

The City discourages wasteful water use and promotes the use of water saving devices with the primary purpose of ensuring that the City's water resources are used reasonably and for beneficial uses to maximize water supply reliability for all customers in both normal and dry years. The City has the authority through the MMC to establish water waste prevention regulations to help reduce water waste. The MMC (https://library.qcode.us/lib/manteca_ca/pub/municipal_code) is current through Ordinance O2022-20 and the September 2022 code supplement, which is always in effect.

MMC Section 13.04.210 (Appendix H) describes prohibited water use in the City. A summary of the water use restrictions is provided below:

- Washing of sidewalks, driveways, patios, parking lots, aprons, or other non-landscaped exterior ground areas except as allowed by a City-issued washing permit;
- Taking of water from any fire hydrant except by regularly constituted fire protection agencies or construction purposes provided a permit has been issued;

- Allowing the escape of water through leaks, breaks, or malfunctions in the user's plumbing or distribution system for more than 24 hours after discovery thereof;
- Washing of automobiles or boats except at a commercial car wash or by use of a quick-acting positive shut-off nozzle on the hose or bucket and sponge;
- Recreational activities that require a constant flow of potable water.

The restrictions are enforceable per MMC Chapter 1.10 and are administered by the City. Enforcement of MMC Section 13.04.210 involves tiers of action with the issuance of Notices of Violation, fines, and fees depending on the nature of the violation as well as the employment of water compliance patrols to conduct enforcement activities. Enforcement activities can escalate when the City's WSCP (Appendix G) is triggered due to water shortage conditions or State reductions. Escalated enforcement activities include an increase in water compliance patrols and the establishment of water waste hotlines.

In addition, the City anticipates monitoring water use through full implementation of AMI by 2025 to be able to help identify leaks and/or water waste violations.

The effectiveness of this DMM is evaluated based on the number of violations observed. In 2022, the City issued 478 violation notices. The City has not imposed monetary fines for violations, but instead focused on educating customers on the modified irrigation schedule.

Implementation of this DMM is ongoing. Although water savings from this program cannot be directly quantified, it is expected to help the City achieve its water use targets by minimizing the non-essential uses of water so that water is available for human consumption, sanitation, and fire protection.

9.1.2 Metering

All City potable water customers are metered and billed on a monthly basis in compliance with State metering laws for urban water systems (CWC §527) based on a fixed monthly charge and a usage charge. The City prescribes minimum water system design and Operations and Maintenance (O&M) standards consistent with AWWA standards and best practices for water utilities. These standards include meter calibration, testing, and replacement activities as part of the meter maintenance program to maintain the read accuracy of the City's meter inventory. More than 50 percent of the City's water meters are less than ten years old.

In the past five years, the City has been working on the implementation of its AMI project. It anticipates completing the project by 2025.

Implementation of this DMM is expected to help reduce overall water usage in the City by providing accurate and timely water use information to both the customers and the City. Metering also helps customers make informed decisions about their water consumption. The City's future plans include continued customer outreach on the availability of the customer water portal to receive automatic alerts of potential leaks, as well as continued customer education on how to use the water portal to view and keep track of customer water use.

9.1.3 Conservation Pricing

As discussed in Section 9.12, the City's potable water customers are billed for water supply and service. Per MMC Section 13.04.060, the billed monthly water rate is the sum of a fixed monthly charge based on meter size and a volumetric water charge based on the customer's volume of water use. City Council periodically reviews and approves water rate increases when necessary to cover the costs of providing water service to the community (including provisions for O&M, capital, debt service, and reserve fund requirements). The City's current water rate structure is located in MMC Section 13.04.060 (Appendix I).

Beginning in 2008, the City instituted a volumetric water pricing structure that recovers water system costs based on water consumption while encouraging efficient water use. The City typically earns at least 50 percent of its total water revenues from consumption-based charges. This rate structure incentivizes customers to manage their water use over time and participate in the City's DMM programs.

As discussed in Section 9.0 in the WSCP (Appendix G), the City has the authority to establish drought surcharges, if necessary, to finance the cost of prolonged demand reduction scenarios that significantly impact revenue recovery.

The City updated its utility billing software in 2012. The updated system allows monitoring of total fixed and volumetric charge data which can be utilized to track water demand patterns and determine if annual revenue requirements for a given month or year will be met from volumetric charges.

Implementation of this DMM is expected to help the City achieve its water use targets by ensuring water customers pay the true cost of water to adequately fund water system operations and maintenance, including repair and replacement programs, and water conservation programs. The City will evaluate the effectiveness of its rates by tracking changes in unit water use resulting from rate increases.

9.1.4 Public Education and Outreach

To fulfill the public education and outreach requirements of CWC §10631(1)(B) part (iv), the City implements public information programs and school education programs, each described below. The City funds these programs with the annual water conservation activity budget of $75,000 approved by City Council. The City organizes and participates in several community events annually, with the exception in 2020 due to COVID-19. Examples of the City's water conservation outreach material is shown in Appendix J.

9.1.4.1 Public Information Programs

The City has multiple ongoing public information programs to promote participation in its DMMs and programs. As part of these programs, marketing and outreach materials are provided to customers through the issuance of press releases, publishing of newsletters, and placement of door tags and bill inserts. Customers are notified of various conservation programs throughout the year by the Public Works Department and through utility billing, and customers can also learn about rebates, other conservation programs, and links to additional conservation resources on the City's website (https://www.manteca.gov/departments/public-works/water-division/water-conservation).

These public information programs also work to promote water conservation. The City offers conservation brochures and posters, activity booklets, public outreach displays, oral presentations, and workshops to inform the public of City conservation efforts and how they can help and participate. The City also raises awareness about water conservation through paid advertising, press releases, news ads, media events,

the Speaker's Bureau, bill inserts, and the City's website. The following public information and outreach efforts are conducted at least annually:

- Send seasonal inserts in the customers' water bills to encourage efficient irrigation during the irrigation season and minimize outdoor water use in the spring and fall based on local rainfall patterns.
- Describe the water conservation rebates the City has to offer and present water saving approaches for customers depending on their user class and water use patterns.
- Participate in Earth Day Planet Party event hosted by Manteca Unified School District (MUSD).
- Host a booth at the Watermelon Faire and Pumpkin Faire to discuss the City's Unlawful Water Use Ordinance (MMC Section 13.04.210), water conservation guidelines, and conservation tips with approximately 3,000 City residents. Hand out thousands of promotional items to promote the City's water conservation programs.
- Run weekly advertisement on social media regarding outdoor watering schedules and the Unlawful Water Use Ordinance (April through July).
- Advertise the outdoor watering schedules on the City's website.
- Provide information and resources on the City's website to raise public awareness about water supply, water quality, water conservation, and other water-related issues.

The City reviews and updates its water conservation public information and outreach program annually based on current water conditions, available water programs, and approved budgets.

Implementation of public education and outreach is ongoing and expected to help the City achieve its water use targets by educating water users about the value of water and the importance of improving water use efficiency and avoiding water waste. The City is planning to increase public outreach by making use of social media to reach more customers as well as advertising at movie theaters and on local television.

9.1.4.2 School Education Programs

Up until 2017, the City conducted annual school education programs for approximately 15,000 MUSD students, typically targeted at the elementary age population. However, the annual school education programs were discontinued in 2017 due to limited staff resources.

The purpose of the school education programs was to raise awareness for water-related issues. The school education program materials and presentations met State education framework requirements, and the following is a list of activities that may have been a part of the school education program in any given year:

- Water Awareness Art Contests,
- Water Resource Library, and
- Earth Day Planet Party Event hosted by MUSD.

Students also learned about conservation practices and could receive a free conservation kit that would include a water survey, 1.5 gallons per minute (gpm) low-flow shower head, 1.5 gpm kitchen sink and 1.0 gpm bathroom sink aerators, leak detection dye tablets, and a watering gauge, along with step-by-step instructions. The students would be given a homework assignment to complete a water audit form for their home and replace inefficient showerheads and aerators with water-saving devices provided in the

kit. This program was a very effective way for the City to simultaneously reach a large number of customers and educate students, who in turn educated their parents about water use efficiency practices and low flow plumbing devices. Results from the City school education programs were tracked, and a summary report was generated at the end of each school year to evaluate its success. The report documented the estimated reduction in water usage that was achieved through the retrofits and other activities and provides data on the percentage of students who participated in the program.

The City recognizes the value of educating the younger population about the importance of water conservation. Thus, the City is currently working on restarting the water education program and resuming presentations at local schools as staffing allows. As part of the re-initiation process, the City will review opportunities to enhance its school education programs to supplement existing public education efforts. Measures that will be evaluated include additional direct mail flyers, increased outreach participation at community functions, and an improved conservation website.

9.1.5 Programs to Assess and Manage Distribution System Real Loss

The City has an active Water Loss Control Program that tracks both real and apparent losses which are monitored by staff in the Public Works Department. The City also tracks typical water system activities associated with water losses including water main breaks; valve, hydrant, or service leaks; and relative accuracy of supply and demand meters.

As discussed previously in Section 4.3, beginning in 2016, water suppliers are required to report distribution system water losses based on the AWWA Water Audit Software. This software requires the reporting of metered water sources and metered water demands, the quantification of apparent and real water losses, and the calculation of non-revenue water as a percentage of total system flows. The software then provides a calculated infrastructure leakage index (ILI) based on the input data. According to general guidelines, an ILI of 1.0 to 3.0 is acceptable for systems that fit the following criteria, including the City:

- Water resources are costly to develop or purchase,
- The ability to increase revenues via water rates is greatly limited because of regulation or low ratepayer affordability, and
- Operating with system leakage above this level would require expansion of existing infrastructure and/or additional water resources to meet the demand.

The City first began conducting this annual audit using the AWWA Water Audit Software in 2015 though it was not required for submittal to DWR until 2016. In 2015, the result of the audit was an ILI of 0.0. Following that audit, the City put a focus on ensuring that water production and customer metering data contained minimal errors that would skew the results, and measurable steps have been taken to validate the water audit data in the past five years. Table 9-1 presents the steps taken in each of the past five years (2016-2020) to increase data validity and reduce real and apparent losses alongside the ILI reported by the Water Audit Software for that year. This data shows the City's diligent work towards improving metering accuracy throughout the City and reducing non-revenue water and ILI.

If an audit were to indicate that water losses regularly exceed the City's goals, a full audit will be triggered to identify the sources and determine the impacts on overall system losses. The City has historically had a comprehensive work order management system in place to document leak locations and repair history,

which has provided a solid foundation for ongoing and future water loss control actions. The City may contract with a qualified leak detection company to perform a leak detection survey if deemed necessary.

Table 9-1. Data Improvement Activities

Year	Steps Taken	Water Audit ILI
2016	• Calibrate meters on an annual basis.	3.25
2017	• Increase bench/field testing of residential water meters. • Purchase a listening device to assist in locating water leaks. • Increase tracking of unbilled unmetered water use. • Begin annual calibration of 25 percent of production mag meters and plan to increase the percentage in the following year.	1.33
2018	• Increase tracking of unbilled unmetered authorized consumption. • Replace 6,000 old water meters. • Continue work towards an AMI water metering network.	0.91
2019	• Replace 2,500 water meters. • Work to capture additional unmetered operational water usage.	0.93
2020	• Replace 9,000 water meters. • Install water meters in public parks irrigated with potable water. • Collect water flushing water volumes. • Certify some production mag meters.	1.52

Implementation of this DMM is ongoing and expected to help the City achieve its water use targets by quickly identifying sources of water loss so repairs can be completed in a timely manner and water losses are minimized. In compliance with the DWR requirement, the City will continue to evaluate distribution system losses annually via the AWWA Water Audit software and report to DWR. The City will continue to take actions to reduce water losses by improving metering accuracy and enhancing the overall data quality throughout the system, including a goal of full implementation of AMI by 2025.

9.1.6 Water Conservation Program Coordination and Staffing Support

The City maintains a fully staffed DMM program with two full-time equivalents (FTEs) including one full-time Water Resources Coordinator and part-time staff including: distribution system staff, utility billing staff, and parks and open space staff. Consultant support is also utilized for program planning, development, implementation, and funding on an as-needed basis.

The City's Water Resources Coordinator is responsible for managing the City's Water Conservation Program and implementing the various DMMs discussed in this chapter. However, the position has been vacant since 2019. To maintain the City's water conservation efforts, the Public Works Deputy Director files all required State reporting related to water conservation. The City's administrative staff dedicate approximately 10 percent of their time supporting the City's Water Conservation Program.

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

9.1.7 Other Demand Management Measures

The City will continue to plan and implement DMM programs for its water system using both City-wide programs as well as collaborative regional programs with partners with similar interests when feasible. The benefits of regional programs include shared administrative costs and responsibilities, promotion of customer rebate programs, and expansion of outreach programs currently available to City customers into neighboring areas. The City will continue to support cost-effective regional activities and will focus on improving customer outreach and promoting awareness of available DMM programs. The non-utility based DMM programs available to City water use customers are described below.

9.1.7.1 A Day Without Water

Since 2015, the City has encouraged its constituents to take part in "A Day Without Water," a national education campaign run by the Value of Water Campaign that brings together diverse stakeholders to highlight how water is essential, invaluable, and in need of investment (https://imagineadaywithoutwater.org/). In October of each year, people from all over the world pledge to eliminate or minimize their water use for an entire day.

In 2019, 350 City constituents participated. This has helped the City achieve its water use targets by educating customers on the importance of water conservation.

9.1.7.2 Building Code/New Standards

The California Green Building Standards Code (CALGreen) is the first-in-the-nation state-mandated green building code. It became effective in 2011 and has since been periodically updated, most recently in 2019. CALGreen establishes mandatory green building measures that affect both indoor and outdoor water use such as dedicated meter requirements and regulations addressing landscape irrigation and design. CALGreen also identifies a number of voluntary measures that set a higher standard of efficiency for possible adoption.

CALGreen has required the integration of WaterSense Specification fixtures in new residential developments as well as any additions/alterations to existing residential structures. The City will continue to encourage upgrades to existing (pre-1993) buildings to comply with CALGreen standards and will continue to support incentive programs for conversion of existing buildings to water efficient devices and standards.

The City enforces compliance with CALGreen and SB 407 (Plumbing Retrofit on Resale) that both work to improve the water use efficiency of new buildings as well as older buildings that retrofit fixtures and appliances with newer, more efficient products. The City tracks the conversion of older buildings and fixtures to CALGreen standards through the permitting process.

Implementation of this DMM is ongoing. These codes assist the City in conserving water and reliably meeting any future water use targets by the increasing water use efficiency of buildings.

9.1.7.3 Residential Assistance Programs

Beginning in 2015, the City partnered with Rising Sun Energy Center to provide a free home energy and water audit service. Beginning in 2020, the program shifted to a contact-free program where customers complete a ten-minute online survey to determine their personalized efficiency needs, and a free energy and water efficiency kit is delivered directly to their door with installation instructions. This survey/kit program is offered to any resident, but the City actively targets high-use single-family and multi-family

residential water use customers. High-use residential water use customers are identified based on billing data and are contacted by City Staff who offer a free audit. Participants also receive a home energy and water use assessment, resource conservation tips, and installation of energy and water saving devices at no cost.

Implementation of this DMM is ongoing and will help the City achieve its water use targets by improving water use efficiency and conservation for high-use residential users. The City plans to continue working to increase customer participation in the residential assistance programs through increased advertisement, education, and outreach.

9.1.7.4 High-Efficiency Clothes Washers

City customers are eligible to participate in the City's High-Efficiency Clothes Washers (HECW) rebate program, which has been available since 2011. The water efficiency of clothes washers is represented by a "water factor," which is a measure of the amount of water used to wash a standard load of laundry, and the lower the water factor, the greater the water savings. The participation of water utilities everywhere in HECW rebate programs has transformed the market for washers by forcing manufacturers to lower their water factors.

The current program eligibility requirement is set at a water factor of 7.1 or less, which can save almost 20,000 gallons per year per washer over a conventional top loading washer, and customers receive a $100 rebate when they install a new eligible HECW model. Funding for this program comes from the Water Fund (funded by water rates) and is supplemented by state and/or federal grants whenever possible. Advertisement and full program details of the HECW rebate program are readily available on the City's website (https://www.manteca.gov/departments/public-works/water-division/current-city-rebates).

Implementation of this DMM is ongoing. Tracking of customer participation in this program estimates that more than 27 gallons per day (gpd) are saved for each HECW installed, and it is estimated that the City will save more than 65 MG (200 AF) over the next ten years if program targets are met. Program participation is historically highly correlated with the City's level of marketing efforts. Over the past five years, the City has processed 1,792 HECW rebates.

The City plans to improve and update its website and prominently include information about the HECW rebate program on future bill inserts and other direct mail or marketing campaigns.

9.1.7.5 Toilet Rebate Program

City customers are eligible to participate in the City's Toilet Rebate Program, which has also been available since 2011. The rebate applies to purchases of High-Efficiency Dual Flush toilets with a requirement of 1.28 gallons per flush or less. The EPA's WaterSense list of tested toilets provides the list of qualifying models (https://www.epa.gov/watersense/residential-toilets).

High-efficiency toilets (HETs) are the current standard defined by the plumbing code for all new toilet installations, but through the City's Toilet Rebate Program, customers receive $75 for any High-Efficiency Dual Flush qualifying model that replaces a pre-1993 fixture. The City's webpage advertises its Toilet Rebate Program and provides the rebate application and details (https://www.manteca.gov/departments/public-works/water-division/current-city-rebates).

Implementation of this DMM is ongoing. Tracking of customer participation estimates that 21 and 27 gpd are saved for each High-Efficiency Dual Flush toilet installed in single-family and multi-family units, respectively. It is estimated that the City will save more than 65 MG (200 AF) from installation of water efficient toilets over the next ten years if program targets are met. Over the past five years, the City has processed 1,469 toilet rebates.

The City intends to continue to offer the Toilet Rebate Program providing its customers with the opportunity to upgrade old toilets with new models that comply with CALGreen standards. To inform customers about current incentive opportunities and increase participation, the City also plans to augment existing public outreach efforts through direct mail and enhanced website features.

9.1.7.6 Turf Replacement Program

Through the City's Lawn-to-Garden (Turf Replacement) Program, residential and commercial property owners are eligible to receive up to $1.00 per square foot of turf removed for qualifying projects with actual rebate amounts that are dependent upon current program demand and funding availability. The City's webpage advertises its Turf Replacement Program and additional details on the process (https://www.manteca.gov/departments/public-works/water-division/current-city-rebates).

Implementation of this DMM is ongoing. The Turf Replacement Program helps the City achieve its water use targets by increasing the use of water-efficient landscapes. Over the past five years, the City has processed 35 turf replacement rebates.

The City plans to continue funding the Turf Replacement Program, though the hope is for future programs to provide incentives to customers at no cost to the City.

9.1.7.7 Commercial, Industrial, and Institutional DMMs

All businesses in the City are eligible to participate in the Commercial, Industrial, and Institutional (CII) DMM program that is available to help businesses save water and reduce long term utility costs. As part of this program, the City conducted the following water audits prior to 2018:

- The City of Manteca Court House to identify water saving opportunities and lead by example, and
- Nine of the City's top 30 commercial water users to identify potential water savings opportunities and provide businesses with the opportunity to reduce utility charges impacting their profits.

However, the City discontinued conducting water audits for businesses in 2018.

Qualifying businesses can receive rebates for some water efficiency and conservation measures. The City plans to consider adding the following fixtures to the CII rebate program:

- Weather-based irrigation controllers,
- Central computer irrigation controllers,
- Rotating spray nozzles retrofits,
- High efficiency large rotary nozzle retrofits, and
- Air-cooled ice machines.

Implementation of the CII rebates is ongoing. Over the past five years, the City has experienced very limited participation of this DMM; only one hotel has participated by retrofitting twenty toilets.

The City plans to evaluate the effectiveness of the CII DMM program by tracking multiple parameters, including program participation, metered CII water use, high water users, and water savings from specific CII activities. The City's goal for the next five years is to focus on publicizing the CII DMM program through increased advertising and public outreach efforts. The City also plans to evaluate the implementation of additional CII DMM programs, such as providing water surveys, CII rebates, and promoting industrial process water use reductions.

9.1.7.8 Large Landscape

The City has an extensive non-potable well irrigation network whereby City parks and open spaces greater than five acres in size are equipped with onsite wells that provide non-potable water to meet irrigation demands. The implementation of these non-potable irrigation wells has taken some of the stress off of the City's potable water distribution system. The typical annual water demand for these non-potable irrigation wells ranges from a total of 1,200 to 2,000 AFY. The cost for water at these sites is based on the capital and O&M costs associated with developing and maintaining the non-potable wells for irrigation service. Costs for replacing a non-potable irrigation well located within a community facility district (CFD) are paid for by the members of the CFD.

As part of the large landscape DMM program, City staff identify high-use customers based on usage and acreage. These customers are contacted, provided with information on the services offered by the City, and offered free water use surveys, landscape water use budgets, and landscape training. Large landscape water audits are also available upon request to any City customer. The following training-related opportunities have been provided in the past as part of the large landscape DMM program:

- The City hosted a Model Water Efficient Landscape Ordinance Workshop that was performed by DWR when the State updated its Landscape Water Conservation Ordinance in 2015.
- City staff were trained on water efficient practices including large landscape situations.
- The City offered training for landscape professionals to better understand the City's Unlawful Water Use Ordinance and how to avoid Notices of Violation and fines.

Upon request, the City plans to develop evapotranspiration-based landscape water budgets for users with dedicated irrigation meters, and landscape water use surveys will continue to be offered to customers without dedicated irrigation meters. There are also plans to consider implementing incentive programs for devices such as weather-based irrigation controllers and precision nozzles to mix metered high water use customers with high water savings potential. The large landscape program is available to all large landscape customers free of charge.

Implementation of this DMM program is ongoing. Over the past five years, the City has made this program available to customers but has not received any participation.

The City plans to continue to promote incentive opportunities and raise customer awareness about existing audit program offerings. The City has also been working to increase program participation at schools and other large institutional accounts to establish landscape water budgets and decrease overall water use, and they also plan to continue enhancing program marketing and outreach to reach more CII customers with large, landscaped areas to manage. The City plans to evaluate specific measures that could

be implemented to encourage broader interest in the current large landscape programs as well as investigate potential funding opportunities to improve program effectiveness.

9.1.7.9 Information and Tracking

Information and tracking represent an ongoing element of the City's existing DMM programs. The immediate priorities of the City's information and tracking activities include:

- **Automatic Meter Reading (AMR)/AMI** – The City is currently working to establish an AMI system by 2025 to allow City staff to obtain real-time water usage data for identification of customer-side leaks on a real-time basis. With AMI, the City could easily monitor the impacts of implemented DMM programs through water savings and make timely program adjustments or additions where necessary to develop the most water-savings-efficient and cost-effective programs. Customers with AMI are able to access this water usage data through a customer portal to monitor and manage their water use. During water shortage conditions, an AMI system could assist the City in identifying the necessity for any additional demand reduction measures. The City will continue to prioritize the deployment of an AMR/AMI compatible system.
- **Water Use Tracking Tools** – The City plans to design and develop a database with tools for tracking water savings associated with DMM programs in order to increase flexibility in adding or changing program elements.

Implementation of information and tracking is ongoing. The focus is on collecting and processing water use data and evaluating the effectiveness of the DMM programs to meet participation and water savings targets. The information collected provides a robust dataset regarding customers and their water use patterns which can then be used to aid in the improvement of existing DMM programs and the design of new DMM programs.

9.2 MEMBERS OF THE CALIFORNIA WATER EFFICIENCY PARTNERSHIP

The City is an active member of the California Water Efficiency Partnership establishing a firm commitment to the implementation of DMMs to conserve its water supplies. The City plans to continue implementation of its DMMs into the future. The City also plans to comply with SB 555 as part of its future water loss control program. As described in this chapter, other DMMs may be implemented by the City (subject to City Council approval) as deemed necessary based on customer participation, water savings, cost effectiveness, and other relevant factors.

9.3 WATER USE OBJECTIVES (FUTURE REQUIREMENTS)

In 2018, the State Legislature enacted two policy bills, (SB 606 (Hertzberg) and Assembly Bill (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 were in the process of developing new standards for indoor and outdoor residential water use. These standards will require urban water retailers to develop agency-wide water use objectives, provide annual reports and update their UWMP.

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. 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 in the near future. 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.

By November 1, 2023, the City will calculate its urban water use objective and actual water use. In accordance with CWC §10609.24, the City will submit an annual report starting January 1, 2024, and provide an annual report by January 1 every year thereafter, reporting its progress toward meeting its urban water use objective.

CHAPTER 10
Plan Adoptions, Submittal and Implementation

This chapter provides information regarding the notification, public hearing, adoption, and submittal of the City's 2020 UWMP and WSCP. 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 City 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 City must provide an opportunity for the public to provide input on this 2020 UWMP, including the WSCP. The City must consider all public input prior to its adoption. There are two audiences to be notified for the public hearing: cities, counties, and neighboring water districts; and the public.

10.2.1 Notices to Cities and Counties

The City provided greater than a 60-day notice regarding the preparation of its 2020 UWMP and WSCP to cities and counties as well as neighboring water agencies near its service area as discussed in Section 2.5 of this plan. The notices of preparation are included as Appendix D. The City provided notices to the following agencies:

- City of Escalon
- City of Lathrop
- City of Ripon
- City of Tracy
- San Joaquin County
- South San Joaquin Irrigation District
- Mountain House Community Services District

Upon substantial completion of this 2020 UWMP and WSCP, the City provided the agencies listed above, including the County, notices of availability and public hearing (Appendix D).

Notifications to cities and counties 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)

City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
City os Escalon	Yes	
City of Lathrop	Yes	
City of Ripon	Yes	
City of Tracy	Yes	
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
San Joaquin County	Yes	

10.2.2 Notice to the Public

To allow ample time for the public to prepare comments, the City issued a notice of availability and public hearing to the public and provided a public review period following the notice and prior to adoption of the 2020 UWMP and WSCP. A notice of availability and public hearing was issued in accordance with Government Code Section 6066 and was published twice in the *Manteca Bulletin* newspaper to notify all customers and local governments of the public hearing. In addition, the notice was posted on the City's website. A copy of the published Notice of Public Hearing is included in Appendix D.

10.3 PUBLIC HEARING AND ADOPTION

The City encouraged community participation in the development of this 2020 UWMP, including the 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 City water users and the general public to become familiar with the 2020 UWMP and WSCP and ask questions about the City'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 and WSCP were made available for public inspection at the City's offices, at local public libraries, and on the City website.

10.3.1 Public Hearing

A public hearing was held on ____. As part of the public hearing, the City provided a report on the City's compliance with the Water Conservation Act of 2009. The report included information on the City's baseline, water use 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 and WSCP were adopted by the City Council on _____ __, 2023. Copies of the adopted resolutions are included in Appendix K.

10.4 PLAN SUBMITTAL

The adopted 2020 UWMP was submitted electronically to DWR within 30 days of adoption using the Water Use Efficiency (WUE) data submittal tool. A CD or hard copy of the adopted 2020 UWMP was also submitted to the California State Library.

No later than 30 days after adoption, a copy of the adopted 2020 UWMP, including the WSCP, was provided to the cities and counties to which the City provides water.

10.5 PUBLIC AVAILABILITY

No later than 30 days after submittal to DWR, copies of this plan, including the WSCP, were made available at the City's offices for public review during normal business hours. An electronic copy of this 2020 UWMP and WSCP was also made available for review and download on the City's website: https://www.manteca.gov/.

10.6 PLAN IMPLEMENTATION

This 2020 UWMP will be the source document for any SB 610 Water Supply Assessments or SB 221 Water Supply Verifications required for any proposed projects between 2021 and 2025 that are subject to the California Environmental Quality Act and would demand an amount of water equivalent or greater than the amount of water required by a 500-dwelling-unit project. Also, this 2020 UWMP will provide guidance and direction on development of new local supplies and implementation of water conservation programs to meet the future conservation requirements.

10.7 AMENDING AN ADOPTED UWMP OR WSCP

The City may amend its 2020 UWMP and WSCP jointly or separately. If the City amends one or both documents, the City will follow the notification, public hearing, adoption, and submittal process described in Sections 10.2 through 10.4 above. In addition to submitting amendments to DWR through the WUE data portal, copies of amendments or changes to the plans will be submitted to the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

2020 Urban Water Management Plan Appendices

PREPARED FOR

City of Manteca

PREPARED BY

WEST YOST
Water. Engineered.

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*[(a)]
Add additional rows as needed			
CA3910005	Manteca, City of	23,436	15,320
	TOTAL	23,436	15,320
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in DWR Table 2-3.*			

NOTES:
(a) Volumes are in AF.

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
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP * (select from drop down)	
Unit	AF
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

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
Add additional rows as needed
South San Joaquin Irrigation District
NOTES:

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served[(a)]	2020	2025	2030	2035	2040	2045*(opt)*
	83,470	87,173	91,816	95,901	99,310	102,067

NOTES:
(a) Population is from California Department of Finance Estimates, benchmarked to the 2020 Census. Population projections are based on DOF Report P-2A and projections for San Joaquin County, applied to the City of Manteca's 2020 population.

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type[1]	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,a,b)]
Add additional rows as needed			
Single Family		Drinking Water	10,716
Multi-Family		Drinking Water	970
Commercial		Drinking Water	1,540
Industrial		Drinking Water	146
Landscape		Drinking Water	802
Losses[(c)]		Drinking Water	1,073
Other Potable		Drinking Water	35
		TOTAL	15,282

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in DWR Table 6-4.*

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

NOTES:

(a) Volumes are in AF.

(b) Commercial use includes institutional uses, consistent with the City's Large Water System annual reporting. Other potable water use includes unbilled authorized consumption.

(c) Losses are based on the City's annual AWWA Audit Worksheet.

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type[1]	Additional Description (as needed)	Projected Water Use[(2,a,b)] *Report To the Extent that Records are Available*				
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		11,301	11,887	12,472	13,057	13,642
Multi-Family		1,243	1,516	1,788	2,061	2,334
Commercial		1,720	1,899	2,079	2,258	2,438
Industrial		218	290	362	434	505
Landscape		818	833	849	864	880
Other Potable		36	36	37	38	38
Losses		1,093	1,114	1,134	1,154	1,175
	TOTAL	16,428	17,574	18,720	19,866	21,012

[1] *Recycled water demands are NOT reported in this table. Recycled water demands are reported in DWR Table 6-4.*

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

NOTES:

(a) Volumes are in AF.

(b) 2040 projected water use is based on the City's 2022 Recirculated Draft EIR for the Manteca General Plan Update (Table 3.15-6), with the assumption that 15% of demands from commercial and industrial land uses are for landscaping irrigation. 5-year increments are linearly interpolated. 2045 projections assume continued growth at the same rate.

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020[(a)]	2025[(a)]	2030[(a)]	2035[(a)]	2040[(a)]	2045 (opt)[(a)]
Potable Water, Raw, Other Non-potable *From DWR Tables 4-1R and 4-2 R*	15,282	16,428	17,574	18,720	19,866	21,012
Recycled Water Demand[1] *From DWR Table 6-4*	718	718	2,692	2,693	2,694	2,695
Optional Deduction of Recycled Water Put Into Long-Term Storage[2]						
TOTAL WATER USE	15,999	17,146	20,266	21,413	22,560	23,707

[1] Recycled water demand fields will be blank until DWR 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 DWR Table 4-3.*

NOTES:
(a) Volumes are in AF.

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,a,b]
01/2016	1,119
01/2017	551
01/2018	441
01/2019	455
01/2020	1,073
[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: (a) Volumes are in AF. (b) From Annual AWWA Audit Worksheets.	

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) *Drop down list (y/n)*	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.	N/A
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
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*[(a)]	2017*[(a)]	2018*[(a)]	2019*[(a)]	2020*[(a)]
Add additional rows as needed						
Alluvial Basin	San Joaquin Valley Groundwater Basin - ESJ Subbbasin	5,499	4,729	5,093	4,446	6,038
	TOTAL	5,499	4,729	5,093	4,446	6,038
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in DWR Table 2-3.*						

NOTES:
(a) Volumes are in AF.

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.						
100	Percentage of 2020 service area covered by wastewater collection system *(optional)*						
100	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*[(a)]	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*	
City of Manteca	Metered	7,886	City of Manteca	City of Manteca Wastewater Quality Control Facility	Yes	No	
Total Wastewater Collected from Service Area in 2020:		7,886					
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in DWR Table 2-3* **.**							

NOTES:
(a) Volumes are in AF.

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,a]				
							Wastewater Treated	Discharged Treated Wastewater[b]	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
City of Manteca Wastewater Quality Control Facility	EFF-001	San Joaquin River	5B390104001	River or creek outfall		Tertiary	7,886	7,168	718	0	0
						Total	7,886	7,168	718	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR 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:

(a) Volumes are in AF.

(b) Discharged treated wastewater is assumed to be the difference between treated wastewater and recycled wastewater.

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:	City of Manteca
Name of Supplier Operating the Recycled Water Distribution System:	City of Manteca
Supplemental Water Added in 2020 (volume) *Include units*	0 AF
Source of 2020 Supplemental Water	N/A

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* [1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020[1,a]	2025[1,a]	2030[1,a]	2035[1,a]	2040[1,a]	2045[1,a] (opt)
Agricultural irrigation[b]	Irrigation of fodder crops		Irrigation of fodder crops	Secondary, Disinfected - 23	677	677	0	0	0	0
Landscape irrigation[c] (exc golf courses)	Irrigation of ornamental landscape			Tertiary	36	36	2,280	2,280	2,280	2,280
Golf course irrigation	Irrigation of turf			Tertiary	0	0	406	406	406	406
Commercial use[d]	Dust control, soil compaction, concrete mixing, pressure testing new utility lines, trench backfill consolidation, etc.		Dust control at construction sites	Tertiary	5	5	6	7	8	9
Industrial use				Tertiary	0	0	0	0	0	0
				Total:	718	718	2,692	2,693	2,694	2,695
				2020 Internal Reuse[e]	476					

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

NOTES:
(a) Volumes are in AF.
(b) Agricultural irrigation is expected to continue at the current level until construction of the City's Family Entertainment Zone replaces agricultural lands, identified in Phase 4 of the City's RWFMP.
(c) Projected recycled water use volumes for landscape irrigation are summarized from Table 6-1 of the City's RWFMP (Janurary 2023).
(d) Commercial is assumed to increase by an average of 2.5% annually due to increased construction.
(e) Internal reuse is process water at the WQCF which is projected to reach a maximum of 550 AF based on Table 4-7 of the City's RWFMP.

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[1,a]	2020 Actual Use[1,a]
Insert additional rows as needed.		
Agricultural irrigation	870	677
Landscape irrigation (exc golf courses)	0	36
Golf course irrigation		
Commercial use	30	5
Industrial use	0	476
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	900	1,194

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

NOTE:
(a) Volumes are in AF.

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.		
6-8	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use*[a]
Add additional rows as needed			
RWFMP Phase 1[b]	Install booster chlorination system and complete retrofits at the WQCF	2024	336
RWFMP Phase 2[b]	Construct pump station at WQCF, rehabilitate existing sanitary sewer force mains, install pipe and complete retrofits at Big League Dreams	2025	Varies
RWFMP Phase 3[b]	Install recycled water pipelines to serve all additional existing customers, complete retrofits for existing customers, construct storage tank at WQCF	2027	Varies
RWFMP Phase 4[b]	Install recycled water pipelines to serve future customers, upsize WQCF pump station, construct additional storage tank at WQCF	2030-2040	Varies
		Total	336
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*			

NOTES:
(a) Volumes are in AF.
(b) RWFMP Phases 1-4 to expand the City's recycled water system are summarized from Table 6-5 of the City's RWFMP.

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.					
6-14	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*(a) *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
Nick C. DeGroot WTP Phase 2	Yes	SSJID and Cities of Tracy, Lathrop, and Escalon	Assumes 2040 completion of Phase 2 WTP expansion	2040	All Year Types	7,000
RWFMP Phase 1-4	Yes	City of Lathrop	Assumes completion of RWFMP Phase 1-4 to expand the City's recycled water system and maximize recycled water use within the City's service area.	2030-2040	All Year Types	10,282
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*						

NOTES:
(a) Volumes are in AF.
(b) Expected increase in recycled water supply for use within the City's service area is equivalent to the available recycled water supply in 2040 (11,000 AFY) minus the actual 2020 recycled water use volume.

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
Drop down list May use each category multiple times.These are the only water supply categories that will be recognized by the WUEdata online submittal tool		Actual Volume*(a)	Water Quality Drop Down List	Total Right or Safe Yield*(a) (optional)
Add additional rows as needed				
Purchased or Imported Water	SCWSP Treated Surface Water	9,244	Drinking Water	11,500
Groundwater (not desalinated)	ESJ Subbasin	6,038	Drinking Water	8,164
Recycled Water	Secondary Treated	677	Recycled Water	2,000
Recycled Water	Tertiary Treated	517	Recycled Water	5,000
	Total	16,476		26,664
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*				

NOTES:
(a) Volumes are in AF.

Submittal Table 6-9 Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply*(a,b,c,d) Report To the Extent Practicable									
Drop down list May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool		**2025**		**2030**		**2035**		**2040**		**2045** (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Add additional rows as needed											
Purchased or Imported Water	SCWSP Treated Surface Water	11,500	11,500	11,500	11,500	11,500	11,500	18,500	18,500	18,500	18,500
Groundwater (not desalinated)	ESJ Subbasin	9,727	9,727	13,490	13,490	15,052	15,052	16,615	16,615	18,178	18,178
Recycled Water	Tertiary Treated	718	5,150	2,692	11,000	2,693	11,000	2,694	11,000	2,695	11,000
	Total	21,945	26,377	27,682	35,990	29,245	37,552	37,809	46,115	39,373	47,678

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

NOTES:

(a) Volumes are in AF.

(b) Purchased water reasonably available volume based on Table 4-2 from SSJID 2020 UWMP.

(c) Projected groundwater supply is assumed to be equal to the calculated total safe yield from the ESJ Subbasin minus the City-owned non-potable irrigation wells serving parks and schools, and SSJID-owned non-potable wells within City limits. The projected groundwater supplies for 2025 to 2035 were linearly interpolated between the 2020 total safe yield (12,925 AFY/acre) and estimated 2040 total safe yield. Projected groundwater supply for 2045 was linearly extrapolated. Non-potable irrigation well groundwater use from Table 2-3 of the City's RWFMP (January 2023) was subtracted from the projected total safe yields for each year.

(d) Reasonably available volume for recycled water is assumed to be equivalent to projected recycled water demands within the City's water service area. The total safe yield of recycled water is assumed to be equivalent to the available recycled water supply from Table 3-2 in the City's RWFMP (January 2023).

Table 6-12. Energy Intensity – Total Utility Approach (DWR Table O-1B)

Enter Start Date for Reporting Period	1/1/2020	**Urban Water Supplier Operational Control**		
End Date	12/31/2020			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit)		*6,038*	*0*	*6,038*
Energy Consumed (kWh)		*3,010,452*	*0*	*3,010,452*
Energy Intensity (kWh/volume)		*498.6*	*0.0*	*498.6*

Quantity of Self-Generated Renewable Energy

0 kWh

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

Metered Data

Data Quality Narrative:

Monthly electrical energy data was provided for groundwater wells and storage tank pump stations.

Narrative:

The energy data provided summarizes the monthly energy consumption for operating the City's groundwater wells and storage tanks. Energy use for water purchased from SSJID is not under the City's operational control, and therefore is not included in this table. Recycled water energy use is in Table O-2.

Table 6-13. Energy Intensity – Wastewater & Recycled Water (DWR Table O-2)

Urban Water Supplier: *City of Manteca*

Table O-2: Recommended Energy Reporting - Wastewater & Recycled Water					
Enter Start Date for Reporting Period	1/1/2020	Urban Water Supplier Operational Control			
End Date	12/31/2020	Water Management Process			
☐ Is upstream embedded in the values reported?		Collection / Conveyance	Treatment	Discharge / Distribution	Total
Volume of Water Units Used	AF				
Volume of Wastewater Entering Process (volume units selected above)		*7,886*	*7,886*	*7,168*	*7,886*
Wastewater Energy Consumed (kWh)		*530,294*	*9,864,696*	*0*	*10,394,990*
Wastewater Energy Intensity (kWh/volume)		*67.2*	*1250.9*	*0.0*	*1,318.2*
Volume of Recycled Water Entering Process (volume units selected above)		*0*	*718*	*718*	*718*
Recycled Water Energy Consumed (kWh)		*0*	*0*	*0*	*0*
Recycled Water Energy Intensity (kWh/volume)		*0.0*	*0.0*	*0.0*	*0.0*

Quantity of Self-Generated Renewable Energy related to recycled water and wastewater operations

kWh

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

Metered Data

Data Quality Narrative:

Monthly electrical data provided for the WQCF and wastewater lift stations owned by the City.

Narrative:

The energy data provided summarizes the monthly energy consumption for operating the City's WQCF and wastewater lift stations. The energy use for the treatment and distribution of recycled water is not metered separately, therefore, recycled water energy consumed is shown as zero and is included in the total wastewater energy consumed.

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: Table 7-2 and Table 7-3	
		☐	Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available *		**% of Average Supply**
Average Year				100%
Single-Dry Year				
Consecutive Dry Years 1st Year				
Consecutive Dry Years 2nd Year				
Consecutive Dry Years 3rd Year				
Consecutive Dry Years 4th Year				
Consecutive Dry Years 5th Year				

Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.

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

OPTIONAL Table 7-2 Retail: Normal Year Supply and Demand Comparison - Potable					
	2025[a]	2030[a]	2035[a]	2040[a]	2045[a] (Opt)
Supply totals[b] *(autofill from DWR Table 6-9)*	21,227	24,990	26,552	35,115	36,678
Demand totals *(autofill from DWR Table 4-3)*	16,428	17,574	18,720	19,866	21,012
Difference	4,799	7,416	7,832	15,249	15,666

NOTES:
(a) Volumes are in AF.
(b) The City's potable water supplies include SSJID surface water and groundwater pumped by City owned wells.

OPTIONAL Table 7-2 Retail: Normal Year Supply and Demand Comparison - NonPotable					
	2025[a]	2030[a]	2035[a]	2040[a]	2045[a] (Opt)
Supply totals *(autofill from DWR Table 6-9)*	718	2,692	2,693	2,694	2,695
Demand totals *(autofill from DWR Table 4-3)*	718	2,692	2,693	2,694	2,695
Difference	0	0	0	0	0

NOTES:
(a) Volumes are in AF.
(b) The City anticipates producing recycled water to be equivalent to their customer's recycled water demands. Therefore, the recycled water supply totals are equivalent to recycled water demand totals.

OPTIONAL Table 7-3 Retail: Single Dry Year Supply and Demand Comparison - Non-Potable					
	2025[(a)]	2030[(a)]	2035[(a)]	2040[(a)]	2045[(a)] (Opt)
Supply totals	718	2,692	2,693	2,694	2,695
Demand totals	718	2,692	2,693	2,694	2,695
Difference	0	0	0	0	0

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

NOTES:
(a) Volumes are in AF.
(b) The City anticipates producing recycled water to be equivalent to their customer's recycled water demands. Therefore, the recycled water supply totals are equivalent to recycled water demand totals.

OPTIONAL Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison - Non-Potable						
		2025[(a)]	2030[(a)]	2035[(a)]	2040[(a)]	2045[(a)] (Opt)
First year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
Second year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
Third year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
Fourth year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
Fifth year	Supply totals	718	2,692	2,693	2,694	2,695
	Demand totals	718	2,692	2,693	2,694	2,695
	Difference	0	0	0	0	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in DWR Table 2-3.*						

NOTES:
(a) Volumes are in AF.
(b) The City anticipates producing recycled water to be equivalent to their customer's recycled water demands. Therefore, the recycled water supply totals are equivalent to recycled water demand totals.

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total[a]**
Total Water Use	15,511
Total Supplies	18,276
Surplus/Shortfall w/o WSCP Action	2,765
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	2,765
Resulting % Use Reduction from WSCP action	0%
2022	**Total[a]**
Total Water Use[b]	15,740
Total Supplies	19,014
Surplus/Shortfall w/o WSCP Action	3,273
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	3,273
Resulting % Use Reduction from WSCP action	0%
2023	**Total[a]**
Total Water Use	15,969
Total Supplies	17,900
Surplus/Shortfall w/o WSCP Action	1,931
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	1,931
Resulting % Use Reduction from WSCP action	0%
2024	**Total[a]**
Total Water Use	16,198
Total Supplies	18,638
Surplus/Shortfall w/o WSCP Action	2,439
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	2,439
Resulting % Use Reduction from WSCP action	0%
2025	**Total[a]**
Total Water Use	16,428
Total Supplies	21,227
Surplus/Shortfall w/o WSCP Action	4,799
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	4,799
Resulting % Use Reduction from WSCP action	0%

NOTES:
(a) Volumes are in AF.
(b) Total water uses for 2021-2025 were linearly interpolated between 2020 actual water use (as shown in DWR Table 4-1) and 2025 projected water use (as shown in DWR Table 4-2), and provided in Table 4-4 of this UWMP.

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
City os Escalon	Yes	
City of Lathrop	Yes	
City of Ripon	Yes	
City of Tracy	Yes	
South San Joaquin Irrigation District	Yes	
Mountain House Community Services District	Yes	
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Add additional rows as needed		
San Joaquin County	Yes	
NOTES:		

Appendix C

DWR 2020 Urban Water Management Plan 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	Executive Summary
X	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	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
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 2.5 and Appendix D
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 and 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
	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; City is not a Wholesale Supplier
X	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 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
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 3.5

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 4.4
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 4.5
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 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 4.4
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 4.6
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 4.2.3.1 and Section 4.7
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 5.2 and Section 5.5
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; City is not a Wholesale Supplier
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
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 5.6
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 F
X	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Chapter 6 and Chapter 7

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 6.9, Section 6.10, and Chapter 7
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, Section 6.2, and Section 6.5
X	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Section 6.8 and Section 6.9
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 6.9
X	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2
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 6.2.1
X	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.2.1
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 6.2.1
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 6.2.1
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 6.2.2
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 6.2.3
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 6.7
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 6.5.2

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(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and Section 6.5.4
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 6.5.4
X	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.4
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 6.5.4
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 6.5.4
X	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6
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 6.5.2
X	Section 6.2.8, and 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 6.8
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 6.11
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
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 next 20 years.	Water Supply Reliability Assessment	Section 7.1.3 and Section 7.1.4

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)	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 7.1.3, Section 7.1.4, and Section 7.3
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
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 7.3
X	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Section 8.2 and Appendix G
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 G: Section 2.0
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 G: Section 11
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 G: Section 3.1
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 G: Sections 3.2 and 3.3
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 G: Section 4.0

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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	Appendix G: Section 4.0
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 G: Section 5.3
X	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Appendix G: Section 5.1
X	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Appendix G: Section 5.4
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 G: Section 5.2
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 G: Section 5.1
X	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Appendix G: Section 5.6
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 G: Section 6.0
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 G: Section 6.0
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 G: Section 7.0
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 G: Section 8.0
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 G: Section 8.0
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 G: Section 8.0
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 G: Section 9.0

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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 G: Section 9.0
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 G: Section 9.0
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 G: Section 10
X	Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Appendix G: Section 12.0
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 G: Section 13.0
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 G: Section 13.0
	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; City is not a Wholesale supplier
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 9.1
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
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 and Appendix D
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 and Appendix K

Retail	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
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 10.3 and 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 and Appendix K
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
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 10.7

Appendix D

Agency and Public Notices

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

January 12, 2023

Justin Collins
Public Works Superintendent
City of Escalon
2060 McHenry Avenue
Escalon, Ca. 95320-9484

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

Dear Mr. Collins:

The City of Manteca (City) 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 the City's WSCP. The City's 2015 UWMP was adopted on September 20, 2016, and the City's 2020 UWMP is now required to be submitted to the California Department of Water Resources.

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 City coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP and WSCP updates. The City will be reviewing the UWMP and WSCP and will make amendments and updates, as appropriate.

If you wish to contact the City about its review process, you may do so by writing to the undersigned or by email to cbrown@manteca.gov .

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

Sincerely,

Carl Brown
Director of Public Works
City of Manteca

cc: File
City of Escalon
City of Lathrop
City of Ripon
City of Tracy
San Joaquin County Public Works
South San Joaquin Irrigation District
Mountain House Community Service District

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

January 12, 2023

Michael King
Director of Public Works
City of Lathrop
390 Towne Centre Drive
Lathrop, Ca. 95330

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

Dear Mr. King:

The City of Manteca (City) 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 the City's WSCP. The City's 2015 UWMP was adopted on September 20, 2016, and the City's 2020 UWMP is now required to be submitted to the California Department of Water Resources.

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CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

Sincerely,

Carl Brown
Director of Public Works
City of Manteca

cc: File
City of Escalon
City of Lathrop
City of Ripon
City of Tracy
San Joaquin County Public Works
South San Joaquin Irrigation District
Mountain House Community Service District

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

January 12, 2023

James Pease
Director of Public Works
City of Ripon
259 North Wilma Avenue
Ripon, Ca. 95366

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

Dear Mr. Pease:

The City of Manteca (City) 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 the City's WSCP. The City's 2015 UWMP was adopted on September 20, 2016, and the City's 2020 UWMP is now required to be submitted to the California Department of Water Resources.

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CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

Sincerely,

Carl Brown
Director of Public Works
City of Manteca

cc: File
City of Escalon
City of Lathrop
City of Ripon
City of Tracy
San Joaquin County Public Works
South San Joaquin Irrigation District
Mountain House Community Service District

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

January 12, 2023

James Jackson
Director of Operations & Utilities
City of Tracy
520 Tracy Boulevard
Tracy, Ca. 95376

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

Dear Mr. Jackson:

The City of Manteca (City) 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 the City's WSCP. The City's 2015 UWMP was adopted on September 20, 2016, and the City's 2020 UWMP is now required to be submitted to the California Department of Water Resources.

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CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

Sincerely,

Carl Brown
Director of Public Works
City of Manteca

cc: File
City of Escalon
City of Lathrop
City of Ripon
City of Tracy
San Joaquin County Public Works
South San Joaquin Irrigation District
Mountain House Community Service District

1001 W. CENTER ST. MANTECA, CA 95337 (209) 456-8400 FAX (209) 923-8940

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

January 12, 2023

Nader Shareghi
Director of Public Works
Mountain House CSD
251 E. Main Street
Mountain House, Ca. 95391

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

Dear Mr. Shareghi:

The City of Manteca (City) 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 the City's WSCP. The City's 2015 UWMP was adopted on September 20, 2016, and the City's 2020 UWMP is now required to be submitted to the California Department of Water Resources.

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CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

Sincerely,

Carl Brown
Director of Public Works
City of Manteca

cc: File
City of Escalon
City of Lathrop
City of Ripon
City of Tracy
San Joaquin County Public Works
South San Joaquin Irrigation District
Mountain House Community Service District

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

January 12, 2023

Fritz Buchman
Director of Public Works
San Joaquin County
P.O. Box 1810
Stockton, Ca. 95201-1810

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

Dear Mr. Buchman:

The City of Manteca (City) 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 the City's WSCP. The City's 2015 UWMP was adopted on September 20, 2016, and the City's 2020 UWMP is now required to be submitted to the California Department of Water Resources.

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CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

Sincerely,

Carl Brown
Director of Public Works
City of Manteca

cc: File
City of Escalon
City of Lathrop
City of Ripon
City of Tracy
San Joaquin County Public Works
South San Joaquin Irrigation District
Mountain House Community Service District

1001 W. CENTER ST. MANTECA, CA 95337 (209) 456-8400 FAX (209) 923-8940

CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

January 12, 2023

Peter Richert
General Manager
South San Joaquin Irrigation District
P.O. Box 747
Ripon, Ca. 95366

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

Dear Mr. Richert:

The City of Manteca (City) 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 the City's WSCP. The City's 2015 UWMP was adopted on September 20, 2016, and the City's 2020 UWMP is now required to be submitted to the California Department of Water Resources.

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CITY OF MANTECA

PUBLIC WORKS DEPARTMENT

Sincerely,

Carl Brown
Director of Public Works
City of Manteca

cc: File
City of Escalon
City of Lathrop
City of Ripon
City of Tracy
San Joaquin County Public Works
South San Joaquin Irrigation District
Mountain House Community Service District

Appendix E

Distribution System 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: City of Manteca (3910005)
Reporting Year: 2020 (1/2020 - 12/2020)

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

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

Master Meter and Supply Error Adjustments

WATER SUPPLIED

				Pcnt:	Value:	
Volume from own sources:	6	1,967.506	MG/Yr			MG/Yr
Water imported:	3	3,012.327	MG/Yr			MG/Yr
Water exported:	n/a		MG/Yr			MG/Yr
	8					
	3					

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

WATER SUPPLIED: 4,979.833 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option

			Pcnt:	Value:	
Billed metered:	8	4,618.755	MG/Yr			
Billed unmetered:	n/a		MG/Yr			
Unbilled metered:	4	116.400	MG/Yr			
Unbilled unmetered:	5	12.450	MG/Yr		12.450	MG/Yr

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

AUTHORIZED CONSUMPTION: 4,747.605 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 232.228 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		12.450	MG/Yr	0.25%		MG/Yr
Customer metering inaccuracies:	1	47.830	MG/Yr	1.00%		MG/Yr
Systematic data handling errors:	5	11.547	MG/Yr	0.25%	11.547	MG/Yr

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

Apparent Losses: 71.826 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 160.402 MG/Yr

WATER LOSSES: 232.228 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 361.078 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	10	322.0	miles
Number of active AND inactive service connections:	8	23,436	
Service connection density:		73	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	55.0	psi

COST DATA

Total annual cost of operating water system:	10	$16,423,687	$/Year	
Customer retail unit cost (applied to Apparent Losses):	5	$1.35	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	9	$1,293.00	$/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: Water imported
2: Customer metering inaccuracies
3: Volume from own sources

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: City of Manteca (3910005)
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:	5	1,448.802	MG/Yr	8		MG/Yr
Water imported:	7	2,881.324	MG/Yr	8		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: 4,330.126 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	5	3,941.573	MG/Yr			
Billed unmetered:	n/a	0.000	MG/Yr			
Unbilled metered:	9	186.161	MG/Yr			
Unbilled unmetered:	5	54.127	MG/Yr	1.25%		MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 4,181.861 MG/Yr

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

WATER LOSSES (Water Supplied - Authorized Consumption) 148.265 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		10.825	MG/Yr	0.25%		MG/Yr

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

Customer metering inaccuracies:	4	31.192	MG/Yr	0.75%	MG/Yr
Systematic data handling errors:	5	9.854	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: 51.871 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 96.394 MG/Yr

WATER LOSSES: 148.265 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 388.553 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	307.0	miles	
Number of active AND inactive service connections:	8	23,500		
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: 5 | 55.0 psi

COST DATA

Total annual cost of operating water system:	10	$17,036,817	$/Year	
Customer retail unit cost (applied to Apparent Losses):	5	$1.35	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$234.43	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 62 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: Water imported
2: Volume from own sources
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: City of Manteca (3910005)
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:	5	1,356.073	MG/Yr	8			MG/Yr
Water imported:	7	3,080.252	MG/Yr	8			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: 4,436.325 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option

Pcnt: Value:

Billed metered:	5	3,931.726	MG/Yr		
Billed unmetered:	n/a	0.000	MG/Yr		
Unbilled metered:	9	305.333	MG/Yr		
Unbilled unmetered:		55.454	MG/Yr	1.25%	MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 4,292.513 MG/Yr

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

WATER LOSSES (Water Supplied - Authorized Consumption) 143.812 MG/Yr

Apparent Losses

Pcnt: Value:

Unauthorized consumption:		11.091	MG/Yr	0.25%	MG/Yr

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

Customer metering inaccuracies:	4	32.018	MG/Yr	0.75%	MG/Yr
Systematic data handling errors:		9.829	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: 52.938 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 90.874 MG/Yr

WATER LOSSES: 143.812 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 504.599 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	291.0	miles
Number of active AND inactive service connections:	8	22,596	
Service connection density:		78	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 | 55.0 psi

COST DATA

Total annual cost of operating water system:	10	$17,874,862	$/Year	
Customer retail unit cost (applied to Apparent Losses):	5	$1.35	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	5	$238.81	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 63 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: Water imported
2: Volume from own sources
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: City of Manteca (3910005)
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:	5	1,540.833	MG/Yr			MG/Yr
Water imported:	7	2,648.995	MG/Yr			MG/Yr
Water exported:	n/a		MG/Yr			MG/Yr

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

WATER SUPPLIED: 4,189.828 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	5	3,927.041	MG/Yr			
Billed unmetered:	n/a		MG/Yr			
Unbilled metered:	9	30.944	MG/Yr			
Unbilled unmetered:		52.373	MG/Yr	1.25%		MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: 4,010.358 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption)

179.470 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		10.475	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	29.909	MG/Yr	0.75%	MG/Yr
Systematic data handling errors:		9.818	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: 50.201 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 129.268 MG/Yr

WATER LOSSES: 179.470 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 262.787 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	289.5	miles
Number of active AND inactive service connections:	8	21,873	
Service connection density:		76	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	55.0	psi

COST DATA

Total annual cost of operating water system:	10	$14,468,311	$/Year
Customer retail unit cost (applied to Apparent Losses):	5	$1.35	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	5	$234.43	$/Million gallons

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 61 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: Water imported
2: Volume from own sources
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: City of Manteca (3910005)
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.

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

Master Meter and Supply Error Adjustments

WATER SUPPLIED

					Pcnt:	Value:	
Volume from own sources:	5	1,791.798	MG/Yr	5			MG/Yr
Water imported:	7	1,967.078	MG/Yr	8			MG/Yr
Water exported:	n/a		MG/Yr				MG/Yr

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

WATER SUPPLIED: 3,758.876 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option

				Pcnt:	Value:	
Billed metered:	5	3,339.000	MG/Yr			
Billed unmetered:	n/a		MG/Yr			
Unbilled metered:	9	46.000	MG/Yr			
Unbilled unmetered:	5	9.397	MG/Yr		9.397	MG/Yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: ? 3,394.397 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 364.479 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		9.397 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	34.192 MG/Yr	1.00%		MG/Yr
Systematic data handling errors:		0.000 MG/Yr	0.25%		MG/Yr

Systematic data handling errors are likely, please enter a positive, non-zero value; otherwise grade = 1 (not displayed)

Apparent Losses: ? 43.589 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 320.890 MG/Yr

WATER LOSSES: 364.479 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 419.876 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	9	276.0	miles
Number of active AND inactive service connections:	8	22,000	
Service connection density:		80	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 55.0 psi

COST DATA

Total annual cost of operating water system:	10	$13,347,448	$/Year
Customer retail unit cost (applied to Apparent Losses):	5	$1.35	$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	5	$964.99	$/Million gallons

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 59 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: Water imported
3: Customer metering inaccuracies

Appendix F

SB X7-7 Compliance Forms

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal DWR Table 2-3.*

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)[(a)] or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES: (a) DOF population for 2020 was benchmarked to the 2020 Census.	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population[(a)]	
2020	83,470
NOTES: (a) 2020 population from Department of Finance, benchmarked to the 2020 Census.	

SB X7-7 Table 4: 2020 Gross Water Use

Compliance Year 2020	2020 Volume Into Distribution System[(a)] *This column will remain blank until SB X7-7 Table 4-A is completed.*	2020 Deductions					2020 Gross Water Use[(a)]
		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.*	
	15,320	-		-		-	**15,320**

* **Units of measure (AF, MG , or CCF)** must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal DWR Table 2-3.

NOTES:
(a) Volumes are in AF.

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)

2020 Gross Water[(a)] *Fm SB X7-7 Table 4*	2020 Population *Fm SB X7-7 Table 3*	2020 GPCD
15,320	83,470	**164**

NOTES:
(a) Volumes are in AF.

SB X7-7 Table 9: 2020 Compliance

Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD (Enter "0" if Adjustment Not Used)			TOTAL Adjustments[1]	Adjusted 2020 GPCD[1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD[1, 2]	Did Supplier Achieve Targeted Reduction for 2020?
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
164	-	-	-	-	164	179	**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.*

Appendix G

Water Shortage Contingency Plan

City of Manteca
Water Shortage Contingency Plan

PREPARED FOR

City of Manteca

PREPARED BY

WEST YOST
Water. Engineered.

City of Manteca
Water Shortage Contingency Plan

Prepared for

City of Manteca

Project No. 265-60-22-12

Project Manager: Rhodora Biagtan, PE	Date
QA/QC Review: Monique Day, PE	Date

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AMI	Advanced Meter Infrastructure
AMR	Automated Meter Reading
AWIA	America's Water Infrastructure Act
AWSDA	Annual Water Supply and Demand Assessment
City	City of Manteca
County	San Joaquin County
CWC	California Water Code
Director	Director of Public Works
ERP	Emergency Response Plan
FEMA	Federal Emergency Management Agency
Legislature	California State Legislature
LHMP	Local Hazard Mitigation Plan
MG	Million Gallons
MMC	Manteca Municipal Code
PIO	Public Information Officer
RRA	Risk and Resilience Assessment
SB	Senate Bill
SSJID	South San Joaquin Irrigation District
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan

1.0 INTRODUCTION

This plan presents the City of Manteca's (City) Water Shortage Contingency Plan (WSCP). The WSCP describes the City's strategic plan in preparation for and response to water shortages, with a goal to proactively prevent catastrophic service disruptions. It includes water shortage stages and associated actions that will be implemented in the event of a water supply shortage. As part of the WSCP, the City's legal authorities, communication protocols, compliance, and enforcement, and monitoring and reporting are included. Following the adoption of this WSCP, the City plans to update the City's Municipal Code (MMC) to support this WSCP.

A water shortage may occur 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. A water shortage means that the available water supply is insufficient to meet the normally expected customer water use.

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 drought planning to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning.

The City's WSCP has been updated so that it is consistent with the 2018 Water Conservation Legislation requirements. The City intends for this WSCP to be an adaptive management plan so that it may assess response action effectiveness and adapt to emergencies and catastrophic events. Refinement procedures and adoption requirements are provided in this plan to allow the City to modify this WSCP outside of the UWMP process.

2.0 WATER SUPPLY RELIABILITY ANALYSIS

This section relies on the water supply planning analysis and reliability findings from the City's 2020 Urban Water Management Plan (UWMP). The discussion below includes a summary of the City's existing and projected water use (from Chapter 4 of the City's 2020 UWMP), existing and planned water supplies by source (from Chapter 6 of the City's 2020 UWMP), and the water supply reliability assessment for 2025-2045 and the Drought Risk Assessment for 2021-2025 (from Chapter 7 of the City's 2020 UWMP).

The City's 2020 UWMP indicates that it can reliably meet its projected demands through 2045 in both normal and dry years. For a five-year drought beginning in 2021 (i.e., the Drought Risk Assessment), no water supply shortfalls are anticipated. In response to any supply shortfalls that may occur, the City may declare a water shortage stage (as described in Section 4.0).

Statewide water supply conditions and actions by surrounding agencies may impact the City's available water supply. A water shortage condition occurs when the supply of potable water available cannot meet ordinary water demands for human health and safety. The City may be able to foresee its water shortage condition in some cases, but an unforeseen sudden or emergency event (e.g., power outage or earthquake) may also cause a water shortage. In general, the City's water supply conditions may be affected by the following:

- Local surface water availability (Stanislaus River)
- Vulnerability to seismic events

- Changing environmental and regulatory requirements
- Climate change

In future years, the City will conduct an annual water supply and demand assessment in accordance with Section 3.0. The analysis associated with this WSCP was developed in the context of the City's water supply sources and reliability.

3.0 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

California Water Code (CWC) Section 10632.1 requires water suppliers to submit an Annual Water Supply and Demand Assessment (AWSDA) starting July 1, 2022. Water suppliers will also be required to submit an Annual Water Shortage Assessment Report beginning July 1, 2022. The assessment will need to be conducted for the current year's upcoming dry season and the next year, assuming that the next year will be a dry year. This WSCP provides the procedures for the City to conduct its Annual Water Supply and Demand Assessment. The findings from that assessment will provide information for City's Annual Water Shortage Assessment Report.

The procedures provided in this section are intended to assist the City in planning for potential, foreseeable shortage in water supplies. These procedures provide the steps the City needs to take that may lead to declaring a water shortage emergency and associated water shortage level (see Section 3) and implementation of water shortage response actions (see Section 4).

3.1 Decision-Making Process

The City will use the decision-making process described below to consistently determine its water supply reliability on an annual basis. The City may adjust and improve this process as needed.

The Director of Public Works (Director), or his/her designee, is responsible for preparing the City's Annual Assessment and Annual Water Shortage Assessment Report and for submitting the report to DWR by July 1st of each year. The Director will designate City staff to gather key data inputs described in Section 3.2 and conduct the assessment in accordance with Section 3.3. In June, the City will finalize the assessment based on South San Joaquin Irrigation District's (SSJID) anticipated water deliveries. City staff will present the Annual Assessment and Annual Water Shortage Assessment Report to the Director for review. 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. City staff will submit the Annual Water Shortage Assessment Report to DWR by July 1 each year. The subsequent dry year may be similar to a single dry year as defined in Chapter 7 of the City's 2020 UWMP.

Should the Annual Assessment find that available supply will not meet expected demands, the City will coordinate interdepartmentally, with the region's other water service providers, and with San Joaquin County (County) for the possible proclamation of a local emergency. The Director, or his/her designee, will present the finalized assessment to the City Council, along with recommendations on water shortage condition determination and actions. Recommended actions may include declaration of a water shortage emergency, declaration of a water shortage stage, and water shortage actions.

Based on the findings of the Annual Assessment, the City Council will determine if a water shortage condition exists and, if needed, adopt a resolution declaring a water shortage emergency and an associated water shortage stage and authorizing water shortage actions. The Deputy Director of Public

Works will then prepare the City's Annual Water Shortage Assessment Report, incorporating the City Council determinations and approved actions.

The City will follow the schedule of activities shown in Table 1 for conducting the Annual Assessment and decision making. 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. The start and end dates and the activities shown in this table are approximate and may be adjusted as needed.

Table 1. Schedule of Assessment and Decision-Making Activities

Schedule	Task	Activity (Act) Decision (Dec)	Responsible Party
Assessment Activities			
February to March	Determine available water supply for current year and one subsequent dry year. Describe source and quantities considering factors affecting supply as described in Section 3.2.	ACT	City Staff
February to March	Plan for water demands for current year and one subsequent dry year. Describe demand types and quantities considering factors presented in Section 3.2.	ACT	City Staff
February to March	Using the methodology described in Section 3.3, calculate the City's water supply reliability for the current year and one subsequent dry year.	ACT	City Staff
Late March to Early May	Complete AWSDA based on expected water deliveries from SSJID	ACT	Deputy Director of Public Works
Late April or Early May	Review AWSDA and Annual Water Shortage Assessment Report and provide comments, if needed.	ACT	Director of Public Works
Decision Making Activities If Assessment Shows Available Supply May Not Meet Expected Demands			
Late April or Early May	Based on finalized determinations of AWSDA regarding water shortage condition and recommended actions, prepare recommendations on water shortage condition determination and actions.	DEC	Director of Public Works
Late April or Early May	Prepare ordinances or resolutions approving determinations and actions.	DEC	Director of Public Works
Early May	Coordinate interdepartmentally, with the region's water service providers, and with the County for the possible proclamation of a local emergency.	DEC	Director of Public Works
Early to Late May	Based on determinations of the AWSDA, prepare the Annual Water Shortage Assessment Report with recommendations on water shortage condition. Submit to Director.	ACT	City Staff
May	Present finalized determinations and recommendations to the City Council, along with ordinances or resolutions approving determinations and actions.	DEC	Director of Public Works

Table 1. Schedule of Assessment and Decision-Making Activities			
Schedule	Task	Activity (Act) Decision (Dec)	Responsible Party
May	Receive presentation of finalized determinations and recommendations. Make determination of degree of emergency and authorize water shortage response actions for implementation.	DEC	City Council
Late May	Review AWSDA and Annual Water Shortage Assessment Report and provide comments, if needed.	ACT	Director of Public Works
Late May to Early June	If a water shortage emergency condition is declared, implement the WSCP and the water shortage response actions as approved by the City Council.	DEC	Director of Public Works
Assessment and Report Submittal			
On or before July 1	Finalize AWSDA and Annual Water Shortage Assessment Report and submit to DWR.	ACT	Deputy Director of Public Works

3.2 Key Data Inputs

The AWSDA is required to evaluate supply and demands for the current year and one subsequent dry year. The following key data inputs will be used to evaluate the City's water supply reliability.

Planned water supplies will be used as input to the AWSDA for the current year and the following one dry year. In planning for water supplies, the following factors are considered:

- Hydrological conditions
- Regulatory conditions
- Contractual constraints
- Surface water quality conditions
- Infrastructure capacity constraints or changes
- Development Planning

Planned water supply sources and quantities will be described and be reasonably consistent with the supply projections in Chapter 6 (Water Supply Characterization) of the City's most recent UWMP. Should the supply sources and projections deviate significantly from the UWMP, the City will explain the difference.

Planned unconstrained water demands will be used as input to the AWSDA for the current year and the following one dry year. Unconstrained water demands are customer demands where no water conservation measures are in effect. In planning for water demands, the following factors are considered:

- 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
- Infrastructure operations

Planned water demands types and quantities will be described and be reasonably consistent with the demand projections in Chapter 4 (Water Use Characterization) of the City's most recent UWMP. Should the demand projections deviate significantly from the UWMP, the City will explain the difference.

3.3 Assessment Methodology

In preparing the AWSDA, the City will use the following assessment methodology and evaluation criteria to evaluate the City's water supply reliability for the current year and following one dry year.

The City will prepare a spreadsheet to plan for current year and future year demands. Planned supply and demand inputs described in Section 3.2 will be entered in the spreadsheet in annual increments, or closer time intervals as necessary during water shortage conditions.

Supply and demand will be compared to determine the reliability of the City's water supply in the current year and the following one dry year. The City's water supply for the current year and the following dry year will be determined reliable if water supplies are equivalent to or exceed projected water demands. If water supply cannot meet anticipated water demands in the current year or the following dry year, the extent of the water shortage condition will be determined, and the City will prepare response actions in accordance with this WSCP. If a water shortage is anticipated, the AWSDA findings will be presented to the City Council, along with recommended actions for City Council consideration.

3.4 Adoption of the Annual Assessment

Each year, the City will conduct the AWSDA and develop the Annual Water Shortage Assessment Report, as outlined above, to determine whether a water shortage exists or is anticipated in the current or one subsequent dry year. The AWSDA and Annual Water Shortage Assessment Report will be presented to the Director of Public Works or designee, for review and approval.

If the AWSDA finds that available water supply will be adequate to meet expected demands for the current year and one subsequent dry year, no further action will be required. The approved report will be submitted to DWR by July 1 each year.

If the AWSDA finds that available supply will not meet expected demands, the City staff will present the findings and recommendations to the City Council at a public meeting, along with a resolution and ordinance (as needed) approving the findings and response actions. After the City Council acts, the City will implement the authorized water shortage response actions.

4.0 STANDARD WATER SHORTAGE LEVELS

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 (also called shortage stages) that correspond to progressive ranges of up to 10, 20, 30, 40, 50 percent, and greater than 50 percent shortages from the normal reliability condition. Each shortage condition should correspond to additional actions water suppliers would implement to meet the severity of the impending shortages. A water shortage is the gap between available supply and projected demands.

The City's 2015 UWMP included five stages that addressed up to 50 percent gap between supply and demand. Table 2 presents the City's updated stages, which now address a greater than 50 percent gap between supply and demand and aligns with the State's standard stages. The City's water shortage levels apply to both foreseeable and unforeseeable water supply shortage conditions.

Table 2. City Water Shortage Contingency Plan Levels (DWR Table 8-1)

Shortage Level	Percent Shortage Range	Shortage Response Actions
1	Up to 10	Voluntary – 10 percent reduction in use
2	Up to 20	Voluntary or mandatory – 20 percent reduction in use
3	Up to 30	Mandatory – 30 percent reduction in use
4	Up to 40	Mandatory – 40 percent reduction in use
5	Up to 50	Mandatory – 50 percent reduction in use
6	Greater than 50	Mandatory – more than 50 percent reduction in use

As described in Section 3.0, the City 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 City ascertain the need to declare a water shortage emergency and water shortage stage. In certain cases, the City may need to declare a water shortage emergency due to unforeseen water supply interruptions. When the City anticipates or identifies that water supplies may not be adequate to meet the normal water supply needs of its customers, the City Council may determine that a water shortage exists and consider a resolution to declare a water shortage emergency and associated stage. The shortage stage provides direction on shortage response actions.

5.0 SHORTAGE RESPONSE ACTIONS

CWC Section 10632(a)(4) requires shortage response actions that align with the defined shortage levels. The City's shortage response actions consist of a combination of demand reduction, supply augmentation, and operational changes. The City's suites of response actions are dependent on the event that precipitates a water shortage level, the time of the year the event occurs, the water supply sources available, and the condition of its water system infrastructure.

The City plans to use a balanced approach, combining demand reduction, supply augmentation, and operational changes to respond to the event and the resulting water shortage level. The City will adapt its implementation of response actions to close the gap between water supplies and water demand and meet the water use goals associated with the declared water shortage level.

Meters allow the City to compare current water demands with demand reduction goals and adjust its shortage response actions accordingly. The City water system is fully equipped with meters which can be read remotely and can be read monthly to track the extent of the effectiveness of the City's response actions. The City is in the process of equipping the water system service connections with a cloud-based advanced meter infrastructure (AMI) which can be read in real time to track demand reduction goals. The City anticipates that all customer meters will be AMI within the next five years.

Water production and water use can be compared to previous periods. This continuous monitoring allows the City to assess water system demands and compare it with its water demand reduction goals. The City may then adjust its shortage response actions as needed to balance demands with available water supplies. For example, the City may intensify its public outreach or more vigorously enforce compliance

with water use prohibitions if needed water demand reduction goals are not met for any specific shortage level. Conversely, the City 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 City 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 City may continuously monitor and adjust its response actions to reasonably equate demands with available supply, the extent to which the gap between water supplies and water demand will be reduced by implementation of each action is difficult to quantify and is provided as an estimate. 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.

5.1 Demand Reduction Actions

During water shortage conditions, the City plans to reduce demand by implementing the actions shown in Table 3. Demand reduction actions are organized by the triggering water shortage level, and each action includes an estimate of how much its implementation will reduce the shortage gap. For each demand reduction action, Table 3 also indicates if the City 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 3. 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				
1	Expand Public Information Campaign	Reduce water use up to 1%	Encourage water users to reduce water waste	Yes
1	Other	Reduce water use up to 5%	City water customers shall reduce water use by 10%	Yes
1	Other - Prohibit use of potable water for washing hard surfaces	Reduce water use up to 1%		Yes
1	Other - Require automatic shut of hoses	Reduce water use up to 1%		Yes
1	CII - Restaurants may only serve water upon request	Reduce water use up to 1%	Manteca Municipal Code: 13.04.210	Yes
2	Expand Public Information Campaign	Reduce water use up to 1%	Encourage water users to reduce water waste	Yes
2	Other	Reduce water use up to 5%	City water customers shall reduce water use by 20%	Yes
2	Landscape - Other landscape restiction or prohibition	Reduce water use up to 5%		Yes
2	CII - Other CII restriction or prohibition	Reduce water use up to 1%		Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	Reduce water use up to 1%		Yes
2	Other - Require automatic shut of hoses	Reduce water use up to 1%		Yes
2	Landscape - Limit landscape irrigation to specific times	Reduce water use up to 10%	Outdoor watering restricted to 2 days per week.	Yes
3	Expand Public Information Campaign	Reduce water use up to 1%	Encourage water users to reduce water waste	Yes
3	Other	Reduce water use up to 5%	City water customers shall reduce water use by 30%	Yes
3	Other	Reduce water use up to 1%	Prohibit vehicle washing unless use of a bucket and hose equipped with a self-closing valve.	Yes
3	Landscape - Prohibit certain types of landscape irrigation	Reduce water use up to 5%		Yes
3	Landscape - Other landscape restriction or prohibition	Reduce water use up to 5%	New or expanding landscapes is limited to drought tolerant trees, shrubs and ground cover. No new turf grass shall be placed, hydroseeded or laid	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Reduce water use up to 5%		Yes
3	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	Reduce water use up to 1%		Yes
3	CII - Other CII restriction or prohibition	Reduce water use up to 1%	Operators of hotels, motels, and other commercial establishments offering lodging shall post in each room and site a notice of water shortage condition, approved by the Public Works Director	Yes
4	Expand Public Information Campaign	Reduce water use up to 3%	Encourage water users to reduce water waste	Yes
4	Other	Reduce water use up to 3%	City water customers shall reduce water use by 40%	Yes
4	Landscape - Prohibit certain types of landscape irrigation	Reduce water use up to 5%	Irrigation of any landscaping except trees or drought tolerant plantings is prohibited	Yes
4	Landscape - Other landscape restriction or prohibition	Reduce water use up to 5%	All nonresidential users are to reduce irrigation by 40% for existing landscapes	Yes
4	Moratorium or Net Zero Demand Increase on New Connections	Reduce water use up to 3%	No new water service connections or commitments for new water service shall be put in place	Yes
4	Other water feature or swimming pool restriction	Reduce water use up to 1%	Filling pools and spas is prohibited	Yes
5	Expand Public Information Campaign	Reduce water use up to 3%	Encourage water users to avoid water waste	Yes
5	Other	Reduce water use up to 3%	City water customers shall reduce water use by 50%	Yes
5	Moratorium or Net Zero Demand Increase on New Connections	Reduce water use up to 3%	No new water service connections or commitments for new water service shall be put in place	Yes
6	Other	Reduce water use up to 3%	City water customers shall reduce water use by 60%	Yes

5.2 Additional Mandatory Restrictions

In addition to demand reduction actions, the City has the following mandatory water restrictions set forth in MMC Section 13.04.210. Under Stages 1 to 6, the use of water in any of the following manners are restricted:

A. 1. For washing of sidewalks, driveways, patios, parking lots, aprons or other non-landscaped exterior ground areas, except as allowed by a city issued washing permit for the washing of driveways, parking lots, aprons and other non-landscaped areas of commercial and industrial properties for the purpose of maintaining the area in a clean, safe and sanitary condition;

2. All businesses proposing to water wash areas identified in subsection (A)(1) shall obtain a washing permit from the public works department;

3. Use potable water to irrigate turf at commercial, industrial, or institutional properties that is not regularly used for human recreational purposes or for civic or community events can be reduced in commercial, industrial, and institutional areas to protect local water resources and enhance water resiliency;

B. Watering of landscaping, washing of exterior buildings or filling of swimming pools:

1. Except at locations bearing a street address ending in an even number on Tuesday, and Saturday;

2. Except at locations bearing a street address ending in an odd number on Wednesday, and Sunday;

3. At any location between the hours of twelve noon to six p.m. on any day;

4. At all locations and all times, watering of landscapes is prohibited on Monday, Thursday, and Friday;

5. The following shall not be subject to the watering day and time restrictions:

a. All locations within twenty-one days of landscape installation;

b. Manteca public golf course, City parks, the City Hall complex, and Manteca Unified School District landscapes;

c. Private Parks or other landscaped areas larger than 4 acres;

d. Landscape irrigation exclusively using drip irrigation and/or micro spray irrigation systems;

6. Irrigating outdoors during and within forty-eight hours following measurable (at a minimum any amount of rainfall that generates run-off or puddles) rainfall;

C. Taking of water from any fire hydrant except by regularly constituted fire protection agencies or provided a permit for construction water has been obtained through the public works department;

D. Allowing the escape of water through leaks, breaks or malfunction in the user's plumbing or distribution system for more than twenty-four hours after discovery thereof by, or notice thereof to, the user;

E. Washing of automobiles or boats except:

1. By use of a quick-acting positive shut-off nozzle on the hose or bucket and sponge;

2. At a commercial car wash;

F. Serving water by restaurants except upon request of a customer;

G. Irrigation that causes water runoff onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;

H. Using potable water in decorative water features that do not recirculate the water;

I. Operating evaporated coolers which are not equipped with a recirculating pump;

J. Recreational activities that require a constant flow of potable water;

K. Hotels and motels must offer their guests the option to not have their linens and towels laundered daily, and prominently display this option in each guest room.

These restrictions are in addition to State mandated prohibitions. The City will enforce both State-mandated prohibitions in addition to its own restrictions.

5.3 Supply Augmentation and Other Actions

The City has approximately 3.8 million gallons (MG) of potable water storage within the City's service area, to manage daily operations and mitigate the effects of a short-term (days) water supply interruption. As part of the City's operations, the City conducts annual construction projects to repair and replace water distribution system infrastructure to reduce water system losses.

In a water shortage emergency, the City may pursue purchased water supplies from water suppliers adjacent to the City boundaries to mitigate the shortage gap. Supply augmentation and other actions that the City may implement during water supply emergencies are summarized in Table 4 below.

Table 4. Supply Augmentation and Other Actions (DWR Table 8-3)

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			
1-4	Expand Public Information Campaign	5-10%	Intensify public information and educational outreach programs
5	Implement Drought Surcharge	10-20%	The City of Manteca will consider implementation of drought rates.
6	Transfers	Up to the shortage gap	The City of Manteca will coordinate with adjacent water suppliers.

5.4 Locally Appropriate Operational Changes

During a water shortage of any level, the City may elect to implement operational measures to support implementation of the WSCP. This may include hiring temporary workers, reassigning staff, and/or increasing overtime to provide staffing for a range of efforts, such as conducting Water Waste Patrols, implementing the communication protocols, responding to customer service requests, scheduling, and conducting site assessments and consultations, processing incentive and rebate applications, and conducting compliance and enforcement efforts. The City may also elect to lower water system pressure and limit water main flushing and treatment vessel backwashing. Operational changes will be considered at each level of water shortage to determine whether and when to implement such measures.

5.5 Emergency Response Plan

The City's water shortage levels outlined in Section 4.0 apply to both foreseeable and unforeseeable water supply shortage conditions, including catastrophic water shortage conditions.

The City's Emergency Response Plan (ERP) addresses catastrophic water shortage conditions. The ERP outlines response procedures associated with unforeseeable incidents such as a regional power outage, earthquake, infrastructure failure, and other events. The ERP includes actions to be taken in preparation for, during, and recovery from such events. To protect the security of the City's water system, the ERP is retained by the City as a confidential document.

5.6 Seismic Risk Assessment and Mitigation Plan

CWC Section 10632.5(a) requires that UWMPs include a seismic risk assessment and mitigation plan to assess and mitigate a water system's seismic vulnerabilities. A Local Hazard Mitigation Plan (LHMP) or Risk and Resilience Assessment (RRA) may be incorporated in this UWMP to meet this requirement if it addresses seismic risk.

The City is located within San Joaquin County. As such, the San Joaquin County 2023 Local Hazard Mitigation Plan (2023 LHMP), provides relevant information regarding local seismic risk. The 2023 LHMP was submitted to the Federal Emergency Management Agency (FEMA), which found it in conformance with Title 44 Code of Federal Regulations Part 201.6 Local Mitigation Plans, and was adopted by the County on April 11, 2023.[1] The 2023 LHMP considered the risk of the region to earthquakes and found that the likelihood and magnitude of a significant incident are minimal.[2] Thus, the 2023 LHMP is not included in this UWMP.

The City developed an RRA in 2020 in accordance with the America's Water Infrastructure Act (AWIA). The RRA systematically evaluated the City's assets, threats, and risks, and evaluated countermeasures that might be implemented to minimize overall risk to the system. Vulnerability to natural hazards, including earthquakes, was assessed based on the City's level of preparation/resilience, active response capability, and ability to recover.

[1] San Joaquin County. San Joaquin County Local Hazard Mitigation Plan. January 2023. https://www.sjgov.org/department/oes/local-hazard-mitigation-planning

[2] San Joaquin County 2023 Local Hazard Mitigation Plan, p. 38.

The City's efforts in addressing its few seismic vulnerabilities are in progress. To protect the security of the City's water system, the RRA is retained by the City as a confidential document.

6.0 COMMUNICATION PROTOCOLS

In the event of a water shortage, the City must inform their customers, the general public and interested parties, and local, regional, and state entities. Communication protocols for foreseeable and unforeseeable events are provided in this section. In any event, timely and effective communication must occur for appropriate response to the event. City staff are provided with City email accounts to communicate internally and externally.

6.1 Communication for Foreseeable Events

Water shortage may be foreseeable when the City conducts its AWSDA as described in Section 3.0. When the City determines the potential of a water shortage event, the City Council may determine and declare a water shortage emergency. The City will hold a duly noticed public meeting to present the current or predicted shortage. At the public meeting, the City Council will determine if a water shortage emergency condition exists and the degree of the emergency. The City Council will consider the shortage response actions triggered or anticipated to be triggered by the shortage level. As necessary, the City Council will act on the water shortage emergency declaration, associated water shortage level, and shortage response actions.

The City will follow the communication protocols and procedures below and may trigger any of them at any water shortage level.

1. If a water shortage emergency is anticipated, the City will coordinate interdepartmentally, with the region's water service providers, and with the County for the possible proclamation of a local emergency.
2. The City will issue a public notice for a City Council meeting during which the AWSDA findings and recommendations for a water shortage emergency and shortage response actions are presented.
3. The City will communicate actions to customers, the general public, and interested parties through a combination of bill stuffers and newsletters, website, social media posts, press releases, and blog posts.
4. The City will communicate actions to relevant local, regional, and state officials and entities primarily through email correspondence.

6.2 Communication for Unforeseeable Events

A water shortage may also occur during unforeseeable events such as earthquakes, fires, infrastructure failures, civil unrest, and other catastrophic events. The City's ERP provides specific communication protocols and procedures to convey actions during these events. The City may trigger these communication protocols, depending on the event. In general, communications and notifications will proceed along the identified chain of command. All City staff are provided their communication responsibilities. The ERP also provides a list of relevant contacts to notify at the local, regional, and state level.

7.0 COMPLIANCE AND ENFORCEMENT

This section describes how the City will ensure compliance with and enforcement of provisions of this WSCP. The City's procedures include protocols for treatment of violations and actions associated with more egregious levels of violation. The procedures include appeal and exemption processes.

7.1 Compliance and Enforcement Procedures

When a water shortage is anticipated, the City Council 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.

The City is metered system-wide, at production facilities and at each customer connection. Thus, water use can be quantified and compared to determine users' extent of compliance to water reduction requirements. The City may also become aware of non-compliance through water waste reporting by the general public, the City's online reporting tool, City staff inspections, and/or manual review of customer use data.

MMC Chapter 1.10 applies for violation of regulations and restrictions associated with the water shortage emergency declaration. When the City becomes aware of violations, a written notice of the violation will be delivered to the customer at the premises or by first class mail and posted in a conspicuous location at the premises. A copy of the notice will also be mailed to the regularly billed customer for water use at the premises. The notice will describe the violation and request that it be corrected, cured, or abated within a reasonable period of time as determined by the City under the circumstances. The notice will include a list of potential consequences for failure to comply with the notice, including fines. Should the violation persist, the City may assess civil penalties per MMC Chapter 1.10 Article V. Civil penalties may be assessed at a daily rate as determined by the City. In addition to fines, the City may collect administrative costs incurred in the investigation, inspection, and reinspection of the property.

7.2 Appeal Process

MMC Chapter 1.10 outlines the appeal process for City customers. If a customer wishes to appeal the City's decision, they must submit a written appeal to the Director of Public Works, or designee, within ten calendar days of service of the notice. The Director of Public Works will request the City Attorney to appoint a hearing officer and to schedule a day, time, and place for an appeal hearing. Written notice regarding the hearing will be served at least ten calendar days prior to the hearing to the appealing customer.

8.0 LEGAL AUTHORITIES

The MMC Sections 13.04.210 and 13.04.220 support the City's ongoing water use restrictions, including provisions for enforcement. The MMC does not contain provisions for additional restrictions on water use during water shortages. Should a water shortage occur, the City would need to adopt an emergency ordinance to restrict water use as needed. The emergency ordinance would support the City's water shortage contingency actions, including regulations and restrictions to be enacted in event of a water shortage.

At the time of a water shortage emergency, the City Council will, by resolution, declare a state of water shortage emergency and empower enactment of the WSCP. A water shortage emergency declaration will be in effect upon proper findings made by the City Council and remain in effect until the City Council finds and declares by resolution that the water shortage emergency condition has abated, has changed in degree, or no longer exists.

When a water shortage is determined, the City will coordinate interdepartmentally, with the region's water service providers, and with the County for the possible proclamation of a local emergency in accordance with under California Government Code, California Emergency Services Act (Article 2, Section 8558).

In a duly noticed meeting, the City Council will determine whether a water shortage emergency condition exists and, if so, the degree of the emergency and what regulations and restrictions should be enforced in response to the shortage. The City shall declare a water shortage emergency in accordance with CWC Chapter 3 of Division 1.

> *California Water Code Division 1, Section 350*
>
> *…The governing body of a distributor of a public water supply…shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.*

The water shortage emergency declaration triggers communication protocols described in Section 6.0 and compliance and enforcement actions described in Section 7.0.

9.0 FINANCIAL CONSEQUENCES OF WSCP

Because the City bills its customers in part per unit volume of water consumed, the City may experience a reduction in revenue upon implementation of water shortage stages. The City policy is to maintain adequate water fund reserves in the event water shortage and subsequent demand reduction measures impact the City's revenue. The City is currently conducting a water rate study. As part of the study, the City may consider a drought rate structure. A drought surcharge would allow the City to recover revenue shortfalls accrued against a rate stabilization fund as a result of prolonged demand reductions during water shortage conditions.

The City anticipates that reduced water sales will lead to a reduction in revenue, based on decline in water sales and corresponding quantity rate charge. Although recovery of revenues may be pursued with City-approved drought surcharges, higher rates may result in further declines in water usage beyond water use targets and further reduction in water revenues.

The City also anticipates increased costs from implementing the WSCP:

- Increased staff costs: salaries, benefits, materials and supplies for various staff and new hires required to administer and implement water shortage contingency program measures and actions
- Increased O&M cost: Operations and maintenance costs associated with alternative sources of water supply, reduced system flows, or water quality challenges
- Increased cost of supply and treatment: purchase and treatment costs of new water supply or additional treatment due to existing source shortfalls

The City water rates include a variable cost portion of the water Operation and Maintenance fee that is usually greater than 70 percent of the average monthly water bill, not including the debt service fees. In

2008, the City completed a rate study that was adopted by the City Council.[3] The rate study described the potential effects of demand management measures and recommended that the City establish a water utility rate stabilization reserve.

10.0 MONITORING AND REPORTING

The City water system is fully metered, from its water supply sources to individual customer meters. These meters may be used as monitoring tools for compliance and reporting purposes. The City's water system is fully set up for automated meter reading (AMR); the City plans to upgrade the entire system to AMI as soon as reasonably possible. AMI allows the City to monitor customer water usage in real time as necessary for assessing compliance with demand reduction actions and helping customers achieve the reduction goal.

If reduction goals are not met through implementation of the WSCP (during any water shortage Stage), the Director will notify the City Council, and more aggressive action will be taken. Additionally, if it is determined that this WSCP requires refinements in order to achieve reduction targets, the City will revise the WSCP according to the procedures discussed in Section 11.0 and then adopt it and make it available as discussed in Section 12.0.

11.0 WSCP REFINEMENT PROCEDURES

This WSCP is an adaptive management plan. It is subject to refinements as needed to ensure that the City's shortage response actions and mitigation strategies are effective and produce the desired results. Based on monitoring described in Section 10.0 and the need for compliance and enforcement actions described in Section 7.0, the City may adjust its response actions and may modify its WSCP. When a revised WSCP is proposed, the revised WSCP will undergo the process described in Section 13.0 for adoption by the City Council and distribution to the County, its customers, and the general public.

Feedback from City staff and the public is important in refining or incorporating new actions. The City seeks input from staff who interface with customers to gauge the effectiveness of its response actions and for response action ideas. The City seeks input from its customers and the general public through its website and through regularly scheduled City Council meetings.

Customer water meter data may be evaluated for each customer sector or each individual customer. The City 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 may effectively implement.

12.0 SPECIAL WATER FEATURE DISTINCTION

The City distinguishes special water features, such as decorative fountains and ponds, differently from pools and spas. Special water features are regulated separately. Regulations under MMC Section 13.04.210 prohibit the use of potable water in decorative water features unless the water is recirculated. Decorative water features are also distinguished from pools and spas in the demand reduction actions identified in Table 3.

[3] The Reed Group, Inc. 2008. *City of Manteca Water Rate Study*. September 2008.

13.0 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

This WSCP is adopted concurrently with the City's 2020 UWMP, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. A hard copy and electronic copy of this WSCP will be submitted to DWR within 30 days of adoption.

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

Appendix H

City Code 13.04.210 Unlawful Water Use

Manteca, California Municipal Code

Title 13 PUBLIC SERVICES

Chapter 13.04 WATERWORKS SYSTEM

13.04.210 Unlawful water use.

It is unlawful for any person to use, permit or allow the use of water in any of the following manners:

A. 1. For washing of sidewalks, driveways, patios, parking lots, aprons or other nonlandscaped exterior ground areas, except as allowed by a city-issued washing permit for the washing of driveways, parking lots, aprons and other nonlandscaped areas of commercial and industrial properties for the purpose of maintaining the area in a clean, safe and sanitary condition;

2. All businesses proposing to water wash areas identified in subsection (A)(1) shall obtain a washing permit from the public works department;

3. Use potable water to irrigate turf at commercial, industrial, or institutional properties that are not regularly used for human recreational purposes or for civic or community events;

B. Watering of landscaping, washing of building exteriors, or filling of swimming pools:

1. Except at locations bearing a street address ending in an even number on Tuesday and Saturday;

2. Except at locations bearing a street address ending in an odd number on Wednesday and Sunday;

3. At any location between the hours of twelve noon to six p.m. on any day;

4. At all locations and all times, watering of landscapes is prohibited on Monday, Thursday, and Friday;

5. The following shall not be subject to the watering day and time restrictions:

a. All locations within twenty-one days of landscape installation;

b. Manteca public golf course, city parks, the City Hall complex, and Manteca Unified School District landscapes;

c. Private parks or other landscaped areas larger than four acres;

d. Landscape irrigation exclusively using drip irrigation and/or micro spray irrigation systems;

6. Irrigating outdoors during and within forty-eight hours following measurable (at a minimum any amount of rainfall that generates runoff or puddles) rainfall;

C. Taking of water from any fire hydrant except by regularly constituted fire protection agencies or provided a permit for construction water has been obtained through the public works department;

D. Allowing the escape of water through leaks, breaks or malfunction in the user's plumbing or distribution system for more than twenty-four hours after discovery thereof by, or notice thereof to, the user;

E. Washing of automobiles or boats except:

1. By use of a quick-acting positive shut-off nozzle on the hose or bucket and sponge;

2. At a commercial car wash;

F. Serving water by restaurants except upon request of a customer;

G. Irrigation that causes water runoff onto adjacent property, nonirrigated areas, private and public walkways, roadways, parking lots, or structures;

H. Using potable water in decorative water features that do not recirculate the water;

I. Operating evaporated coolers which are not equipped with a recirculating pump;

J. Recreational activities that require a constant flow of potable water;

K. Hotels and motels must offer their guests the option to not have their linens and towels laundered daily, and prominently display this option in each guest room. (Ord. O2022-19 § 1; Ord. 1583 §§ 1, 2, 2016; Ord. 1569 § 1, 2015; Ord. 1548 §§ 2, 3, 2014; Ord. 1239 § 1, 2003; Ord. 1126 § 1, 2000; Ord. 1111 § 2, 1999; Ord. 1110 § 2, 1999; Ord. 986 § 1, 1994; Ord. 915 § 1, 1991; Ord. 911 § 2, 1991; Ord. 870 § 1, 1990)

Contact:

City Clerk: 209-456-8017

Appendix I

City Code 13.03.060 Monthly Rates

Manteca, California Municipal Code

Title 13 PUBLIC SERVICES

Chapter 13.04 WATERWORKS SYSTEM

13.04.060 Monthly rates.

A. Customers of the city's waterworks shall pay monthly charges calculated as the sum of the fixed monthly charge plus the water use charge.

1. Fixed monthly charge per meter size:

Meter Size	Jan. 1, 2009 through Dec. 31, 2009	Jan. 1, 2010 through Dec. 31, 2010	Jan. 1, 2011 through Dec. 31, 2011	Jan. 1, 2012 through Dec. 31, 2012	Jan. 1, 2013 and thereafter
5/8″ & 3/4″	$19.95	$18.50	$17.15	$17.15	$17.15
1″	$30.80	$28.60	$26.50	$26.50	$26.50
1-1/2″	$57.65	$53.55	$49.65	$49.65	$49.65
2″	$90.00	$83.60	$77.55	$77.55	$77.55
3″	$165.60	$153.85	$142.70	$142.70	$142.70
4″	$273.50	$254.10	$235.80	$235.80	$235.80
6″	$543.05	$504.60	$468.20	$468.20	$468.20
8″	$866.70	$805.30	$747.25	$747.25	$747.25

2. Water use charge per one hundred cubic feet (HFC) used:

Rate Type*	Jan. 1, 2009 through Dec. 31, 2009	Jan. 1, 2010 through Dec. 31, 2010	Jan. 1, 2011 through Dec. 31, 2011	Jan. 1, 2012 through Dec. 31, 2012	Jan. 1, 2013 and thereafter
Block 1	$1.03	$1.03	$1.03	$1.03	$1.03
Block 2	$1.35	$1.35	$1.35	$1.35	$1.35
Block 3	$2.72	$2.72	$2.72	$2.72	$2.72

* The applicable rate is determined by the amount of water usage. In any given month, if a customer uses an amount of water that is below the applicable Block 1 limit, then the customer will pay based on the Block 1 rate. In contrast, if the customer uses an amount of water that is above the applicable Block 1 limit, then the customer will pay as follows: (a) Block 1 rate for each HCF up to the Block 1 limit, (b) Block 2 rate for each HCF above the Block 1 limit but below the Block 2 Limit, and (c) Block 3 rate for each HCF used above the Block 2 Limit.

Block 1 and Block 2 limits in HCF for the various meter sizes are as follows:

Meter Size	Block 1 Limit (HCF)	Block 2 Limit (HCF)
5/8″ & 3/4″	20	300
1″	30	300
1-1/2″	60	300
2″	90	300
3″	180	300
4″	280	300
6″	340	*
8″	520	*

* For 6″ and 8″ meters, usage above the Block 1 limit will trigger the Block 3 water user charge.

B. Single Meter-Multiunit Discount. Notwithstanding any other provision of this code, all multiresidential water customers that have more than ten units and are served by one water meter shall receive a monthly discount of one dollar and four cents per non-vacant unit for each unit over ten units.

C. Areas with No Water Meter. In those areas where no water meter is required pursuant to Section B of Section 13.04.010, the city's director of public works shall estimate the monthly water usage based on the rates set forth above. (Ord. 1514 § 2, 2012; Res. R2011-220; Ord. 1409 § 2, 2008; Ord. 1236 § 1, 2003; Ord. 1178 § 2, 2000; amended during 2/01 supplement; Ord. 1089 § 1, 1998; Res. R1997-61; Res. R1997-6; prior code § 22-6)

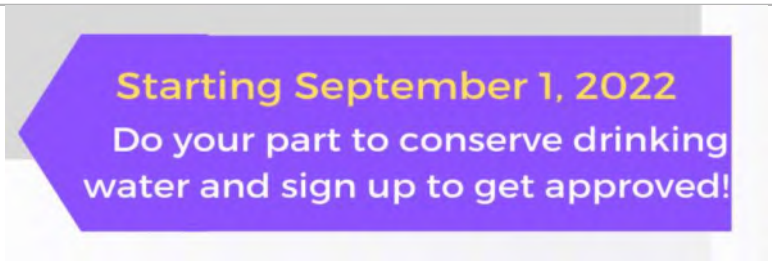
Contact:

City Clerk: 209-456-8017

Appendix J

Water Conservation Outreach

Service Finder



Water Conservation

On May 24,2022, Governor Newsom signed an Executive Order requiring urban water suppliers to implement Level 2 of their water shortage contingency plan. These new regulations are intended to reduce water demand and improve water conservation. The City of Manteca is here to assist our water customers on ways to help you save water. Below is a link the State's Resolution and a new resource, Save Our Water.

- State of California Resolution
- Water Conservation Emergency Regulations
- State of California "Save Our Water" website

The City of Manteca Water Conservation Program runs all year long, and has, since January 1, 2015. The City of Manteca water supply comes from 15 groundwater wells, each with a limited capacity for production.

With a conscientious Water Conservation Program we can allocate the existing supply to more homes and people, while slowing down the rate at which we need to build new wells. In addition, the increased usage pulls water from the aquifers faster than it is being replenished. This creates an "over-draft" of the groundwater supply, thereby lowering the water table. The water table level in the Central Valley has been dropping steadily for over 30 years and it is time to reverse this trend.

If you think about water conservation before using water, it becomes easy to use less. The majority of over-use of water is landscape watering - the tendency for the majority of the population is to use more water than is necessary which leads to run-off and waste.

Inside Water Conservation Tips

- Install a **free** low-flow showerhead. Available from the City of Manteca. Call for more information.
- Install a soak and soap valve in the shower to allow you to reduce or stop the flow without adjusting any settings.
- Install faucet aerators.
- Turn off the water while shaving, washing or brushing your teeth.
- Run full loads in dishwashers and washing machines.
- Do not use the toilet as a trash can since it requires water to flush the trash.
- Install an ultra low flow toilet. You could save up to 20% on your water bill. Old toilets use up to 7 gallons per flush, but by switching to a new toilet you can reduce that to 1.5 - 2.0 gallons.
- View our rebate program for water efficient toilets.
- Adjust the water level in your clothes washer to fit the load being washed.
- Place a container of drinking water in the refrigerator instead of running water to get a cold drink.

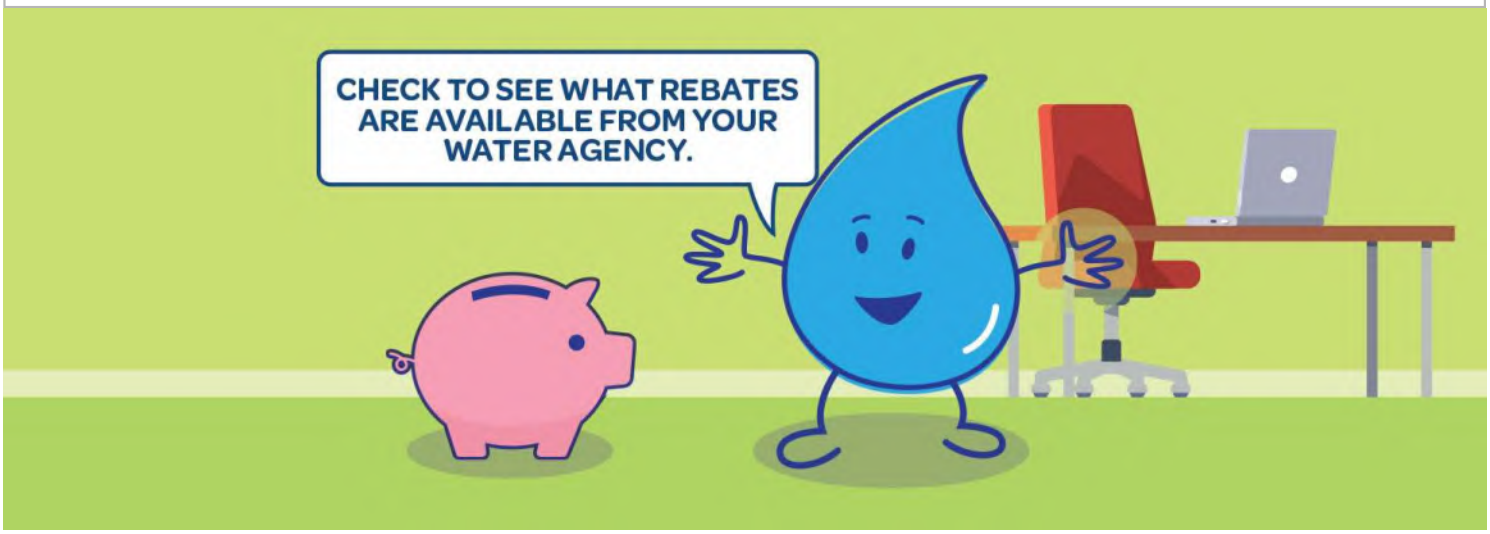
Outside Water Conservation Tips

- Plant native or warm-season grasses and drought-tolerant or water-efficient plants.
- Use a broom, **not water**, to clean sidewalks, driveways, patio and other non-landscaped areas.
- Cover your swimming pool to reduce the amount of evaporation.
- Install drip irrigation. It saves water and reduces weeding by placing the water only where you want it.
- Early morning watering is ideal when temperatures and wind speed are the lowest. Mid-day watering in hot weather wastes water due to high evaporation rates.
- Coordinate your watering schedule with the California Irrigation Management Information System (CIMIS).
- Check your sprinkler system weekly to guard against misdirected or broken sprinklers. Position the sprinklers to water your lawn and shrubs and not paved areas.
- Water your lawn only when it needs it. Monitor your irrigation schedule if you have an automatic timer. Adjust or deactivate your sprinklers accordingly, as needs change.
- Mow your lawn higher during hotter months. Longer blades of grass cool the surface of the ground and reduce evaporation.
- Use an auto-shutoff spray nozzle while washing your automobile or watering your garden.

Additional Resources

Data and Underlying Analysis Relied Upon to Determine the Conservation Standard Reported to State Water Resources Control Board

Service Finder



Current City Rebates

City of Manteca Rebates

- City of Manteca High Efficiency Clothes Washer Application
- City of Manteca Toilet Rebate Program
- City of Manteca Lawn-to-Garden Program (see below)

Lawn-to-Garden (Turf Replacement Program)

The Manteca Public Works Department pays an incentive of $1.00 per square foot when a grass lawn is replaced with a beautiful water-efficient landscape suited to our region's semi-arid climate. Restrictions apply, so be sure to read the Terms and Conditions, and the Design Requirements (see links below) for more information.

There are a few highlights of the program:

- L2G program only applies to front yards and parkways
- The maximum incentive payment is $650 for residential or 5,000 square feet for commercial
- **If you remove your grass lawn before your design is approved, you will not qualify for the incentive**

Municipal Code 7.48.050 Design Requirements for Specific Types of Landscaping

In addition to the general requirements of Section 17.48.040 (Landscape Improvement Requirements), the following provisions apply to the special types of landscaping as established below.

A. Residential Landscape. For single-family and two-family residential Zoning Districts:

1. For lots of land on which a building permit was issued on or before 07/15/2015, at least 35 percent of the actual front yard shall be landscaped.
2. For lots of lands on which a building permit was issued on or after 07/16/2015, at least 35 percent of the actual front yard shall be landscaped and no more than 25 percent of the actual front yard or street-side yard shall be turf.

Steps To Participate

Call the Water Division at 209 456-8468 or email waterconservation@manteca.city to discuss lawn to garden requirements **before beginning project**.

1. Submit Application, drawing and plant list to the Water Division at 209 456-8468.
2. Water Resources Coordinator will review application, perform a drive by inspection and provide approval to construct.
3. Construct Project.
4. Call Water Resources Coordinator when you have completed the project and are ready for an inspection.
5. With an approved inspection, you will receive your rebate.

Applicants due rebates for this program must also complete IRS Form W-9.
Rebate checks will be issued within 4-6 weeks.

Lawn-to-Garden Required Files

- Guidelines
- Terms And Conditions
- FAQ
- Kill Lawn
- Design Requirements
- Checklist
- Application

Lawn-to-Garden Approved Plants

- Bulbs
- Grasses
- Groundcover
- Palms

- Perennials
- Shrubs
- Succulents
- Trees

Gallery

Service Finder

When Can I Water?

The City of Manteca Water Conservation program has been updated to address the current drought.

Watering days have been reduced to two days a week

As of April 14, 2016, The City will be enforcing the new regulation that does not allow individuals to irrigate outdoors during and within 48 hours following measurable rainfall (at a minimum any amount of rainfall that generates run-off or puddles). The City will be utilizing the administrative code relating to penalties. On August 16, 2022, the City of Manteca Council adopted Ordinance No. 02022 19, immediatelychanging the City's Unlawful Water Use Code (13.04.210).

Save Water and Lower Your Water Bill

For additional information on water conservation, high-efficiency washing machine rebates and low-flush toilet rebates, contact the Water Division at (209) 456-8463 or email us at waterconservation@ci.manteca.ca.us.

Improve Your Sprinkler Coverage

Changing the time your sprinklers run can improve sprinkler coverage. Between 4:00 a.m. and 7:00 a.m., the City's water system is operating at lower pressures, due to high demand. During this period, sprinkler head coverage will be reduced, possibly causing dry areas in your lawn. Watering outside of this 4:00-7:00 a.m. window will provide your sprinklers with more pressure and result in better coverage. Also, when resetting your sprinkler timer, don't select a time between noon and 6:00 p.m.

Water Conservation Guidelines

- Residences and businesses with odd-numbered addresses may water on Wednesday, Friday, and Sunday but not between Noon and 6:00 p.m.
- Residences and businesses with even-numbered addresses may water on Tuesday, Thursday, and Saturday but not between Noon and 6:00 p.m.

- Watering will be reduced to a maximum of 3 days per week, with no watering on Mondays for all residences and businesses.
- You may run water to fill an existing swimming pool only on the days and during the hours allowed for your address.
- Cars, trucks, and boats may be washed on any day, but only when using a quick acting, positive shut-off nozzle on the hose or by using a bucket and sponge. Commercial car washes are not restricted in the days and hours they operate.
- No water use will be allowed on any day, at any time, for washing off sidewalks, driveways, patios, parking lots, or other exterior non-landscaped areas.
- No water will be allowed to flow into a gutter or other drainage area for longer than 5 minutes. Water leaks, breaks, or malfunctions in the user's plumbing or irrigation system shall be repaired within 24 hours after discovery.
- Water will only be served to restaurant customers upon request.

Penalties for Water Waste

Effective April 14, 2016

- First Violation: Written Notice
- Second Violation: $100 fine plus applicable fees (fine may be waived upon attending Water Conservation Seminar)
- Third Violation: $200 fine plus applicable fees
- Any Subsequent Violation: $500 fine plus applicable fees

Violation Penalties

Violation Penalties: Manteca Municipal Code Section 13.04.210

City of Manteca

RESIDENTIAL RECYCLED WATER PROGRAM

CITY OF MANTECA WILL OFFER RECYCLED WATER FOR FREE TO RESIDENTS FOR LANDSCAPE IRRIGATION.

Starting September 1, 2022

Do your part to conserve drinking water and sign up to get approved!

More Information:

For more information contact Heather Grove at
(209) 456-8473 or hgrove@mantecagov.com

To sign up for a Residential Recycled Water Workshop at the Water Quality Control Facility (WQCF)
R.S.V.P. with Justine Firmalo
(209) 456-8470 or email jfirmalo@mantecagov.com

BOOK NOW

Appendix K

UWMP Adoption Resolution

NOT INCLUDED WITH THIS SUBMISSION