FINAL - JUNE 2016

CITY OF TURLOCK

2015 Urban Water Management Plan

WEST YOST ASSOCIATES

CITY OF TURLOCK INC. 1908

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Final
2015 Urban Water Management Plan

Prepared for

City of Turlock

June 2016

WEST YOST ASSOCIATES
Consulting Engineers

669-12-15-01

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µg/L	Micrograms Per Liter
AB	Assembly Bill
AF	Acre-Feet
AFY	Acre-Feet Per Year
AMR	Automatic Meter Reading
Baseline GPCD	Baseline Gallons Per Capita Per Day
BMPs	Best Management Practices
CDoF or DOF	California Department of Finance
CEQA	California Environmental Quality Act
CII	Commercial, Institutional, and Industrial
City	City of Turlock
CIWQS	California Integrated Water Quality System
CUWCC	California Urban Water Conservation Council
CVCWA	Central Valley Clean Water Association
CV-SALTS	Central Valley Salinity Alternatives for Long-Term Sustainability
CWC	California Water Code
DBCP	Dibromochloropropane
DMC	Delta-Mendota Canal
DMMs	Demand Management Measures
DPWD	Del Puerto Water District
DWR	California Department of Water Resources
DWR 2015 Guidebook	2015 Urban Water Management Plans Guidebook for Urban Water Suppliers
ECI	Environmental Compliance Inspector
EDB	Ethylenedibromide
EPA	U.S. Environmental Protection Agency
e-WRIMS	Electronic Water Rights Information Management System
FERC	Federal Energy Regulatory Commission
GMP	Groundwater Management Plan
GPCD	Gallons Per Capita Per Day
gpf	Gallons Per Flush
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
ILP	Integrated Licensing Process
M&I	Municipal and Industrial
MCL	Maximum Contaminant Level
MG	Million Gallons
mg/L	Milligrams Per Liter
MGD	Million Gallons Per Day
MGY	Million Gallons Per Year

MID	Modesto Irrigation District
MOU	Memorandum of Understanding
MWELO	Model Water Efficient Landscape Ordinance
NVRRWP	North Valley Regional Recycled Water Program
O&M	Operation and Maintenance
RSWSP	Regional Surface Water Supply Project
RUWMP	Regional Urban Water Management Plan
RWQCF	Regional Water Quality Control Facility
SB	Senate Bill
SB X7-7	Water Conservation Act of 2009
SED	Substitutive Environmental Document
SGMA	Sustainable Groundwater Management Act of 2014
SRWA	Stanislaus Regional Water Authority
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TGBA	Turlock Groundwater Basin Association
TID	Turlock Irrigation District
TMC	Turlock Municipal Code
UAFW	Unaccounted for Water
UWMP Act	Urban Water Management Planning Act
UWMP/Plan	Urban Water Management Plan
WEC	Walnut Energy Center
West Yost	West Yost Associates
WSCP	Water Shortage Contingency Plan
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

Over the last several years, Urban Water Management Plans (UWMPs) have assumed a very important role in water supply planning and management for communities in California. UWMPs have become the foundational documents which cities and water agencies use to develop water supply assessments and other key water supply reliability documents in support of providing water service to existing customers and future development in accordance with adopted General Plans and established Spheres of Influence.

With the current unprecedented water supply conditions in California, development of the 2015 UWMPs comes at a pivotal time. Current drought conditions have resulted in unprecedented State mandates for water conservation and have led to the passage of the Sustainable Groundwater Management Act of 2014. These actions will impact all water suppliers and all water users in the State. With the improving economy statewide, the need for reliable water supplies to serve existing customers, as well as new development, UWMPs are more critical than ever. Also, 2015 is the first compliance year for the interim water use targets required by the Water Conservation Act of 2009 (SB X7-7).

As described in this 2015 UWMP, the City of Turlock's (City's) residents and businesses have responded positively to the call for water conservation and the City continues to be committed to the implementation of good water management practices to ensure that adequate, reliable water supplies are available to meet existing and projected demands. The City has met its interim 2015 per capita water use target and is well positioned to meet the final 2020 water use target per capita water demand.

ES.2 WATER CODE REQUIREMENTS

The Urban Water Management Planning Act (UWMP Act) requires water suppliers that provide over 3,000 acre-feet per year or have over 3,000 connections to prepare and submit to the State Department of Water Resources (DWR) an Urban Water Management Plan every five (5) years.

The UWMP 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 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 primary objective of the UWMP Act is to direct "urban water suppliers" to develop an 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.

In 2015, the City supplied approximately 5,675 million gallons (MG) of raw and potable water to approximately 18,686 residential and non-residential connections located within its water service area. The City is therefore considered an urban water supplier and is required to submit an UWMP. This 2015 UWMP describes the City water system, historical and projected water use, water

supply sources, and a comparison of projected water supply to water demands during normal, single-dry, and multiple-dry years in five-year increments from 2020 to 2040. As required by SB X7-7, this 2015 UWMP also confirms the City's 2015 and 2020 water use targets, verifies the City's compliance with the interim 2015 water use target, and describes the City's implementation plan for meeting the City's final 2020 water use target.

The City's 2015 UWMP (or Plan) has been prepared in accordance with the UWMP Act, as defined by the California Water Code, Division 6, Part 2.6, Sections 10610 through 10656 (Urban Water Management Planning), and the Water Conservation Act of 2009 (WC Act, also known as SB X7-7), as defined by California Water Code, Division 6, Part 2.55, Section 10608 (Sustainable Water Use and Demand Reduction). A copy of the relevant sections of the Water Code are included in Appendix A.

A brief summary of this 2015 UWMP's contents and the public review and adoption process is provided below, following a discussion of the legislative changes that have been enacted since the 2010 UWMPs were prepared and adopted.

ES.3 LEGISLATIVE CHANGES FROM 2010 UWMP

The legislative changes to the UWMP Act are described in Chapter 1. Some highlighted changes include:

- Demand Management Measures: Address the nature and extent of each water demand management measure implemented over the past five (5) years in narrative form.
- 2015 UWMP Submittal Date to DWR: Changed from December 31, 2015 to July 1, 2016.
- Water Loss: Requires water suppliers to quantify and report on distribution system water loss using the AWWA Water Audit methodology.
- Voluntary Reporting of Passive Savings due to new water codes and requirements.
- Voluntary Reporting of Energy Intensity: Describe the water/energy nexus.
- Defining Water Features: Water Shortage Contingency Plans must distinguish between water features that are artificially supplied with water (including ponds, lakes, waterfalls, and fountains) and swimming pools and spas.

ES.4 PLAN ORGANIZATION

This 2015 UWMP contains the appropriate sections and tables required per California Water Code Division 6, Part 2.6 (Urban Water Management Planning Act), included in Appendix A of this 2015 UWMP, and has been prepared based on guidance provided by DWR in their March 2016 "Final 2015 Urban Water Management Plans, Guidebook for Urban Water Suppliers" (DWR 2015 Guidebook). The required tables are included in the relevant sections and in Appendix B.

DWR's Urban Water Management Plan Checklist, as provided in the DWR 2015 Guidebook, has been completed to demonstrate the Plan's compliance with applicable requirements. A copy of the completed checklist is included in Appendix C.

This 2015 UWMP is organized into the following chapters:

- Chapter 1: Introduction and Overview
- Chapter 2: UWMP Preparation
- Chapter 3: System Description
- Chapter 4: System Water Use
- Chapter 5: SB X7-7 Baselines and Targets
- Chapter 6: System Supplies
- Chapter 7: Water Supply Reliability Assessment
- Chapter 8: Water Shortage Contingency Planning
- Chapter 9: Demand Management Measures
- Chapter 10: Plan Adoption, Submittal and Implementation

Appendices (listed in Chapter 1) provide relevant supporting documents, including the 2015 UWMP tables and SB X7-7 Verification Form.

ES.5 PLAN REVIEW AND ADOPTION

The UWMP Act requires the water supplier to coordinate the preparation of its Plan with other appropriate agencies, 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 2015 UWMP. The coordination and outreach are described in Chapter 2.

A public hearing to discuss the Draft 2015 UWMP was held on June 14, 2016.

Public hearings provide an opportunity for City water users and the general public to become familiar with the Plan and to ask questions about the City's plans to continue providing a reliable, safe, high-quality water supply. The adoption, implementation and economic impact of revised per capita water use targets (described in Chapter 5) was also discussed. Copies of the draft Plan were made available for public inspection at the Municipal Services Department, the Turlock Public Library, and the City's website.

California Water Code § 10621 (b) requires agencies to notify the cities and counties to which they serve water that the Plan is being updated and reviewed. This notification must be sent out at least 60 days in advance of the public hearing. In February 2016, 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 Plan update. In May 2016, a notice was sent to the cities and counties, and other stakeholders, to inform them of the UWMP public hearing and their opportunity to comment on the public draft UWMP prior to the UWMP adoption and adoption of the method for determining the urban water use targets. These notifications to cities, counties, and other stakeholders are discussed in Chapter 10 and provided in Appendix D.

This Plan was adopted by the City Council on June 14, 2016. A copy of the adopted resolution is provided in Appendix K.

Within 30 days of Plan adoption, a copy of the Plan was submitted to DWR, the California State Library and the cities and counties to which the City provides water.

Within 30 days of submitting the adopted Plan to DWR, copies of this Plan will be made available during normal business hours at the following locations:

- Turlock Public Library, and
- Municipal Services Department.

A copy of the adopted Plan will also be available for review and download on the City's website: http://www.cityofturlock.org.

Should this Plan be amended or changed, copies of amendments or changes to the Plan shall be submitted to DWR, the California State Library, and any city or county within which the City provides water supplies within 30 days after adoption of the amendment(s).

CHAPTER 1
Introduction and Overview

This chapter provides an introduction and overview of the City of Turlock (City) 2015 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 2010 UWMP, and organization of the City's 2015 UWMP. This 2015 UWMP has been prepared jointly by City staff and West Yost Associates (West Yost).

1.1 BACKGROUND AND PURPOSE

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 an UWMP which provides a framework for long-term water supply planning and documents how urban water suppliers are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future water demands. A copy of the current version of the Act, as incorporated in Sections 10610 through 10656 of the California Water Code (CWC), is provided in Appendix A of this document.

1.2 URBAN WATER MANAGEMENT PLANNING AND THE CALIFORNIA WATER CODE

The purpose of the UWMP is to provide a planning tool to the City for developing and delivering municipal water supplies to the City's water service area. The City has a long history of providing clean and reliable water to its mostly residential, commercial, and industrial customers. Local groundwater sources have historically met water needs for the community, and in order to continue meeting those needs, the City must continue to carefully manage its groundwater supply. Additionally, the City anticipates it will begin utilizing treated Tuolumne River water through the Regional Surface Water Supply Project within the next five years. The City's UWMP is a comprehensive guide for planning a safe and adequate water supply.

1.2.1 Applicable Changes to the Water Code Since 2010 UWMPs

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 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.

There have been several additions and changes to the California Water Code since the City's 2010 UWMP was prepared. These are summarized below:

- AB 2067 (Weber 2014)
  - CWC Section 10631 (f)(1) and (2): Demand Management Measures
    - Requires water suppliers to provide narratives describing their water demand management measures, as provided.
    - Requires retail water suppliers to address the nature and extent of each water demand management measure implemented over the past 5 years and describe the water demand management measures that the supplier plans to implement to achieve its water use targets.
    - See Chapter 9 of this 2015 UWMP for a description of the City's Demand Management Measures.
  - CWC Section 20621 (d): Submittal Date
    - Requires each urban water supplier to submit its 2015 UWMP to the Department of Water Resources by July 1, 2016.
- SB 1420 (Wolk 2014)
  - CWC Section 10644(a)(2): Submittal Format
    - Requires the UWMP, or amendments to the UWMP, to be submitted electronically to the department.
  - CWC Section 10644(a)(2): Standardized Forms
    - Requires the UWMP, or amendments to the UWMP, to include any standardized forms, tables, or displays specified by the department.
  - CWC 10631 (e)(1)(J) and (e)(3)(A) and (B): Water Loss
    - Requires an UWMP to quantify and report on distribution system water loss.
    - See Chapter 4 of this 2015 UWMP for a description of the City's distribution system water losses.
  - CWC 10631 (e)(4): Voluntary Reporting of Passive Savings
    - Provides for water use projections to display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans, when that information is available and applicable to an urban water supplier.
    - See Chapter 4 of this 2015 UWMP for a description of the City's passive water savings.
- SB 1036 (Pavley 2014)
  - CWC 10631.2 (a) and (b): Voluntary Reporting of Energy Intensity
    - Provides for an urban water supplier to include certain energy-related information, including, but not limited to, an estimate of the amount of the energy used to extract or divert water supplies.
    - The City has opted to not report on energy intensity in this 2015 UWMP.

- CWC 10632: Defining Water Features
  - — Commencing with the UWMP update due July 1, 2016, for purposes of developing the water shortage contingency analysis, requires urban water suppliers to analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.

1.3 UWMP ORGANIZATION

This 2015 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 2015 UWMP, and has been prepared based on guidance provided by the California Department of Water Resources (DWR) in their January 2016 "2015 Urban Water Management Plans Guidebook for Urban Water Suppliers" (DWR 2015 Guidebook). The required tables are included in the relevant sections and in Appendix B.

DWR's UWMP Checklist, as provided in the DWR 2015 Guidebook, has been completed by West Yost to demonstrate the UWMP's compliance with applicable requirements. A copy of the completed checklist is included in Appendix C.

This 2015 UWMP is organized into the following chapters:

- Chapter 1: Introduction and Overview
- Chapter 2: UWMP Preparation
- Chapter 3: System Description
- Chapter 4: System Water Use
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- Chapter 6: System Supplies
- Chapter 7: Water Supply Reliability Assessment
- Chapter 8: Water Shortage Contingency Planning
- Chapter 9: Demand Management Measures
- Chapter 10: UWMP Adoption, Submittal and Implementation

This 2015 UWMP also contains the following appendices of supplemental information and data related to the City's 2015 UWMP:

- Appendix A: Legislative Requirements
- Appendix B: DWR UWMP Tables
- Appendix C: DWR UWMP Checklist
- Appendix D: Agency and Public Notices
- Appendix E: SB X7-7 Tables
- Appendix F: Water Conservation and Rationing Plan
- Appendix G: Water Emergency/Disaster Response Plan
- Appendix H: Water Rates
- Appendix I: Water Audit
- Appendix J: CUWCC Reporting
- Appendix K: UWMP Adoption Resolution

CHAPTER 2
UWMP Preparation

This chapter describes the preparation of the City's 2015 UWMP, including the basis for the preparation of the UWMP, individual or regional planning, fiscal or calendar year reporting, units of measure, and UWMP coordination and outreach.

2.1 BASIS FOR PREPARING AN UWMP

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

2.1.1 Public Water Systems

As shown in Table 2-1 (DWR Table 2-1), the City provided water supplies to 18,686 water connections in 2015. The City supplied 5,675 million gallons (MG) of water for municipal purposes in 2015. Of that, 5,563 MG was potable water and 112 MG was raw water. Therefore, the City is required to prepare an UWMP. The City's last UWMP, the 2010 UWMP, was adopted by the City Council in June 2011.

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

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
CA5010019	City of Turlock	18,686	5,675
	TOTAL	18,686	5,675
NOTES: Volumes are in MG. Total volume supplied includes both potable and raw water supplies.			

2.2 REGIONAL PLANNING

The City is a member and participant in several regional water planning organizations. These groups include the Stanislaus Regional Water Authority, the East Stanislaus Regional Water Management Partnership, and the North Valley Regional Recycled Water Program. Although the City is closely involved with each of these regional organizations, the City has opted to not pursue a regional Urban Water Management Plan with any of these entities at this time.

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

This 2015 UWMP has been prepared on an Individual Reporting basis, covering only the City's service area (see Table 2-2 (DWR Table 2-2)). As described in Section 2.5, the City has notified and coordinated with appropriate regional agencies and constituents, including the Stanislaus Regional Water Authority, the East Stanislaus Regional Water Management Partnership, and the North Valley Regional Recycled Water Program, as well as several local agencies.

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

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

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

The City is a water retailer and the UWMP has been prepared on a calendar year basis. The City's 2015 UWMP includes planning data for the complete year of 2015. The City's reporting of water volumes in this 2015 UWMP is reported in MG.

Table 2-3 (DWR Table 2-3) summarizes the City's reporting methods for this 2015 UWMP.

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

Type of Agency (select one or both)	
☐	Agency is a wholesaler
☑	Agency is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
Unit	MG

2.5 COORDINATION AND OUTREACH

This section includes a discussion of the City's inter-agency and general public coordination. The UWMP Act requires the City to coordinate the preparation of its Plan 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 2015 UWMP, and are summarized below.

2.5.1 Agency Coordination

The City is a member agency of the Stanislaus Regional Water Authority, the East Stanislaus Regional Water Management Partnership, and the North Valley Regional Recycled Water Program. These and other agencies, as well as the public, participated in the coordination and preparation of this 2015 UWMP. The water supplier information exchange is summarized in Table 2-4 (DWR Table 2-4).

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 CWC 10631.
Turlock Irrigation District

In February 2016, at the beginning of the UWMP update process, a notice of preparation was sent to stakeholders to inform them of the UWMP update process, schedule, and solicit input for the update.

Following completion of the Draft UWMP, a public notice was published in the Turlock Journal on May 25, 2016 and June 1, 2016 about the 2015 UWMP public hearing and copies of the Draft UWMP were made available at the City's Municipal Services Department and the Turlock Public Library during normal business hours, and an electronic version was placed on the City's website. Copies of the Draft UWMP were also sent directly to key stakeholder agencies (see Table 2-4). During the public review period, local cities and communities, as well as the general public, were encouraged to comment on the draft document.

A public hearing to discuss the Draft UWMP was held on June 14, 2016, in conjunction with the City Council meeting. Noticing for the public hearing was conducted pursuant to Section 6066 of the Government Code. Also, per CWC Section 10621, notice regarding the public hearing was sent to the City and Stanislaus County 60 days prior to the public hearing date.

Copies of the notices to city and county entities served by the City, as well as other stakeholder agencies, are included in Appendix D.

2.5.2 Coordination with Other Agencies and the Community

The City has actively encouraged 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.

As part of development of this 2015 UWMP update, the City provided a public review period following noticing and prior to adoption to allow ample time for public comments to be developed and received. Public noticing, pursuant to Section 6066 of the Government Code, was conducted prior to commencement of the public comment period. Public hearing notices are included in Appendix D of this document. During the public comment period, a hard copy of the Draft UWMP update was made available at the City's Municipal Services Department during normal business hours, the Turlock Public Library, and an electronic version placed on the City's website.

CHAPTER 3
System Description

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

3.1 GENERAL DESCRIPTION

The City, incorporated in 1908, is located in the California Central Valley along State Highway 99, and is referred to as the "Heart of the Valley," as it is located within one of the most productive agricultural regions in the world. Located in Stanislaus County, the City is about 100 miles east of the San Francisco Bay Area with Stockton and Sacramento to the north, and Fresno and Bakersfield to the south.

3.2 SERVICE AREA

The City and water service area encompass an area of approximately 20 square miles. With the exception of three small residential areas served by groundwater from the City of Modesto, the City serves all areas within the City's limits, as well as several small unincorporated areas surrounded by the City. The City's water service includes residential, commercial, industrial, and fire service connections. Municipal water supply for the City is currently based on groundwater, with supplemental supplies from recycled and non-potable water (see more discussion in Chapter 6).

The City water system serves its population of about 71,043 through 20 active wells and one standby well. The distribution system consists of approximately 250 miles of pipe ranging in diameter from 6 to 16 inches, with plans to expand for future surface water distribution (see more discussion in Chapter 6). The service area boundary is shown on Figure 3-1.

3.3 SERVICE AREA CLIMATE

The City of Turlock has a Mediterranean climate. Summers are hot and dry while winters are cold and wet, with an annual average precipitation of approximately 11.9 inches. The local annual average maximum daily temperature is 74.2 degrees (F). Average rainfall over the last six years (2010-2015), excluding 2013 due to lack of Western Regional Climate Center (WRCC) data, was 11.1 inches. The region is subject to wide variations in annual precipitation. Water Year 2010 (October 2009 – September 2010) was a relatively wet year with 16.9 inches of rainfall while Water Year 2012 was relatively dry with only 5.5 inches of rain. The climatic data for the Turlock area is shown in Table 3-1.

Table 3-1. Climate Data Summary

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Average ETo, inches[a]	1.11	1.93	3.69	4.83	7.09	7.92	7.82	6.82	5.23	3.34	1.60	0.97	52.35
Average Max Temperature, °F[b]	53.7	60.6	66.5	72.6	80.1	88.5	94.6	92.6	86.9	76.9	63.9	53.4	74.2
Average Min Temperature, °F[b]	38.1	41.7	44.4	48.5	53.1	58.6	62.6	61.0	57.8	51.6	42.9	38.0	49.8
Average Rainfall, inches[b]	2.28	2.07	1.85	1.05	0.43	0.10	0.01	0.02	0.18	0.59	1.24	2.06	11.88

[a] Source: CIMIS Website: wwwcimis.water.ca.gov, Station 206 Denair II, California (April 2009 to December 2015), Monthly Average ETo Report, Printed January 2016.

[b] Source: Western Regional Climate Center (WRCC) website: www.wrcc.dri.edu, Station 049073 Turlock #2, California. Period of record: 1/1/1893 to 12/31/2014.

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 in the winter, reflecting increased water use for irrigation purposes during the hot, dry summers.

3.4 SERVICE AREA POPULATION AND DEMOGRAPHICS

The City's current (2015) service area population of 71,043 has been estimated by the California Department of Finance (DOF). Historical population data was obtained from the DOF and projected populations were developed using growth rates provided in the Turlock 2012 General Plan.

The City's population has grown at an average annual rate of 1.47 percent from 2005 through 2015 according to population estimates from DOF. Household size within the City is estimated at about 3.04 persons per household with approximately 24,779 total households in 2015.

Growth and development within the City's service area are subject to City and County growth management policies. Future population within the City's service area was projected from the estimated 2015 population and assuming a 2.15 percent annual growth rate through 2040. These results are summarized in Table 3-2 (DWR Table 3-1).

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

Population Served	2015[a]	2020[b]	2025[b]	2030[b]	2035[b]	2040*(opt)* [b]
	71,043	79,016	87,883	97,746	108,715	120,915

NOTES:
(a) Source: Department of Finance.
(b) Future population growth assumes an annual 2.15% growth rate based on the Turlock 2012 General Plan.

3.4.1 Other Demographic Factors

The City of Turlock is composed of primarily residential and commercial areas, surrounded on all sides by arable land. The City's economy is primarily focused around agriculture, with several local companies supporting the food processing industry. Regionally, almonds are the largest agricultural export followed by alfalfa, corn, grapes, and peaches.

Land use planning within the City is administrated by the City's Development Services Planning Division, and guided by the City's 2012 General Plan (found on the City's Website at: http://www.ci.turlock.ca.us/pdflink.asp?pdf=documents/developmentservices/planning/generalplancomplete.pdf). The General Plan promotes infill development prior to annexation of land to the City; however, the City has not seen a dramatic change in housing density over the past few years.

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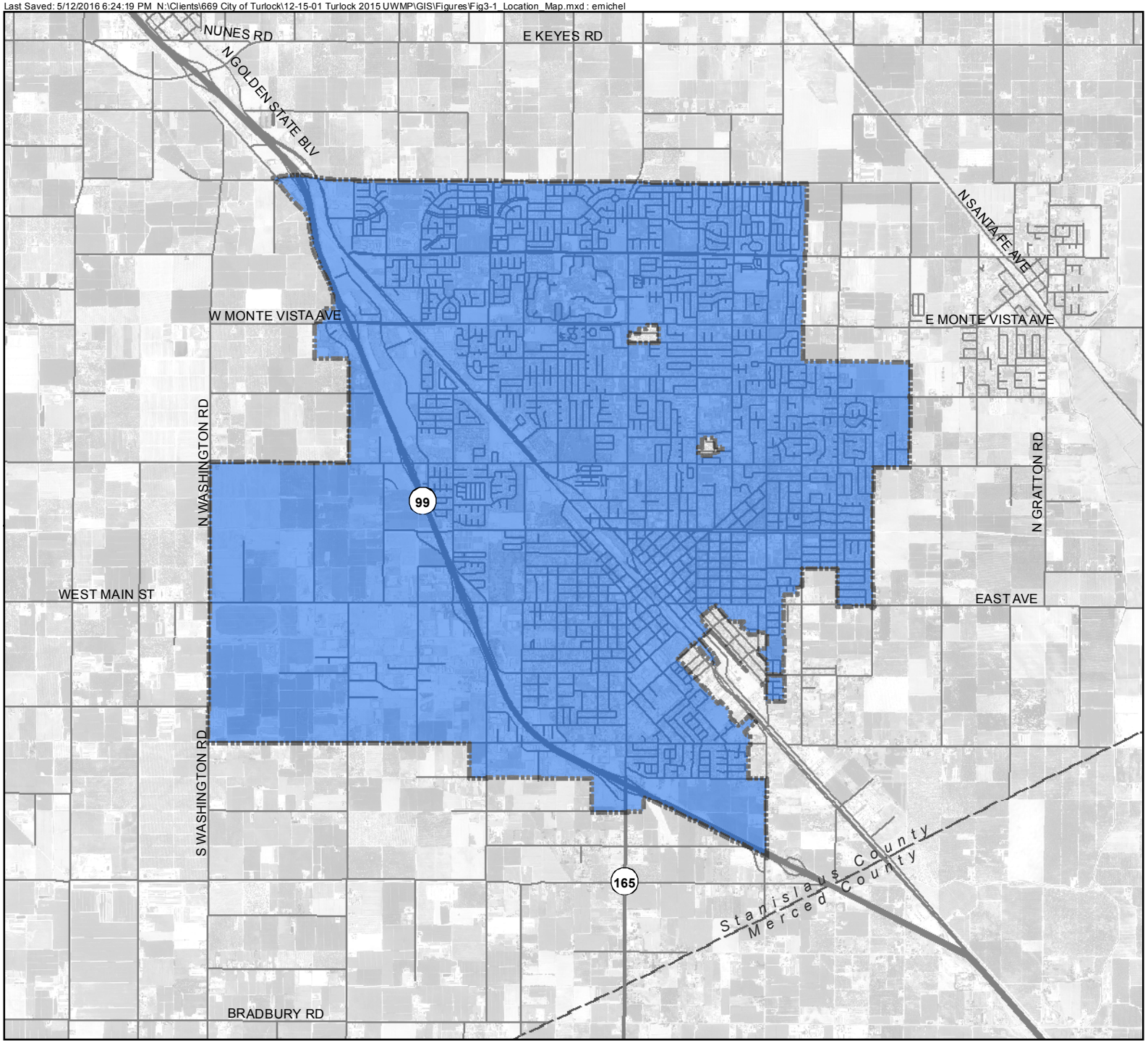

N

0 0.5 1

Miles

Symbology

Service Area

County Boundary

Notes:

1. The indicated service area includes three small areas which are served by the City of Modesto.

CITY OF TURLOCK INC. 1908

WEST YOST ASSOCIATES

Figure 3-1

Location Map

City of Turlock
2015 Urban Water
Management Plan

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CHAPTER 4
System Water Use

As described in Chapter 3, the City's water service area is primarily metered residential accounts. This chapter addresses the City's past, current, and projected water use. Water demand projections are based on the selected SB X7-7 water use targets combined with the projected population according to the City's General Plan. Accurately tracking and reporting current water demands allows the City to properly analyze the use of their water resources and conduct good water resource planning.

4.1 RECYCLED VERSUS POTABLE AND RAW WATER DEMAND

The City serves its demand for water with different levels of treatment depending on the end use. Potable water deliveries are supplemented with recycled water from the wastewater treatment plant as well as raw water from several shallow, non-potable wells. Maintaining a variety of water sources allows the City to best meet its customers' needs, as some irrigation and industrial uses do not require the same water quality required for drinking water. Additional discussion of recycled water can be found in Chapter 6.

4.2 WATER USES BY SECTOR

Water production is the combined quantity of water produced by the City's groundwater wells, while water consumption is the quantity of water actually consumed or used. The difference between production and consumption is unaccounted-for water (UAFW).

This section describes the City's past, current and projected water use by sector through the year 2040 in five-year increments. Demand projections provide the basis for sizing and staging future water facilities to ensure adequate supply. This section identifies the usage among water use sectors including single-family residential, multi-family residential, commercial, industrial, institutional/governmental, and landscape irrigation. These classifications were used to analyze current consumption patterns among various types of customers. These classifications are defined by the DWR 2015 Guidebook and City as follows:

- 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 – 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.
- Industrial – A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.
- Institutional/Governmental – A water user dedicated to public service.
- Landscape – Water connections supplying water solely for landscape irrigation.

Actual water use by the City's customers, by water use sector, in 2005 and 2010 is summarized in Tables 4-1 and 4-2, respectively. Due to the metering program not yet being completed in 2010, past water use is based on groundwater well production records.

Table 4-1. City of Turlock Water Deliveries – Actual (2005)

Water use sectors	2005				
	Metered		Not metered		Total Volume, MG
	# of Accounts	Volume, MG	# of accounts	Volume, MG	
Single-Family	107	58.9	14,825	5,006.50	5,065.40
Multi-Family	367	379.5	670	417.5	797
Commercial	985	624.6	196	130.2	754.8
Industrial	20	1,401.20	--	--	1,401.20
Institutional/Governmental	--	--	--	--	0
Landscape	148	275	--	--	275
Total	1,627	2,739.20	15,691	5,554.20	8,293.40

Table 4-2. City of Turlock Water Deliveries – Actual (2010)

Water use sectors	2010				
	Metered		Not metered		Total Volume, MG
	# of Accounts	Volume, MG	# of accounts	Volume, MG	
Single-Family	122	55.9	15,294	4,060.00	4,115.90
Multi-Family	315	326.9	686	359.6	686.5
Commercial	969	492.7	182	92.5	585.2
Industrial	23	1,091.90	--	--	1,091.90
Institutional/Governmental	77	41.8	--	--	41.8
Landscape (includes Municipal)	359	572.6	--	--	572.6
Total	1,865	2,581.80	16,162	4,512.10	7,093.90

Actual water use by the City's customers, by water use sector, in 2015 is summarized in Table 4-3 (DWR Table 4-1).

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

Use Type	2015 Actual		
	Additional Description *(as needed)*	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	2,495
Multi-Family		Drinking Water	560
Commercial		Drinking Water	533
Industrial		Drinking Water	1,075
Landscape		Drinking Water	269
Institutional/Governmental		Drinking Water	106
Other	City Meters (non-billed)	Drinking Water	82
Other	Unmetered water	Drinking Water	443
Other	Park Wells	Raw Water	113
		TOTAL	5,675
NOTES: Volumes are in MG.			

The projected water use by the City's customers is based on the best available information at this time. The City was able to track actual water use by customers and sector type through the metering program, which was fully implemented in 2011. Per capita demand declined after the meters were installed throughout the City. Per capita demand also declined heavily in 2014 and 2015, likely due to the drought and conservation efforts related to the drought. Therefore, the City has assumed that 2012 represents a reasonable approximation as to what future per capita water use will be if and when the current drought ends. Per capita water use in 2012 was approximately 277 gallons per capita per day (GPCD).

The City projected annual water demand, assuming an annual water production growth of 2.15 percent, consistent with the population growth rate projected in the September 2012 General Plan. Using this 2.15 percent projection to 2040 from the actual water use in 2012, and the percent water use by sector from 2012, the projected water use by water use sector, from 2020 to 2040, was approximated. These results are summarized in Table 4-4 (DWR Table 4-2).

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

Use Type	Additional Description *(as needed)*	Projected Water Use				
		2020	2025	2030	2035	2040-opt
Single Family		3,323	3,696	4,111	4,572	5,085
Multi-Family		767	853	948	1,055	1,173
Commercial		626	696	774	861	958
Industrial		1,161	1,292	1,437	1,598	1,777
Landscape		435	484	538	598	665
Institutional/Governmental		171	191	212	236	262
Other	City Meters (non-billed)	104	116	129	143	159
Other	Unmetered Water	1,726	1,920	2,135	2,375	2,641
Other	Parks Non-Potable Wells	149	149	149	149	149
TOTAL		8,462	9,394	10,432	11,586	12,870

NOTES: Volumes are in MG.
Projections are based on 2012 percentage by water use sector.

Total water demands, including those from recycled water demands are summarized in Table 4-5 (DWR Table 4-3).

Table 4-5. Retail: Total Water Demands (DWR Table 4-3)

	2015	2020	2025	2030	2035	2040 *(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	5,675	8,462	9,394	10,432	11,586	12,870
Recycled Water Demand *From Table 6-4*	360	489	619	748	748	748
TOTAL WATER DEMAND	6,035	8,951	10,013	11,180	12,334	13,618
**Recycled water demand fields will be blank until Table 6-4 is complete.*						
NOTES: Volumes are in MG.						

4.3 DISTRIBUTION SYSTEM WATER LOSSES

Water losses occur due to distribution system leaks and other unmetered water uses (such as firefighting, main flushing, etc.). Actual water losses within the City's water system, from the most recent year of 2013, are summarized in Table 4-6 (DWR Table 4-4).

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

Reporting Period Start Date	Volume of Water Loss
01/2013	896
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES: Volumes are in MG.	

4.4 ESTIMATING FUTURE WATER SAVINGS

CWC Section 10631(e)(4) provides the option for urban water suppliers to reflect its own and its customer's efficiency efforts as part of its future demand projection.

The City anticipates future water savings through its demand management measures and passive forms of water savings such as through the updates to the Water Conservation section of the Turlock Municipal Code, compliance with the State's Model Water Efficient Landscape Ordinance (MWELO), enforcement of the 2013 California Building Code and 2013 California Plumbing Code.

The 2015 and 2016 updates to the Turlock Municipal Code are discussed at length in Chapter 8.

MWELO was enacted pursuant to California Code of Regulations Title 23, Waters, Division 2, Department of Water Resources, Chapter 2.7 and is intended to reduce water consumption of landscapes while also enhancing aesthetic appearances and protecting the public by minimizing visual pollution and soil erosion. Examples of features that can reduce the demand for water include: low water using plants, non-living ground cover, permeable paving, and updated water conserving irrigation techniques.

Effective January 1, 2014, as part of the California Building Code, the City requires low-flow plumbing fixtures for future home and business remodels, to further increase future water savings.

Future water savings were incorporated into the water demand projections by estimating water growth projections from the water use in the year 2012 because the water use this year reflects conservation observed as a result of water meters. Additional conservation was not assumed for planning purposes because it is expected that water use patterns are likely to return back to the 2012 levels once the current drought is over. Otherwise, estimated future water savings were not taken into account because of the challenge in quantifying the anticipated savings from these measures and to be conservative for long-term water resources planning. However, if MWELO and low-flow fixture requirements and demand management measures prove to be effective at achieving a long-term water use reduction, then investments in facilities and programs to increase the City's water supply can be delayed.

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

Senate Bill 1087 (SB 1087) approved on October 7, 2005 added certain provisions to the Government Code and amended a portion of the UWMP Act. As it relates to the UWMP Act, SB 1087 requires the water use projections of an UWMP to include the projected demands for single-family and multi-family residential housing needed for lower income households as identified in the housing element of any city or county in the service area of the supplier (CWC § 10631(a).) A low income household is any household that has an income below 80 percent of the area median income, adjusted for family size.

Table 4-7 shows projected demands for low income housing based on estimated percentages of Single Family Residential and Multi-Family Residential households derived from the January 2016 City of Turlock Housing Element.

Table 4-7. City of Turlock Low Income Projected Water Demands[a]

Low Income Water Demands[b]	2015	2020	2025	2030	2035	2040
Single Family Residential	2,276	1,802	2,089	2,421	2,807	3,254
Multi-Family Residential	559	307	356	413	479	555
Total	2,835	2,109	2,445	2,834	3,286	3,809

[a] Volumes are in MG.

[b] City of Turlock Housing Element (Revised Draft January 6, 2016) Table 3.2-9 says (with 2007-2011 data) that 2,650 of low income households (including extremely low, very low, and low) were owners and 5,990 were renters. Citywide, it says 12,680 are owners and 10,100 are renters. Therefore, owners = 30.7% of low income households and renters = 69.3% of low income households. Citywide owners = 55.7% and renters = 44.3%. Table 3.3-1 shows (with 2013 data) that 93.9% of owners live in Single Family Residential and 41.4% of renters live in Single Family Residential. Therefore, it is estimated that 57.5% of low income households are Single Family Residential and 42.5% are Multi-Family Residential. The dates of the data in the Housing Element are not the same so the percentages of Single Family and Multi-Family Residential are not exact.

Table 4-8 (DWR Table 4-5) indicates that both future water savings estimates and lower income residential demands have been included in the water demand projections, as described above.

Table 4-8. Retail Only: Inclusion in Water Use Projections (DWR Table 4-5)

Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc… utilized in demand projections are found.	Section 4.4
Are Lower Income Residential Demands Included In Projections?	Yes

CHAPTER 5
SB X7-7 Baselines and Targets

In November 2009, Senate Bill X7-7 (SB X7-7), The Water Conservation Act of 2009, was signed into law by Governor Arnold Schwarzenegger as part of a comprehensive water legislation package. The Water Conservation Act addresses both urban and agricultural water conservation. The legislation sets a goal of achieving a 20 percent statewide reduction in urban per capita water use by the year 2020 (i.e., "20 by 2020"), and directs urban retail water suppliers to establish an "interim" per capita water use target to be met by 2015 and a "final" per capita water use target to be met by 2020.

The City's compliance with SB X7-7 was first addressed in the City's 2010 UWMP. The City's baseline per capita water use was determined, and urban water use targets for 2015 and 2020 were established and adopted. SB X7-7 included a provision, CWC 10608.20 (g), that an urban water supplier may update its 2020 urban water use target in its 2015 UWMP, and may use a different target method than was used in 2010. Also, the SB X7-7 methodologies developed by DWR in 2011 noted that water suppliers may revise population estimates for baseline years when the 2010 U.S. Census information became available - as described below, the 2010 Census data was not finalized until 2012.

The DWR 2015 Guidebook indicates there were significant discrepancies between the California Department of Finance (DOF) estimated 2010 population (based on 2000 U.S. Census data) and the actual 2010 population (based on 2010 U.S. Census data). Therefore, if a water supplier did not use 2010 U.S. Census data for their baseline population calculations in the 2010 UWMP, DWR has determined these water suppliers must recalculate their baseline population for the 2015 UWMP using 2000 and 2010 U.S. Census data, and baseline, 2015, and 2020 urban water use targets must be modified accordingly.

This chapter provides a review and update of the City's baseline per capita water use, 2015 interim per capita water use target, and 2020 final per capita water use target in accordance with the requirements described in the DWR 2015 Guidebook and based on the 2010 U.S. Census population data. The City calculated baselines and targets on an individual reporting basis in accordance with SB X7-7 legislation requirements and *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (DWR, 2016). The City has achieved compliance with its 2015 interim target, as discussed below, and is well-positioned to achieve its 2020 final target.

The SB X7-7 Verification Forms are included in Appendix E.

5.1 UPDATING CALCULATIONS FROM 2010 UWMP

Per the provision in SB X7-7, CWC 10608.20 (g), the City has updated its 2020 urban water use target in this 2015 UWMP using the same target method as was used in 2010. Also as required by the DWR 2015 Guidebook, the City will revise its population estimates for baseline years with data from the 2010 U.S. Census now that it is available. Population data from the 2010 U.S. Census was not available by the time the 2010 UWMP was developed. This chapter includes updated population, baselines, and targets for this 2015 UWMP to reflect 2010 U.S. Census data. The following sections describe these updates.

5.2 BASELINE PERIODS

SB X7-7 requires each urban water retailer to determine their baseline daily per capita water use, measured in gallons per capita per day (Baseline GPCD), 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 defines that urban water retailers who met at least 10 percent of their 2008 water demand using recycled water may 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 met 4.25 percent of demand using recycled water. Therefore, the City does not qualify for the 15-year baseline period.

SB X7-7 also requires each urban water retailer to determine a 5-year baseline per capita water demand, which DWR calls the Target Confirmation, calculated over a continuous 5-year period ending no earlier than December 31, 2007 and no later than December 31, 2010.

Based on these requirements, the City has selected the following baseline periods:

- 10-year Baseline Period: 1997 - 2006
- 5-year Baseline Period: 2003 - 2007

These baseline periods are listed in SB X7-7 Table 1 in Appendix E. The 10-year and 5-year periods are the same as reported in the City's 2010 UWMP. Table 5-1 (DWR Table 5-1) lists the average Baseline GPCD, calculated 2015 interim target, and confirmed 2020 target for these baseline periods.

Table 5-1. Baselines and Targets Summary (DWR Table 5-1)

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*1997*	*2006*	*356*	*320*	*284*
5 Year	*2003*	*2007*	*352*		
*All values are in Gallons per Capita per Day (GPCD).					

5.3 SERVICE AREA POPULATION

DWR 2015 Guidebook, Required Use of 2010 U.S. Census Data page 5-5 – if an agency did not use 2010 Census data for their baseline population calculations in the 2010 UWMP…DWR has determined that these agencies must recalculate their baseline populations for the 2015 UWMPs using 2000 and 2010 Census data. This may affect the baseline and target GPCD values calculated in the 2010 UWMP, which must be modified accordingly in the 2015 UWMP.

This section includes a discussion of the City's service area population including 2000 and 2010 U.S. Census data. Population reported in the City's 2010 UWMP did not include 2010 U.S. Census data because the full Census data set was not available until 2012.

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. DOF population estimates, corrected to account for 1990, 2000, and 2010 Census data, were used to estimate service area population. The service area boundaries correspond by 95 percent or more with the boundaries of the City and, therefore, the City is allowed to use DOF population data for the City for the service area population according to the DWR 2015 Guidebook. The population estimate method is indicated in Table 2 and the population estimates are included in Table 3 of the SB X7-7 Tables in Appendix E.

5.4 GROSS WATER USE

Annual gross water use is the total water, whether treated or untreated, that enters the City's distribution system over a 12-month period (calendar year) with certain exclusions. Recycled water that is delivered within the service area is not included in the City's gross water total. This section addresses the City's annual gross water use for each year in the baseline periods, as well as 2015, in accordance with Methodology 1: Gross Water of DWR's *Methodologies* document.

Annual gross water use for the baseline periods and 2015 are summarized in SB X7-7 Table 4 of Appendix E. The values reported in Appendix E are the same as documented in the City's 2010 UWMP. Although gross water use should include water entering the City's distribution system that is treated and untreated, the City did not start keeping records of non-potable park irrigation wells until 2008. Therefore, the 2015 volume number does not include the non-potable park irrigation water that was supplied in 2015 so that the comparison between 2015 and the 10-year and 5-year baselines were most accurate.

5.5 BASELINE DAILY PER CAPITA WATER USE

As indicated above, daily per capita water use is reported in GPCD. Annual gross water use (including non-residential use) is divided by annual service area population to calculate the annual per capita water use for each year of the baseline periods. As discussed above, the City is using updated population data in this 2015 UWMP. The City's calculated baseline daily per capita use is as follows:

- 10-year Base Daily Per Capita Water Use
  - 356 GPCD (for the period from 1997 to 2006)
  - This value is 1 GPCD less than the value calculated in the 2010 UWMP (357 GPCD)

- 5-year Base Daily Per Capita Water Use
  - 352 GPCD (for the period from 2003 to 2007)
  - This value is 8 GPCD greater than the value calculated in the 2010 UWMP (344 GPCD)

These 10-year and 5-year baseline daily per capita values, along with the 2015 GPCD, are shown in SB X7-7 Table 5 and summarized in SB X7-7 Table 6 in Appendix E.

5.6 2015 AND 2020 TARGETS

SB X7-7 requires a state-wide average 20 percent reduction of urban per capita water use by the year 2020. Therefore, the City must set an interim (2015) water use target and a final (2020) water use target using one of four methods defined by SB X7-7 and DWR. Three of these methods are defined in CWC Section 10608.20(a)(1), and the fourth method was later developed by DWR. The 2020 water use target can be calculated using one of the following four methods:

- Target Method 1: 80 percent of the City's base daily per capita water use;
- Target 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;
- Target Method 3: 95 percent of the applicable State Hydrologic Region target as stated in the State's Draft 20x2020 Water Conservation Plan (April 30, 2009); or
- Target 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.

Analysis of Target Methods 1 and 3 were completed. The calculated 2020 target using Target Method 1 is 284 GPCD. The 2020 target using Target Method 3 is 165 GPCD (95 percent of Hydrologic Region 6 - San Joaquin River 2020 Target of 174 GPCD). Target Methods 2 and 4 require specific data which were not available, so those two methods were not considered. Target Method 1 results in a more manageable SB X7-7 final (2020) target (284 GPCD by 2020), and is therefore preferred by the City.

5.6.1 Year Baseline – 2020 Target Confirmation

Urban water suppliers must verify their 2020 final water use target is at least a 5 percent reduction from the 5-year baseline GPCD. As shown in SB X7-7 Table 7-F in Appendix E, the City's maximum 2020 target is 334 GPCD (95 percent of the City's 5-year base daily per capita water use of 352 GPCD). The City's Method 1, 2020 target of 284 GPCD, complies with the minimum reduction.

5.6.2 2015 Interim Urban Water Use Target

The 2015 interim targets for each of the target methods are calculated based on the midpoint of the City's 10-year Base Daily Per Capita Water Use and the confirmed 2020 Target. The midpoint between the City's 10-year Base Daily Per Capita Water Use (356 GPCD) and the final 2020 target (284 GPCD) is 320 GPCD.

5.6.3 Baselines and Targets Summary

The City's interim and final targets are summarized in Table 5-1 (DWR Table 5-1).

Target Method 1, selected for this 2015 UWMP, was also used in the 2010 UWMP. The confirmed final 2020 target of 284 GPCD is close to the final 2020 target included in the 2010 UWMP (286 GPCD). Therefore, the confirmed interim 2015 target of 320 GPCD is also similar to the interim 2015 target reported in the 2010 UWMP (322 GPCD).

5.7 2015 COMPLIANCE GPCD

The City has calculated its actual 2015 daily per capita water use for the 2015 calendar year in accordance with Methodology 3 of DWR's *Methodologies* document. As shown in Table 5-2 (DWR Table 5-2), urban per capita water use in 2015 was 215 GPCD, which is below the 2015 interim water use target of 320 GPCD. Therefore, the City has met its interim 2015 water use target and is well-positioned to meet its 2020 target of 284 GPCD. The complete set of SB X7-7 verification tables used to document this compliance is included in Appendix E.

Table 5-2. 2015 Compliance (DWR Table 5-2)

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments to 2015 GPCD *From Methodology 8*					2015 GPCD *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events	Economic Adjustment	Weather Normalization	TOTAL Adjustments	Adjusted 2015 GPCD		
215	320				0	215	215	Yes
**All values are in Gallons per Capita per Day (GPCD).*								
NOTES: Volumes are in MG.								

As detailed in DWR's *Methodologies* document, there are allowable adjustments that can be made to an agency's gross water use in 2015 for unusual weather, land use changes, or extraordinary institutional water use. The City has elected not to make the adjustments allowed by CWC section 10608.24 because these exceptions are not needed to demonstrate compliance with SB X7-7.

5.8 REGIONAL ALLIANCE

The City has chosen to comply with the requirements of SB X7-7 on an individual basis and is, therefore, not a participant in a regional alliance for SB X7-7 compliance.

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CHAPTER 6
System Supplies

This chapter describes the water supplies currently available to the City, as well as anticipated future water supplies. The City currently utilizes only groundwater and recycled water. Projected future supplies include surface water from the Tuolumne River and expansion of the recycled water system.

6.1 PURCHASED OR IMPORTED WATER

Currently the City does not purchase or import water from any other water supply or entity. However, as a member of the Stanislaus Regional Water Authority (SRWA), the City has entered into a water sales agreement for delivery of 5,475 MGY (15 million gallons per day (MGD)) of Turlock Irrigation District (TID) surface water. TID has indicated the volume of water requested is available, and this volume has been used for planning and environmental review purposes. For the purposes of this document, it is assumed that the SRWA Regional Surface Water Supply Project (RSWSP) will be operational in 2020.

6.2 GROUNDWATER

Through 2015, groundwater supplies were used to meet all water needs in the management area. The local groundwater source is the Turlock Sub-basin, which is a subunit of the San Joaquin Valley Groundwater Basin. The City currently possesses 44 wells. The number of wells considered active, standby, inactive/abandoned, or non-potable are as follows:

- 20 active,
- 1 standby,
- 19 inactive/abandoned, and
- 4 non-potable (irrigation only).

Since the 2010 UWMP, four wells have been removed from active status due to water quality concerns. In addition to evaluating opportunities to reduce contamination in these wells, diversification of supplies away from groundwater (surface water from TID through SRWA - as described above) will help mitigate any future groundwater quality degradation. Quality constraints and their potential impacts on water supply reliability are discussed further in Chapter 7.

The Turlock Sub-basin is discussed in detail in the 2008 Turlock Groundwater Basin Groundwater Management Plan (GMP) produced by the Turlock Groundwater Basin Association (TGBA). The GMP can be found online at: (http://www.turlockgba.org/documents/). A description of topics relevant to the 2015 UWMP follows.

6.2.1 Basin Description

The Turlock Sub-basin lies on the eastern side of California's San Joaquin Valley, and encompasses portions of both Stanislaus and Merced counties. The groundwater system is bounded by the Tuolumne River on the north, the Merced River on the south, and the San Joaquin River on the west. The eastern boundary of the system is the western extent of the outcrop of crystalline basement rock in the foothills of the Sierra Nevada. Land uses in the Turlock Sub-basin are diverse and include agriculture, urban, and commercial or industrial uses distributed in a mosaic throughout the region.

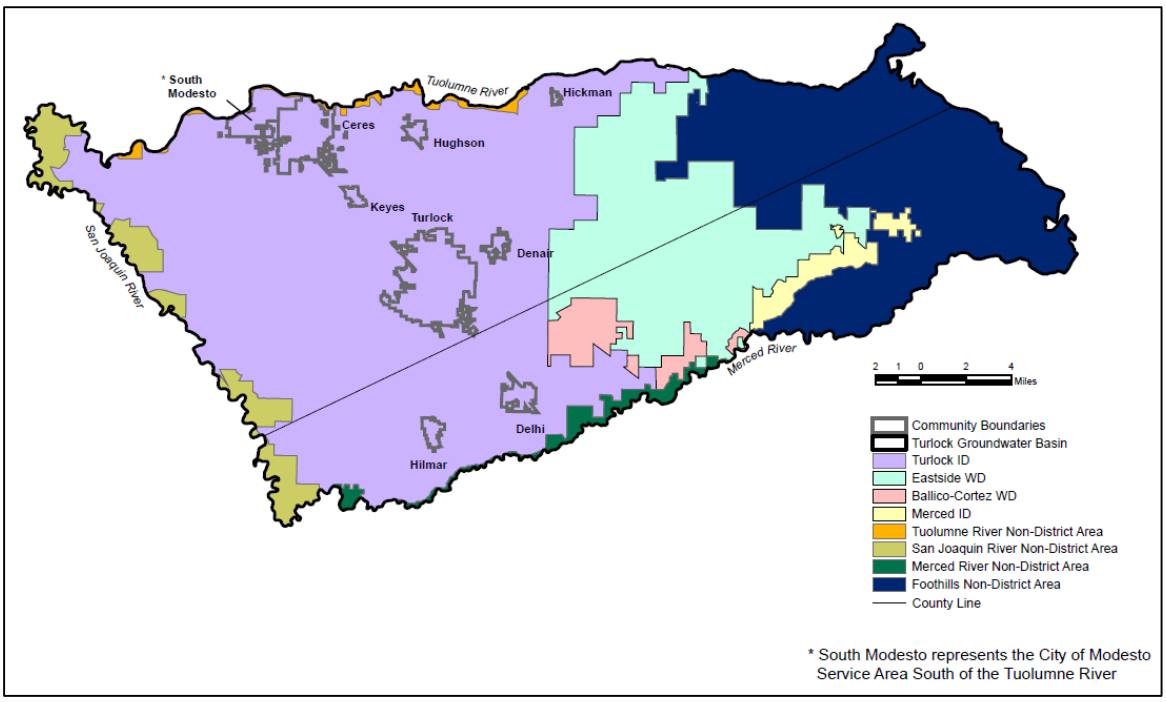
The Turlock Sub-basin underlies an area of approximately 347,000 acres, with irrigated crops (245,000 acres), native vegetation (69,000 acres), and urban development (20,000 acres) as the predominant land uses. The general trend in land use throughout the sub-basin has been an increase in urbanization from less than 4,000 acres in 1952 to approximately 20,000 acres in 2006.

The majority of this urbanization has occurred within unincorporated urban areas and cities within the Turlock Irrigation District boundary. Land in the Eastside Water District, Ballico-Cortez Water District, and Merced Irrigation District has not seen the substantial increase in urbanization that has occurred in other portions of the sub-basin. However, in the Eastside Water District, there has been a shift from non-irrigated lands to irrigated agriculture as the principal land use. The majority of this agricultural development occurred between 1952 and 1984; land use patterns in the Eastside Water District have generally stabilized since the mid-1980s. The shift to irrigated agriculture has occurred to a lesser extent in the Ballico-Cortez Water District. Land use patterns in the foothill areas in the eastern portion of the sub-basin have also shifted from non-irrigated to irrigated agriculture, but most of this shift has occurred in recent years. Between 1952 and 1992, irrigated agriculture in the foothills non-district area increased gradually from 8,600 acres to 10,800 acres. Following 1992, irrigated area grew rapidly, reaching 19,500 acres in 2006, and 35,100 in 2014.

Although expansion of irrigation has, and will continue to increase overall water demand, a portion of water used for irrigation is passively recaptured by the groundwater basin. Unlike water for Municipal & Industrial (M&I) use, irrigation water does not ultimately flow to the City's wastewater treatment plant. Due to its application outdoors, a percentage of irrigation water will percolate downwards through soil and contribute to groundwater aquifer recharge. The benefits of this recharge will become further apparent when the City's groundwater is supplemented by Tuolumne River surface water (through SRWA), as a portion of the recharge water will have originated outside of the basin, contributing towards a net basin inflow.

A map displaying the boundaries of the Turlock Sub-basin can be found in Figure 6-1.

Figure 6-1. Turlock Groundwater Basin Location and Boundaries



Source: Figure 2 from TGBA Groundwater Management Plan, March 2008.

6.2.2 Basin Overdraft Conditions

Overdraft of an aquifer occurs when groundwater extraction is faster than aquifer recharge. It is unsustainable to overdraft an aquifer over long periods of time. Overdraft can eventually lead to subsidence and water quality problems. The Turlock Sub-basin is neither listed as adjudicated[1], nor critically overdrafted[2].

Groundwater conditions within the Turlock Sub-basin vary. Groundwater levels in the eastern areas have declined significantly since the 1960s while levels in the western areas of the sub-basin are high to the point of requiring pumping in certain areas to keep the groundwater from encroaching into the root zone of agricultural crops. Local agencies will continue their efforts to ensure a sustainably managed groundwater basin and prevent activities that could lead to overdraft.

[1] Per DWR's 2011 Water Facts: https://assets.documentcloud.org/documents/1310075/groundwater-legislation.pdf

[2] Per DWR's 2016 table of Critically Overdrafted Basins: http://www.water.ca.gov/groundwater/sgm/pdfs/COD_BasinsTable.pdf

6.2.3 Groundwater Basin Management

The City has taken initiative in management of the Turlock Sub-basin by pursuing a hydrogeological and water quality assessment study. Expected to be complete by the third quarter of 2016, the study will provide the City with a groundwater "road map" intended to provide direction to further protect and develop the City's groundwater resources. Deliverables of the study include:

- A Conceptual Hydrogeologic Model of the Turlock Sub-basin,
- Groundwater Elevation Hydrographs & Contour Maps,
- Groundwater Quality Maps,
- An Aquifer Evaluation,
- A Well Field Interference Analysis,
- A Contamination Mitigation Evaluation,
- Recommendations for Future Well Locations,
- Well Head Treatment Cost Estimates,
- Well Tests,
- Well Rehabilitation Recommendations, and
- Future Well Design Guidelines.

Background information regarding the constraints placed on the City's groundwater resources are further discussed in Section 7.1.

6.2.4 Groundwater Sustainability

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

The SGMA implementation steps and deadlines are shown in Table 6-1.

Table 6-1. Sustainable Groundwater Management Act and Deadlines

Implementation Step	Implementation Measure	Deadlines
Step One	Local agencies must form local GSAs within two years	June 30, 2017
Step Two	Agencies in basins deemed high- or medium-priority must adopt GSPs within five to seven years, depending on whether a basin is in critical overdraft	January 31, 2020 for critically overdrafted basins January 31, 2022 for high- and medium-priority basins not currently in overdraft
Step Three	Once plans are in place, local agencies have 20 years to fully implement them and achieve the sustainability goal	January 31, 2040 for critically overdrafted basins January 31, 2042 for high- and medium-priority basins not currently in overdraft

SGMA applies to basins or sub-basins designated by DWR as high or medium priority basins, based on a statewide ranking that uses criteria including population and extent of irrigated agriculture dependent on groundwater. The final Basin Prioritization findings indicate that 127 of California's 515 groundwater basins and sub-basins are high and medium priority basins. These high and medium priority basins account for 96 percent of California's annual groundwater pumping and supply 88 percent of the population which resides over the groundwater basins. The ranking for the Turlock Sub-basin is shown in Table 6-2. As shown, the Turlock Sub-basin has been ranked as a high Priority Basin.

Table 6-2. Groundwater Basin Prioritization for Sustainable Groundwater Management Act[a]

Rank[b]	Basin Number	Sub-Basin Name	Overall Basin Ranking Score	Overall Basin Priority
38	5-22.03	Turlock	21.5	High

[a] CASGEM Groundwater Basin Prioritization Results, run version May 26, 2014.
[b] Out of a total of 515 basins, of which 127 were high- or medium-priority basins.

6.2.5 GSA and GSP Formation

The area's commitment to comply with SGMA was outlined in a recent Memorandum of Understanding (MOU) signed by local water agencies. Additionally, these agencies are cooperating to develop two GSAs and one GSP for the Turlock Sub-basin. The deadline for GSA formation for the basin is June 30, 2017, with completion of the GSP required by January 31, 2022.

While these GSA's are forming, the TGBA has begun the process of working through data needs and other issues, in preparation for developing a GSP.

6.2.6 Turlock Groundwater Basin Association

The majority of water agencies located within the Turlock Sub-basin, including the City, are part of the TGBA (see Figure 6-1). Formed in 1995, the TGBA has completed numerous studies to better understand the Turlock Sub-basin groundwater system. The TGBA has also developed and implemented multiple Groundwater Management Plans, and coordinates groundwater monitoring for the sub-basin.

All of the member agencies in TGBA agree that groundwater and surface water within the Turlock Sub-basin are vitally important resources that provide the foundation for maintaining current and future water needs. Preservation of these resources is essential to maintaining the economic viability and prosperity of the sub-basin area. It is the overall goal of the TGBA that groundwater will continue to be a reliable, safe, efficient, and cost-effective water supply. Basin Management objectives include:

- Maintain an adequate water level in the groundwater basin;
- Protect groundwater quality and implement measures, where feasible, to reduce the potential movement of existing contaminants;
- Monitor groundwater extraction to reduce the potential for land subsidence;
- Promote conjunctive use of groundwater and surface waters;
- Support and encourage water conservation;
- Develop and support alternate water supplies, and educate users on the benefits of water recycling; and
- Continue coordination and cooperation between the TGBA members and customers.

6.2.7 Historical Groundwater Pumping

Groundwater pumping by the City over the last five years is summarized in Table 6-3 (DWR Table 6-1).

Table 6-3. Retail: Groundwater Volume Pumped (DWR Table 6-1)

Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Turlock Subbasin within the San Joaquin Valley Groundwater Basin	6,847	7,161	7,595	6,710	5,675
	TOTAL	6,847	7,161	7,595	6,710	5,675
NOTES: Volumes are in MG.						

6.3 SURFACE WATER

The City does not currently have a surface water supply. As mentioned in Section 6.1, as a member of the SRWA, the City has entered into a water sales agreement for delivery of 5,475 MGY (15 MGD) of TID surface water.

TID and Modesto Irrigation District (MID) jointly operate the Don Pedro Reservoir, from which water is diverted for end use with both TID and MID's agricultural and M&I customers. The quality of this surface water supply is exceptionally high, with the City of Modesto regularly blending it with local groundwater to help the groundwater meet U.S. Environmental Protection Agency (EPA) MCL requirements.

TID has both pre and post-1914 water rights to the Tuolumne River. A full listing of these water rights can be found through the State Water Resources Control Board's (SWRCB) California Integrated Water Quality System's (CIWQS) Electronic Water Rights Information Management System (e-WRIMS) (https://ciwqs.waterboards.ca.gov/ciwqs/ewrims/). TID has committed post-1914 water rights to the SRWA, and due to the established documentation of these rights, it is unlikely that they will be contested when the rights are used to supply water to SRWA for M&I use.

Surface water supplies more than 50 percent of the total irrigation water applied to land in the Turlock Sub-basin boundaries. Therefore, a majority of recharge originates from the Tuolumne River, and to a much lesser extent, the Merced River. The average volume of surface water imported into the sub-basin between 1997 and 2006 was 540,000 acre-feet per year (AFY). A significant part of applied irrigation water percolates past the root zone to become groundwater, with deep percolation of applied surface water the largest single component of groundwater recharge. The City's addition of surface water supply will likely not only reduce the necessity for groundwater pumping, but will also increase the rate of groundwater recharge in the Turlock Sub-basin.

6.4 STORMWATER

The City's stormwater system includes about 130 miles of storm drain collection/conveyance piping, 49 pump stations, 45 detention basins, and use of the TID open channel irrigation system.

The majority of the City's stormwater drains to local detention basins. Although the primary purpose of these detention facilities is for urban runoff and flood control, they passively contribute to groundwater recharge through percolation of stored supplies. These detention facilities are managed in a way to maximize stored volume in order to maximize groundwater recharge as long as flood control concerns are low. As soon as wet weather events are in the forecast, the detention facilities are drained in order to create more space for stormwater detention.

A portion of the City's stormwater drains to TID laterals. Although this does not directly increase supply for the City, stormwater delivered to TID may help offset TID demands. The City works closely with TID to ensure there is adequate capacity in the laterals for stormwater discharges. The City implements best management practices to improve water quality for the stormwater discharges.

The remainder of the City's stormwater that is not captured in detention basins or flows to TID laterals eventually drains through a combined sewer system to the Turlock Regional Water Quality Control Facility (RWQCF). As outlined in the October 2013 Storm Water Master Plan, the City has decided to construct additional drainage basins, with the goal of eventually segregating the stormwater drainage and sanitary sewer systems.

6.5 WASTEWATER AND RECYCLED WATER

Since 2006, the City has operated a disinfected tertiary wastewater treatment system, the Turlock RWQCF. This section provides information on the wastewater and its current and potential reuse as a recycled water resource in the City.

6.5.1 Recycled Water Coordination

The cities of Turlock, Modesto, Ceres, and the Del Puerto Water District (DPWD) are working together to develop a cooperative project, the North Valley Regional Recycled Water Program (NVRRWP). The NVRRWP is an effort to regionalize recycled water use in Stanislaus County. As envisioned, the NVRRWP could produce and deliver up to 30,600 AFY of disinfected tertiary treated recycled water to western Stanislaus County by 2018. By 2045, NVRRWP could deliver up to 59,900 AFY of recycled water. The source of recycled water includes treated wastewater from the Cities of Turlock and Modesto. As part of the project, the City of Turlock would install 5.7 miles of conveyance pipeline to convey recycled water directly from its RWQCF's tertiary treatment plant to the City of Modesto pumping facility, who would then pump the recycled water to the Delta-Mendota Canal (DMC). The DMC would be used to convey the blended canal-recycled water to DPWD in the west side of the County. Funding from the USBR has been pursued for completion of feasibility studies related to the NVRRWP; however, no funding has been secured to date.

In addition to the above regional program, the City coordinates both internally, and externally with its recycled water customers. The City also intends to coordinate with businesses and residences in the surrounding geographic areas adjacent to and within the City.

6.5.2 Wastewater Collection, Treatment, and Disposal

The RWQCF is designed to treat an average of 20 MGD and is currently treating an average influent flow of 10.3 MGD. The raw wastewater received at the City's RWQCF is a combination of domestic and industrial wastewater flows. Influent consists of wastewater from the City of Turlock, Community Service Districts of Keyes and Denair and up to 2 MGD of primary treated wastewater from the City of Ceres. The RWQCF produces disinfected tertiary treated water that meets Title 22 standards for unrestricted use pursuant to Title 22 section 60301.230(a)(1).

The RWQCF treatment system consists of influent screening, grit removal, primary flotation, secondary treatment (which consists of activated bio-filtration for BOD/TSS reduction and nitrification), secondary clarification, tertiary treatment (which consists of high rate clarification with chemical addition followed by cloth disk filters), disinfection via chlorination, and dechlorination by sodium bisulfite. Solids handling at the RWQCF consists of gravity belt thickening, two-stage anaerobic digestion via acid phase and methane phase digesters, and sludge drying beds. Biosolids are beneficially reused for land application to farmland and co-compost.

Final effluent from the RWQCF that is not recycled is discharged to the San Joaquin River. Effluent flows by pipeline to a pump station for pumping via the Harding Drain Bypass Pipeline, with subsequent discharge through a 36-inch diameter outfall directly into the San Joaquin River.

Wastewater facilities also include a 37.2 MG earthen storage basin, allowing the emergency diversion and storage of flow when necessary. Constructed with a 6" bentonite liner on the bottom and sides, the basin can be used to store either excess wet weather influent, or effluent that does not meet permit requirements.

Table 6-4 (DWR Table 6-2) summarizes information on collection of wastewater within the City's service area. As noted above, wastewater generated outside the City's service area, including wastewater from Community Service Districts of Keyes and Denair and the City of Ceres, is treated within the service area.

Table 6-4. Retail: Wastewater Collected Within Service Area in 2015 (DWR Table 6-2)

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?
City of Turlock	Estimated	3,413	City of Turlock	Turlock Regional Water Quality Control Facility	Yes	No
Total Wastewater Collected from Service Area in 2015:		3,413				

NOTES: Volumes are in MG.
Wastewater generated outside the City's service area, including wastewater from Community Service Districts of Keyes and Denair and the City of Ceres, is treated within the City's service area.

Table 6-5 (DWR Table 6-3) identifies the volume of treated wastewater either recycled or disposed of within the service area.

Table 6-5. Retail: Wastewater Treatment and Discharge Within Service Area in 2015 (DWR Table 6-3)

☑	No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.									
							2015 volumes			
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)*	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Turlock Regional Water Quality Control Facility	Harding Drain Bypass Pipeline	San Joaquin River		River or creek outfall	Yes	Tertiary	3,413	3,038	360	0
						Total	3,413	3,038	360	0

NOTES: Volumes are in MG.
There is a difference between the volume of treated wastewater and the volume discharged and recycled because some of the treated wastewater remains at the RWQCF for onsite purposes.

6.5.3 Recycled Water System

Although the City has operated an established recycled water program since 1990, it does not operate a large pipeline distribution system, and has instead opted to evaluate, design, and build facilities on a per connection basis.

Currently, the City provides up to 2.0 MGD of recycled water to the Walnut Energy Center (WEC) Co-Generation Facility (owned by TID) for cooling, and an average of 0.10 MGD to the City's Pedretti Sports Fields for landscape irrigation.

6.5.4 Recycled Water Beneficial Uses

Approved uses of disinfected tertiary recycled water may include, but are not limited to: agricultural irrigation, water for industrial purposes (including process cooling water), residential landscape irrigation, construction water, and other uses as approved by the City identified within Title 22 California Code of Regulations.

Table 6-6 (DWR Table 6-4) shows the current and projected recycled water direct beneficial uses within the service area.

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

Name of Agency Producing (Treating) the Recycled Water:		City of Turlock						
Name of Agency Operating the Recycled Water Distribution System:		City of Turlock						
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	2015	2020	2025	2030	2035	2040 (opt)
Agricultural irrigation								
Landscape irrigation (excludes golf courses)	Irrigation at Pedretti Sports Fields	Tertiary	18	18	18	18	18	18
Golf course irrigation								
Commercial use								
Industrial use								
Geothermal and other energy production	Walnut Energy Center Cooling Tower through TID	Tertiary	342	471	601	730	730	730
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR*)								
Surface water augmentation (IPR*)								
Direct potable reuse								
Other *(Provide General Description)*	Recycled Water Filling Stations	Tertiary	0	Varies	Varies	Varies	Varies	Varies
		Total:	360	489	619	748	748	748
IPR - Indirect Potable Reuse								
NOTES: Volumes are in MG. The City will begin implementing its recycled water filling station program in 2016. The City has not set a limit on the amount of recycled water that can be trucked off-site other than 300 gallons per vehicle per trip. The City does not know how popular this new program will be and, therefore, is not sure what volume of recycled water to assume will be needed for this program in future years.								

Table 6-7 (DWR Table 6-5) shows a comparison between the recycled water use that was projected in the 2010 UWMP for 2015 and the actual water use for 2015. Actual recycled water use was less than projected in the previous UWMP.

Table 6-7. Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual (DWR Table 6-5)

Use Type		2010 Projection for 2015	2015 actual use
Agricultural irrigation		0	0
Landscape irrigation (excludes golf courses)		20	18
Golf course irrigation		0	0
Commercial use		0	0
Industrial use		0	0
Geothermal and other energy production		380	342
Seawater intrusion barrier		0	0
Recreational impoundment		0	0
Wetlands or wildlife habitat		0	0
Groundwater recharge (IPR)		0	0
Surface water augmentation (IPR)		0	0
Direct potable reuse		0	0
Other	*Other*	0	0
	Total	400	360
NOTES: Volumes are in MG.			

6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

The City has many plans for encouraging and expanding future recycled water use in its service area. These plans are discussed in the following sections and summarized in Table 6-8 (DWR Table 6-6).

6.5.5.1 Expansion of Recycled Water to TID

Beginning in 2018, the City will provide 2,000 AFY (652 MGY) to TID for agricultural irrigation purposes.

6.5.5.2 Expansion of Recycled Water to Del Puerto Water District

As part of the NVRRWP, the City has entered into an agreement with the DPWD to provide the remainder of its available recycled water to DPWD after deliveries to its other recycled water customers. The details of this delivery are outlined in the 2015 NVRRWP Final Report (http://www.nvr-recycledwater.org/documents.asp).

6.5.5.3 Expansion of Recycled Water to Industrial Users

In March 2016, the City entered into an agreement to provide up to 0.1 MGD (37 MGY) of recycled water to Darling Ingredients Inc. Although this is a comparatively small volume, it provides an important first expansion to the existing recycled water infrastructure, further promoting recycled water use by other industrial customers.

Expansion of recycled water supplies to new industrial and commercial users will be provided through direct connection to the existing recycled water distribution system, and the City will be responsible for the operation and maintenance of the entire recycled water distribution system up to the user's recycled water meter. Prior to approving a connection, these users must comply with the requirements of the City of Turlock Recycled Water Rules and Requirements inclusive of Title 22 requirements.

6.5.5.4 Expansion of Recycled Water for Residential and Commercial Filling Stations

In addition to the recycled water distribution system, recycled water will be made available to commercial and residential users through an on-site filling station at the City's RWQCF. Users may fill properly identified recycled water tanks in their vehicle for appropriate uses off-site, up to a maximum volume of 300 gallons per visit. In order to prevent cross-contamination, all portable recycled water containers will be prohibited from being connected to any potable water supply system. Additionally, commercial users will be required to maintain a log book detailing date of delivery, name and address of delivery/recipient, type of use, volume delivered/used and intended use of water delivered. The quantity of recycled water that may be provided by this filling station has not been estimated. Therefore, no quantity for filling stations is included in Table 6-8 (DWR Table 6-6).

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

Page 6-11	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Recycled Water to TID[(a)]	Agriculture Irrigation	2018	652
Recycled Water to Del Puerto Water District[(a)]	Agriculture Irrigation	2018	3,071
Recycled Water to Darling Ingredients International[(a)]	Industrial	2016	37
Recycled Water for Filling Stations[(b)]	Residential or Commercial	2016	Varies
		Total	3,760

NOTES: Volumes are in MG.
(a) These actions will result in recycled water supplied to areas outside of the City's service area.
(b) The City will begin implementing its recycled water filling station program in 2016. The City has not set a limit on the amount of recycled water that can be hauled off-site other than 300 gallons per vehicle per trip. The City does not know how popular this new program will be and, therefore, is not sure what volume of recycled water to assume will be needed for this program in future years.

6.6 DESALINATED WATER OPPORTUNITIES

Because the City is not located in a coastal area, seawater desalination is not applicable to the City and is not currently considered technically or economically feasible. In addition, the groundwater that underlies the City is not brackish in nature and does not require desalination. As such, the City does not have any plans to incorporate desalinated or treated brackish water into its supply portfolio.

6.7 EXCHANGES OR TRANSFERS

Currently there is no alternative potable water supply source in the area that would lend itself to transfer or exchange opportunities. Although there are three small potable water systems within the City's limits (owned and operated by the City of Modesto), these systems do not have excess capacity and already use the City of Turlock as a backup water source.

Although the City has entered into a water sales agreement for TID surface water, the infrastructure is not in place at this time. Additionally, because TID's currently available irrigation water is designated for agricultural use, there are practical and legal issues to consider if an exchange or transfer were to occur.

6.8 FUTURE WATER PROJECTS

As stated in Section 6.1, as a member of the SRWA, the City has entered into a water sales agreement for delivery of 5,475 MGY (15 MGD) of TID surface water.

In 2016, the SRWA awarded a contract for program management services for the preliminary planning and permitting of a water treatment plant (WTP) and transmission pipelines to provide surface water from TID to the City for M&I use. Water would be released from the Don Pedro Reservoir, diverted from the Tuolumne River at an existing infiltration gallery, and pumped to the WTP by TID. It is currently anticipated that TID water will be available to the City by 2020. Constraints and reliability of the project water are further discussed in Chapter 7. A summary of the City's expected future water supply programs is provided in Table 6-9 (DWR Table 6-7).

Table 6-9. Retail: Expected Future Water Supply Project or Programs (DWR Table 6-7)

Page 6-1	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
Stanislaus Regional Surface Water Supply Project	Yes	Stanislaus Regional Water Authority		2020	Average Year	5,475
Stanislaus Regional Surface Water Supply Project	Yes	Stanislaus Regional Water Authority		2020	Single-Dry Year	5,475
Stanislaus Regional Surface Water Supply Project	Yes	Stanislaus Regional Water Authority		2020	Multi-Dry Year	5,475

6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

The City's current and planned sources of water can be summarized as such:

- The City is currently contracted to purchase 5,475 MGY (15 MGD) of TID surface water.
- The City maintains 20 active, potable groundwater wells.
- The City neither currently uses nor plans to use surface water that is not mentioned above.
- The City maintains a series of stormwater detention basins that contribute to groundwater recharge.
- The City currently utilizes and has future plans to expand recycled water usage.
- The City neither currently uses nor plans to use desalinated water.
- The City neither currently exchanges or transfers nor plans to exchange or transfer water with other water systems.

The actual (2015) water supplies for the City are summarized in Table 6-10 (DWR Table 6-8).

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

Water Supply	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality	Total Right or Safe Yield *(optional)*
Groundwater	City's domestic supply wells	5,562	Drinking Water	
Groundwater	Non-potable park irrigation water	113	Raw Water	
Recycled Water		360	Recycled Water	
	Total	6,035		0
NOTES: Volumes are in MG.				

The projected future water supplies for the City are summarized in Table 6-11 (DWR Table 6-9).

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

Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
		2020		2025		2030		2035		2040 *(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)*
Groundwater		2,987		3,919		4,957		6,111		7,395	
Surface water		5,475		5,475		5,475		5,475		5,475	
Recycled Water		489		619		748		748		748	
Total		8,951	0	10,013	0	11,180	0	12,334	0	13,618	0

NOTES: Volumes are in MG.
In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.
The City assumes 5,475 MG of surface water from the Stanislaus Regional Water Supply Project will be available by 2020, however the project is still in the planning phase and this water may not be available until a later date.

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CHAPTER 7
Water Supply Reliability Assessment

This chapter describes the long term reliability and vulnerability of the City's water supplies. The City's planned and implemented water management tools for increasing the reliability of water supplies are also addressed. Short term reliability planning that may require immediate action, such as drought or a catastrophic supply interruption, is addressed in Chapter 8.

Where applicable, each section in this chapter addresses groundwater, surface water, and recycled water in a separate sub-section. The groundwater sub-section refers to the City's current supplies from the Turlock Sub-basin, the surface water sub-section refers to the SRWA's water sales agreement of Tuolumne River water from TID (as described in Chapter 6), and the recycled water sub-section refers to the current and future recycled water produced from the Turlock RWQCF.

7.1 CONSTRAINTS ON WATER SOURCES

This section addresses potential effects on the reliability of water supply sources through the year 2040.

Constraints on water resources for specific communities are addressed by CWC section 10631(c)(2) and section 10634, which state the following:

> *CWC 10631(c)(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or cl atic factors, describe plans to supplement or replace that source with alternative sources or water demand in management measures, to the extent practicable.*
>
> *CWC 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.*

The City has (or will have) the following sources of water supply:

- Treated surface water,
- Groundwater, and
- Recycled water.

The major constraints on each of these supplies are discussed in the following sections:

- Environmental constraints,
- Legal constraints, and
- Water quality constraints.

7.1.1 Environmental Constraints

Environmental factors can limit the reliability of surface water supplies in the event that dry year supply reductions are necessary to maintain the health of aquatic species and the environment in general.

Given the fragile state of many of California's ecosystems, environmental concerns inevitably arise during the water planning process. The delicacy of these systems can, in turn, cause a lack of supply due to the enforcement of environmental legislation. The recent legal actions involving the Endangered Species Act in the Delta are an example of the clash between environmental concerns and water supply. To ensure reliability of the City's water supply, during unexpected environmental constraints that may be placed on TID's water rights, the City will use local groundwater in place of surface water.

A further concern is the potential for overdraft and diminished water quality of the Turlock Sub-basin, which has prompted the City to seek an alternative primary water supply (i.e., surface water). For the purposes of this study, the concern of overdraft is considered a long-term groundwater basin issue rather than a supply inconsistency. The TGBA GMP includes actions to address cooperative management of groundwater to prevent further overdraft and the new TGBA SGMA process, of which the City is taking part, will address overdraft prevention in its GSP in 2022.

7.1.2 Legal Constraints

Legal issues, including place of use and water rights issues, are not expected to limit supply reliability for the City.

7.1.2.1 Groundwater

The Turlock Sub-basin is not an adjudicated groundwater basin, as defined by DWR. Therefore, there are no defined legal pumping rights for the City, and there are no legal constraints on groundwater pumping. In California, the State is not currently authorized by the Water Code to manage groundwater. California landowners have a correlative right to extract groundwater for beneficial use. As a municipal water supplier, the City acts on behalf of the overlying landowners, who rescind their water rights to the City when the land is annexed into the City.

The implementation of SGMA, described in Section 6.2, has introduced provisions whereby the state can step in to manage a groundwater basin if a local GSA does not properly implement sustainable groundwater management. While the information included in this section is current as of 2015, conditions may change between the writing of this UWMP and the adoption of the 2020 UWMP.

7.1.2.2 Surface Water

For the City, through the SRWA, to purchase Tuolumne River water from TID and use it for a municipal supply (further described in Chapter 6), a portion of TID's water rights will need to be modified for the change in use from agricultural to M&I supply. No major legal constraints associated with this process are currently expected.

Additionally, the Federal Energy Regulatory Commission (FERC) operations license for the Don Pedro Reservoir, which is used to store TID's Tuolumne River surface water, is set to expire in 2016. In anticipation, TID and MID have followed FERC's Integrated Licensing Process (ILP), leading to a Final Draft Application submittal in 2014. No major legal issues associated with the relicensing of the reservoir are anticipated.

One other potential legal constraint would be the adoption of the draft Substitute Environmental Document (SED) in support of potential changes to the water quality control plan for the Bay-Delta. This plan outlines several changes to the Bay-Delta Plan, including modifying the flows of several rivers (including the Tuolumne) to support and maintain the natural production of viable native Lower San Joaquin River watershed fish populations migrating through the Delta. If approved, this SED could mandate up to 60 percent of unimpaired Tuolumne River water flow be available downstream, resulting in reduced availability of surface water for withdrawal by TID (and therefore the City through the SRWA). The City will continue to monitor the situation as additional information becomes available.

7.1.2.3 Recycled Water

As described in Chapter 6, the City plans to greatly enhance the use of recycled water produced at the City's RWQCF. Future expansion of recycled water facilities must be pursuant to the requirements set forth in its SWRCB Order WQ 2014-0090-DWQ (http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0090_dwq_revised.pdf). No major legal issues associated with recycled water facility expansion are anticipated.

7.1.3 Water Quality Constraints

The potential water quality constraints on groundwater, surface water, and recycled water supplies are discussed below.

7.1.3.1 Groundwater

The 2008 GMP identified several groundwater constituents that may lead to groundwater quality concerns in the basin. Contaminants in the area include: salinity, nitrate, arsenic, tetrachloroethylene, pesticides, iron, manganese, radio-nucleotides, bacteria and other petroleum hydrocarbons. Of the above contaminants, those with the highest potential for future impacts are further detailed below.

7.1.3.1.1 Salinity

Salinity has been identified as a source of contamination in the Turlock Groundwater Sub-Basin. Salinity levels within the sub-basin range from 90 to greater than 1,250 milligrams per liter (mg/L), as measured by total dissolved solids (TDS). Groundwater salinity is generally lowest in the easterly portion of the Turlock Sub-basin and the City reported an average value of 267 mg/L in its drinking water supply in the 2014 Annual Water Quality Report. While salinity appears to be increasing, it is an unregulated contaminant and the City does not consider it a threat to its water supply.

It should be noted, however, that several other water suppliers in the area are members of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) program, with the stated objective to organize, facilitate and fund efforts needed for the efficient management of salinity in the Central Valley. Although the City is not currently a member of CV-SALTS, it does participate through its membership with Central Valley Clean Water Association (CVCWA). The City will continue to monitor salinity levels in the basin and act accordingly.

7.1.3.1.2 Nitrates

Nitrates have been identified as a source of contamination in the Turlock Groundwater Sub-Basin. While nitrate in irrigation water is not a major concern for most crops, high concentrations of nitrate in groundwater is a concern for potable water supplies.

Historically, the City has reported nitrate concentrations as mg/L nitrate (as Nitrate, NO_3), however as of January 1, 2016, the SWRCB has mandated that all nitrate results be reported in the form of mg/L nitrate (as Nitrogen, N). The SWRCB reports that this change does not represent a functional change in the MCL, but is to reduce confusion and ease reporting of results to U.S. EPA. The maximum contaminant level (MCL) for nitrate (as Nitrate, NO_3) in public drinking water supplies is 45 mg/L and for nitrate (as Nitrogen, N) is 10 mg/L.

In its 2014 Annual Water Quality Report, the City reported an average nitrate concentration of 26 mg/L (as Nitrate, NO3). Under the new reporting methodology, this represents an average concentration of 5.8 mg/L nitrate (as Nitrogen, N). This value, irrespective of reporting methodology, is still well below the MCL, and shows that nitrate concentrations are generally within a safe range and should not pose a problem in the near future. It should be noted, however, that the City has closed several wells due to measured nitrate levels exceeding the MCL.

7.1.3.1.3 Arsenic

Arsenic has been identified as a source of contamination in the Turlock Groundwater Sub-Basin. The City has had several wells with arsenic concentrations slightly over the MCL value of 10 micrograms per liter (µg/L). These wells were removed from active status, with one on "standby" status, which is only available in the event of an emergency. In its 2014 Annual Water Quality Report, the City indicated an average arsenic concentration of 9.3 µg/L in its drinking water supply. The City continues to regularly monitor arsenic contamination in its water supplies.

7.1.3.1.4 Pesticides

Two pesticides resulting from past agricultural activities have been detected in the Turlock Sub-basin: Dibromochloropropane (DBCP) and Ethylenedibromide (EDB). Because the use of DBCP and EDB has been banned for several decades neither is considered a future threat to groundwater supplies. The City will continue to monitor contamination from other known pesticides in its groundwater wells.

7.1.3.1.5 Tetrachloroethylene

Tetrachloroethylene has been identified as a source of contamination in the Turlock Groundwater Sub-basin. The City measured a 6.21 µg/L concentration at one of its wells in June 2014, above the MCL of 5µg/L. In response, the City took the well out of service, and has commissioned additional groundwater monitoring and a remediation system optimization. As a component of these City efforts, an annual groundwater assessment and remediation progress report is being conducted in order to monitor contaminant migration and assess the effectiveness of treatment. Upon analysis of the results, the City will weigh options and select a course of action in the best interest of the community.

7.1.3.2 Surface Water

According to the 2013 Don Pedro Water Quality Assessment (http://www.donpedro-relicensing.com/Documents/P-2299_DP_ISR_W-AR-01_WtrQltyAssmt_StdyRept_130117.pdf) the Tuolumne River water has low specific conductivity and hardness, is prone to acidification, and potential sources of local contamination are limited. The majority of analytes were reported as either non-detectable or just above reporting limit concentrations. Further, there does not appear to be a pattern of increasing chemical concentrations from upstream to downstream of Don Pedro Dam, implying that contamination due to retention in the reservoir is not an issue.

7.1.3.3 Recycled Water

All water produced or intended for use as recycled water within the City's limits, including water produced from the RWQCF, meets all regulations set forth by Title 22 of the California Division of Drinking Water's 2014 update of Regulations Related to Recycled Water.

7.2 RELIABILITY BY TYPE OF YEAR

This section addresses the reliability of the City's water supply in average, single dry, and multiple dry water years. The City uses the following water year definitions from the DWR 2015 Guidebook:

- **Average year**: a year, or an averaged range of years, that most closely represents the average water supply available to the agency. For the purposes of this UWMP, the terms "normal" and "average" are used interchangeably.
- **Single-dry year**: the year that represents the lowest water supply available to the agency.
- **Multiple-dry year period**: the period that represents the lowest average water supply availability to the agency for a consecutive multiple year period (three years or more).

The reliability of the potable and recycled water supplies are discussed below.

7.2.1 Supply Reliability

As discussed in Section 6.2, groundwater supplies are used to meet all of the City's current water needs. The ability of groundwater supply wells to produce water is not expected to be affected by severe or prolonged drought conditions. Aquifer levels are expected to remain within the historical range, and equipment maintenance and backup power supplies are generally adequate to ensure a high degree of reliability. Instead, the reliability of the native groundwater supply is limited by the constraints described in the previous section of this chapter.

The water quality and overdraft constraints, discussed in previous sections, led the City to pursue TID surface water from the Tuolumne River through the SRWA. Because this surface water was not previously available to the City, historic base year data for average, single-dry, and multiple-dry years is not available. As mentioned in Chapter 6, the increase in surface water deliveries within the basin as a result of the SRWA RSWSP are expected to have a positive impact on groundwater recharge within the region as 1) a portion of the recharge water will have

originated outside of the basin, contributing towards a net basin inflow, and 2) the quantity of groundwater pumping by the City will decrease.

Supply percentages for base years are summarized in Table 7-1 (DWR Table 7-1).

Table 7-1. Retail: Basis of Water Year Data (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 1999-2000, use 2000*	Available Supplies if Year Type Repeats	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	% of Average Supply
Average Year	1992	-	100%
Single-Dry Year	1999	-	100%
Multiple-Dry Years 1st Year	1987	-	100%
Multiple-Dry Years 2nd Year	1988	-	100%
Multiple-Dry Years 3rd Year	1989	-	100%
NOTES: Volumes are in MG. In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.			

7.3 SUPPLY AND DEMAND ASSESSMENT

Requirements for water supply and demand assessment are addressed in CWC section 10635(a), which states the following:

> *CWC 10635(a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier.*

For the water supply and demand assessment, demand projections for the period of 2020 through 2040 are taken from Table 4-3 (DWR Table 4-1) in Chapter 4 of this document. The supply projections are assumed to equal the sum of the surface water, groundwater, and recycled water supplies summarized above.

7.3.1 Normal Year

The availability of the City's supplies in Normal Years are described in detail in Chapter 6 and summarized below:

- 2,987 MG (year 2020) – 7,395 MG (year 2040) of groundwater from the City's wells in the Turlock Sub-basin;
- 489 MG (year 2020) – 748 MG (year 2040) of recycled water from the City's RWQCF; and
- 5,475 MG (year 2020-2040) of surface water from the Stanislaus Regional Water Supply Project.

The City's Normal Year demands are described in detail in Chapter 4 and 6 and are summarized below:

- 8,462 MG (year 2020) – 12,870 MG (year 2040) of potable water demands from the City's projected population of 79,016 (year 2020) – 120,915 (year 2040) and associated residential and CII accounts; and
- 489 MG (year 2020) – 748 MG (year 2040) of recycled water demand from various sources.

As shown in Table 7-2 (DWR Table 7-2), the City's Normal Year supplies are adequate to meet projected Normal Year demands. If necessary, the City plans to meet any additional demand through increased groundwater pumping, ensuring the City will maintain 100% supply reliability. Alternatively, if there is any disruption in surface water supply, the City will increase groundwater pumping to compensate.

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

	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill from Table 6-9)*	8,951	10,013	11,180	12,334	13,618
Demand totals *(autofill from Table 4-3)*	8,951	10,013	11,180	12,334	13,618
Difference	0	0	0	0	0

NOTES: Volumes are in MG.
In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.
The City assumes 5,475 MG of surface water from the Stanislaus Regional Water Supply Project will be available by 2020, however the project is still in the planning phase and this water may not be available until a later date.

7.3.2 Single Dry Year

The City's water supplies and demands for a Single Dry Year are assumed to be equivalent to those for a Normal Year.

As shown in Table 7-3 (DWR Table 7-3), the City's Single Dry Year supplies are adequate to meet projected Single Dry Year demands. If necessary, the City plans to meet any additional demand through increased groundwater pumping, ensuring that the City will maintain 100 percent supply reliability. Alternatively, if there is any disruption in surface water supply, the City will increase groundwater pumping to compensate.

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

	2020	2025	2030	2035	2040 (Opt)
Supply totals	8,951	10,013	11,180	12,334	13,618
Demand totals	8,951	10,013	11,180	12,334	13,618
Difference	0	0	0	0	0

NOTES: Volumes are in MG.
In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.
The City assumes 5,475 MG of surface water from the Stanislaus Regional Water Supply Project will be available by 2020, however the project is still in the planning phase and this water may not be available until a later date.

7.3.3 Multiple Dry Year

The City's water supplies and demands for Multiple Dry Years are assumed to be equivalent to those for a Normal Year and Single Dry Year.

As shown in Table 7-4 (DWR Table 7-4), the City's Multiple Dry Year supplies are adequate to meet projected Multiple Dry Year demands. If necessary, the City plans to meet any additional demand through increased groundwater pumping and water conservation, ensuring that the City will maintain 100% supply reliability. Alternatively, if there is any disruption in surface water supply, the City will increase groundwater pumping to compensate.

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

		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	8,951	10,013	11,180	12,334	13,618
	Demand totals	8,951	10,013	11,180	12,334	13,618
	Difference	0	0	0	0	0
Second year	Supply totals	8,951	10,013	11,180	12,334	13,618
	Demand totals	8,951	10,013	11,180	12,334	13,618
	Difference	0	0	0	0	0
Third year	Supply totals	8,951	10,013	11,180	12,334	13,618
	Demand totals	8,951	10,013	11,180	12,334	13,618
	Difference	0	0	0	0	0

NOTES: Volumes are in MG.
In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.
The City assumes 5,475 MG of surface water from the Stanislaus Regional Water Supply Project will be available by 2020, however the project is still in the planning phase and this water may not be available until a later date.

7.4 REGIONAL SUPPLY RELIABILITY

Requirements for water supply and demand assessment are addressed in CWC section 10620(f), which states the following:

> *CWC 10620(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

All water consumed by the City, including the future surface water from TID, is under the jurisdiction of the Central Valley Regional Water Quality Control Board, and is therefore considered from local supply sources. No water is imported from other regions, nor does the City anticipate importing water from other regions throughout the UWMP planning period.

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CHAPTER 8
Water Shortage Contingency Planning

This chapter describes the City's Water Shortage Contingency Plan (WSCP) which establishes actions and procedures for managing water supply and water demand during water shortages. The WSCP's purpose is to minimize non-essential uses of water and conserve remaining supplies for the benefit of the public. The City's WSCP is described by Ordinance Nos. 1209-CS and 1222-CS, amending Chapter 6-7 of the Turlock Municipal Code (Appendix F) and the Water Emergency/ Disaster Response Plan (Appendix G).

8.1 STAGES OF CONSERVATION

The City's Emergency Water Shortage Plan (Appendix F) describes the four water conservation stages of the WSCP. Stage one is the least prohibitive while stage four is the most prohibitive. As stated by Turlock Municipal Code (TMC) Section 6-7-403, the City Manager is authorized to enact water conservation stages at his/her discretion. Table 8-1 (DWR Table 8-1) summarizes the four stages with their corresponding water supply percent reductions and water supply conditions.

Table 8-1. Retail: Stages of Water Shortage Contingency Plan (DWR Table 8-1)

Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition (*Narrative description*)
I	10%	Turlock Municipal Code Section 6-7-405(a)
II	20%	Turlock Municipal Code Section 6-7-405(b)
III	30%	Turlock Municipal Code Section 6-7-405(c)
IV	50%	Turlock Municipal Code Section 6-7-405(d)
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES: Includes updates per Ordinance No. 1222-CS approved April 12, 2016.		

8.2 PROHIBITIONS ON END USES

The City's Municipal Code contains multiple sections outlining acceptable outdoor landscape watering practices, prohibited water uses, and acts constituting water wasting. The statutes contained in these sections are in effect at all times, irrespective of the water conservation stage the City is enforcing.

8.2.1 Outdoor Landscape Watering (TMC Section 6-7-301)

a. Outdoor landscape watering is prohibited between the hours of 9:00 a.m. and 7:00 p.m.

b. From March 1st to October 31st addresses which end with an odd number are authorized to water on Sunday, Wednesday, and Friday.

c. From March 1st to October 31st addresses which end with an even number are authorized to water on Tuesday, Thursday, and Saturday.

d. No watering is permitted on Monday.

e. Winter outdoor landscape watering schedule shall be as follows: from November 1st to February 28th outdoor landscape watering is only permitted on Saturday for addresses which end with an even number and Sunday for addresses which end with an odd number.

8.2.2 Water Use Prohibitions (TMC Section 6-7-302)

a. Newly planted lawns may be allowed daily watering only until the second mowing has been completed upon notification of the Municipal Services Department prior to planting.

b. The washing down or hosing of recreational vehicles, sidewalks, gutters, outside structures, or other exterior surfaces without prior written consent of the Municipal Services Director or his designee is prohibited and a violation of this chapter. Sweeping or brushing is required unless prior approval for water use is obtained.

c. The filling of wading pools is permitted, but "slip-n-slides" and other recreational activities requiring a constant flow of water are prohibited.

d. The washing of vehicles at a residence is allowed only if a quick-acting automatic positive shut-off valve is used and in proper operating condition and is limited to one (1) such washing per week per vehicle during designated watering days and times.

8.2.3 Acts Constituting Water Wasting (TMC Section 6-7-408)

a. Failure to comply with the City of Turlock Emergency Water Shortage Plan, any conservation stage declared thereunder, and/or any guidelines or outdoor landscape watering schedules in effect pursuant thereto.

b. Watering outdoor landscape areas or gardens such that excess water leaves the property or area being watered.

c. Watering outdoor landscaping while raining and within forty-eight (48) hours following any measurable rainfall.

d. Washing vehicles, boats, or equipment during restricted days or hours; and/or using an open hose not equipped with a quick-action automatic shut-off valve while so doing.

e. Hosing down driveways, streets, sidewalks, parking lots, and building exteriors without the prior written consent of the Director of Municipal Services or his designee. If consent is given, any restrictions on the frequency, timing, or method would remain in effect unless a health or safety condition existed.

f. Having leaky faucets, irrigation valves, sprinkler heads, or plumbing fixtures on the premises.

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

8.2.4 Stages of Conservation: Stage 1

When Stage 1 of the WSCP is in effect, the City's target demand reduction will be 10 percent. In addition to the above Outdoor Landscape Watering, Water Use Prohibitions, and Acts Constituting Water Wasting, the following mandatory conservation compliance measures will apply:

1. Outdoor landscape watering shall be limited to three (3) times per week on an odd-even basis. If the address ends in an even number, the water days shall be Tuesdays, Thursdays, and Saturdays. If the address ends in an odd number, the watering days shall be Wednesdays, Fridays, and Sundays. No outdoor landscape watering on Mondays. Drip irrigation shall be exempt.
2. Outdoor landscape watering is prohibited between the hours of 9:00 a.m. and 7:00 p.m.
3. Large commercial landscapes and City parks may have individual watering schedules approved by the Municipal Services Department.
4. Residents shall be allowed to wash their vehicles as established by TMC 6-7-302(d).

8.2.5 Stages of Conservation: Stage 2

When Stage 2 of the WSCP is in effect, the City's target demand reduction will be 20 percent. In addition to the above Outdoor Landscape Watering, Water Use Prohibitions, Acts Constituting Water Wasting, and Stage 1 measures, the following mandatory conservation compliance measures will apply:

1. Outdoor landscape watering shall be limited to two (2) times per week. If the address ends in an even number, the watering days shall be Tuesday and Saturday. If the address ends in an odd number, the watering days shall be Wednesday and Sunday. No outdoor landscape watering on Monday, Thursday, and Friday. Drip irrigation systems shall be exempt.
2. Outdoor landscape watering is prohibited between the hours of 9:00 a.m. and 7:00 p.m.
3. Large commercial landscapes and City parks shall also be limited to two (2) days per week, as scheduled by the Municipal Services Department.
4. Residents shall be allowed to wash their vehicles as established by TMC 6-7-302(d).
5. Further use of decorative fountains or reflection ponds shall be discontinued until further notice.

8.2.6 Stages of Conservation: Stage 3

When Stage 3 of the WSCP is in effect, the City's target demand reduction will be 30 percent. In addition to the above Outdoor Landscape Watering, Water Use Prohibitions, Acts Constituting Water Wasting, and Stage 1 and 2 measures, the following mandatory conservation compliance measures will apply:

1. Outdoor landscape watering shall be limited to one (1) day per week if the address ends in an even number, the watering day shall be Saturday. If the address ends in an odd number, the watering day shall be Sunday. No outdoor landscape watering Monday through Friday. Drip irrigation systems shall be exempt.
2. Outdoor landscape watering is prohibited between the hours of 9:00 a.m. and 7:00 p.m.
3. Large commercial landscaping and City parks shall be limited to one (1) day per week, as scheduled by the Municipal Services Department.
4. Filling newly constructed or drained swimming pools with City water shall be prohibited.
5. Construction water from City fire hydrants shall be banned but treated effluent water from the City of Turlock's Regional Water Quality Control Facility may be made available for construction water purposes.
6. Further use of decorative fountains or reflection ponds shall be discontinued until further notice.
7. Washing of automobiles, trucks, trailers, boats, airplanes and other types of mobile equipment not occurring upon the immediate premises of commercial car washes and commercial service stations and not in the immediate interest of the public health, safety, and welfare shall be prohibited.

8.2.7 Stages of Conservation: Stage 4

When Stage 4 of the WSCP is in effect, the City's target demand reduction will be 50 percent. In addition to the above Outdoor Landscape Watering, Water Use Prohibitions, Acts Constituting Water Wasting, and Stage 1, 2 and 3 measures, the following mandatory conservation compliance measures will apply:

1. Outdoor landscape watering shall be prohibited. This includes multi-purpose commercial landscapes and City parks and median strips, and drip irrigation.
2. Industry and commercial businesses shall be required to curtail consumption in order to maintain adequate supplies of water for health and safety.
3. If there is total well failure, disaster relief from outside the City of Turlock shall be required.

The above prohibited uses are summarized in Table 8-2 (DWR Table 8-2).

Table 8-2. Retail Only: Restrictions and Prohibitions on End Uses (DWR Table 8-2)

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement?
N/A	Landscape - Limit landscape irrigation to specific times	Turlock Municipal Code: 6-7-301(a)	Yes
N/A	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-301(b)	Yes
N/A	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-301(c)	Yes
N/A	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-301(d)	Yes
N/A	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-301(e)	Yes
N/A	Landscape - Prohibit certain types of landscape irrigation	Turlock Municipal Code: 6-7-302(a)	Yes
N/A	Other - Prohibit use of potable water for washing hard surfaces	Turlock Municipal Code: 6-7-302(b)	Yes
N/A	Other water feature or swimming pool restriction	Turlock Municipal Code: 6-7-302(c)	Yes
N/A	Other - Require automatic shut of hoses	Turlock Municipal Code: 6-7-302(d)	Yes
N/A	Landscape - Restrict or prohibit runoff from landscape irrigation	Turlock Municipal Code: 6-7-408(b)	Yes
N/A	Landscape - Other landscape restriction or prohibition	Turlock Municipal Code: 6-7-408(c); Prohibit outdoor landscape watering during, and 48 hours after, rain	Yes
N/A	Other - Require automatic shut of hoses	Turlock Municipal Code: 6-7-408(d); Wash vehicles, boats, or equipment during designated times and/or use an open hose equipped with a quick-action automatic shut-off valve	Yes
N/A	Other - Prohibit use of potable water for washing hard surfaces	Turlock Municipal Code: 6-7-408(e)	Yes
N/A	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Turlock Municipal Code: 6-7-408(f)	Yes
N/A	Other	Turlock Municipal Code: 6-7-408(g); evaporative coolers must be equipped with a recirculating pump	Yes
1	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-405(a)(1)	Yes
1	Landscape - Limit landscape irrigation to specific times	Turlock Municipal Code: 6-7-405(a)(2)	Yes
1	Other - Require automatic shut of hoses	Turlock Municipal Code: 6-7-405(a)(4); Residential vehicle washing requires a quick-acting automatic positive shut-off valve and is limited to one washing per week during designated watering times.	Yes
2	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-405(b)(1)	Yes
2	Landscape - Limit landscape irrigation to specific times	Turlock Municipal Code: 6-7-405(b)(2)	Yes
2	CII - Other CII restriction or prohibition	Turlock Municipal Code: 6-7-405(b)(3); Large commercial landscapes and City parks limited to irrigation two days per week	Yes
2	Other - Require automatic shut of hoses	Turlock Municipal Code: 6-7-405(b)(4); Residential vehicle washing requires a quick-acting automatic positive shut-off valve and is limited to one washing per week during designated watering times.	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	Turlock Municipal Code: 6-7-405(b)(5)	Yes
3	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-405(c)(1)	Yes
3	Landscape - Limit landscape irrigation to specific times	Turlock Municipal Code: 6-7-405(c)(2)	Yes
3	CII - Other CII restriction or prohibition	Turlock Municipal Code: 6-7-405(c)(2); Large commercial landscapes and City parks limited to irrigation one day per week	Yes
3	Other water feature or swimming pool restriction	Turlock Municipal Code: 6-7-405(c)(4); Filling newly constructed or drained swimming pools is prohibited.	Yes
3	Other - Prohibit use of potable water for construction and dust control	Turlock Municipal Code: 6-7-405(c)(5)	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	Turlock Municipal Code: 6-7-405(c)(6)	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Turlock Municipal Code: 6-7-405(c)(7)	Yes
4	Landscape - Prohibit all landscape irrigation	Turlock Municipal Code: 6-7-405(d)(1)	Yes
4	CII - Other CII restriction or prohibition	Turlock Municipal Code: 6-7-405(d)(2); Industry and commercial businesses must curtail consumption in order to maintain adequate supplies of water for health and safety	Yes
NOTES: Per Turlock Municipal Code and Corresponding Ordinances.			

8.3 PENALTIES, CHARGES, OTHER ENFORCEMENT OF PROHIBITIONS

Any person committing any act which constitutes the wasting of water will be served a "Notice of Acts Constituting Water Wasting". This notice will serve as a first warning, and will:

1. Identify the date, time, and circumstances of the violation;
2. State the amount of the potential penalty for water wasting; and
3. Advise the customer of his or her appeal rights.

If a second violation occurs within one year of the first warning, a penalty of $50 will be added to the customer's utility account. This penalty may be waived if the customer in violation completes an online water conservation workshop offered by the City within 60 days after the date of the penalty notice. A third violation that occurs within one (1) year of the second violation will result in an additional penalty of $100. A penalty of $250 will be assessed to the utility customer's account for a fourth, and each subsequent violation within one year after being served with a Notice of Acts Constituting Water Wasting. Failure by the customer to pay the penalty imposed will be grounds for disconnection of utility service until compliance is obtained. Any person issued a "Notice of Acts Constituting Water Wasting" has the right to appeal to the Municipal Services Director, as described by TMC Section 6-7-411.

8.4 CONSUMPTION REDUCTION METHODS

Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that will reduce water use, are appropriate for the service area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply. CWC Section 10632 (a)(5) requires the water supplier to provide consumption reduction methods in the most restrictive stages of a water shortage. Water consumption reduction methods used by the City are listed in Table 8-3 (DWR Table 8-3).

Table 8-3. Retail Only: Stages of Water Shortage Contingency Plan – Consumption Reduction Methods (DWR Table 8-3)

Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference *(optional)*
All Stages	Offer Water Use Surveys	Section 9.3.1
All Stages	Provide Rebates on Plumbing Fixtures and Devices	Section 9.3.2 & 9.3.3

8.5 DETERMINING WATER SHORTAGE REDUCTIONS

CWC Section 10632 (a)(9) requires the water supplier to develop a mechanism for determining actual reductions in water use in the course of carrying out the urban water supply shortage contingency analysis.

The City completed water meter installation on all accounts in 2011 and the effectiveness of the City's water conservation program is based on metered water use data. Monitoring involves determining the per capita water use for residential users and the water use per account for non-residential customer categories.

The City determines if water customers are achieving the required demand reductions by comparing 2013 consumption, per Executive Order B-29-15.

8.6 REVENUE AND EXPENDITURE IMPACTS

Section 10632 (7) of the CWC requires an analysis of the impacts of each of the actions taken for conservation and water restriction on the revenues and expenditures of the water supplier.

On April 8, 2014, the City approved Ordinance No. 1194-CS (Appendix H), amending the City's water rate schedule which establishes a rate schedule through January 2019 which includes a commodity charge, capacity charge, and a customer charge. This structure attempts to more accurately charge customers for the true cost of delivered potable water. The rate structure is such that the majority of the City's water revenue is generated from hard costs (cost per connection – i.e., capacity and customer charges), and not volumetric usage (i.e., commodity charges), which means the City's revenues are not highly dependent on the volume of water their customers use. Billing customers under this new rate structure has helped mitigate lost revenue from reduced water deliveries during the present drought. The City estimates that the impact from the current drought has had an approximate 6 percent drop in revenue. This revenue reduction was sufficiently absorbed through a corresponding short term reduction in Operation and Maintenance (O&M) costs.

8.7 RESOLUTION OR ORDINANCE

As previously stated, the City Council approved Ordinances Nos. 1209-CS and 1222-CS, amending Chapter 6-7 of the TMC (Appendix F).

8.8 CATASTROPHIC SUPPLY INTERRUPTION

Section 10632 (3) of the CWC requires actions to be undertaken by the water supplier to prepare for and implement during a catastrophic interruption of water supplies.

8.8.1 Water Emergency Disaster Response Plan

The City has a Water Emergency / Disaster Response Plan (Appendix G), with a stated objective to "maintain a minimum service level and mitigate the public health risks from any drinking water contamination that may occur during a disaster or other emergency event." The plan contains the following sections:

- Designated Responsible Personnel
- Inventory of Resources
- Water System Information
- Emergency Equipment
- Emergency Operations Center
- Emergency Response Procedures

The plan also states the City has seven emergency generators located at seven different wells, enough to provide water for firefighting and sanitation purposes.

8.8.2 Emergency Exchanges with Other Agencies

As stated previously, the City does not yet maintain any treated water interties with other agencies. However, once the Regional Surface Water Supply Project is operational, the City will have access to surface water from the Tuolumne River. The facilities of the Regional Surface Water Supply Project may supply emergency water to maintain normal distribution during a catastrophic supply interruption. Alternatively, if the catastrophic supply interruption is related to the surface water supply, the City will use the existing groundwater wells to provide sufficient water for health, sanitation, and fire protection for the duration of the emergency.

8.9 MINIMUM SUPPLY NEXT THREE YEARS

As an UWMP requirement, all water agencies are required to provide an estimate of the minimum water supply available during each of the next three water years, as shown in Table 8-4 (DWR Table 8-4). The supplies shown in the table are the sum of all the City's supplies expected to be available in the next three years if drought conditions persist (i.e., assuming hydrologic conditions would be similar to historic multiple dry year periods).

Table 8-4. Retail: Minimum Supply Next Three Years (DWR Table 8-4)

	2016	2017	2018
Available Water Supply	6,850	6,997	7,148
NOTES: Volumes are in MG.			

CHAPTER 9
Demand Management Measures

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. DMMs are mechanisms a water supplier implements to increase water conservation. The CWC requires that UWMPs include a comprehensive description of historical, current, and projected water conservation programs.

> *CWC 10631 (f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:*
>
> *(1) (A) … a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.*
>
> *(B)The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:*
>
> *(i) Water waste prevention ordinances.*
>
> *(ii) Metering.*
>
> *(iii) Conservation pricing.*
>
> *(iv) Public education and outreach.*
>
> *(v) Programs to assess and manage distribution system real loss.*
>
> *(vi) Water conservation program coordination and staffing support.*
>
> *(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.*

In previous UWMPs, a substantial amount of data was required to document a water supplier's progress in implementing fourteen specific DMMs. In 2014, Assembly Bill 2067 simplified, clarified, and updated reporting requirements for DMMs. Starting with this 2015 UWMP, focus has turned away from detailed descriptions of each of the fourteen DMMs and has turned to key water conservation measures that are being implemented to achieve compliance with SB X7-7. For retail agencies, the number of DMMs has been reduced from fourteen to six (plus an "other" category).

9.1 WATER CONSERVATION PROGRAM OVERVIEW

The City actively promotes water conservation through customer education and other DMMs described in the following sections. The City educates customers through outreach methods such as direct mail, web site alerts, messages on customer bills and school-based education programs that reinforce the need for customers and their families to take prompt action to reduce water use to conserve precious drinking water.

As described in this chapter, the City has an active and comprehensive conservation program that offers a full range of helpful programs for customers to reduce their water use.

9.2 DEMAND MANAGEMENT MEASURES

The six DMMs required for the 2015 UWMP include the following:

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

The goal of this chapter is to provide a comprehensive description of the water conservation programs that are currently implemented and those planned to be implemented in the future. For each DMM, the current program is described, followed by a description of how the DMM was implemented over the previous five years and any future implementation plans.

9.2.1 Water Waste Prevention Ordinances

Title 6, Chapter 7 of the Turlock Municipal Code (Appendix F), most recently amended by Ordinance Nos. 1209-CS (May 2015) and 1222-CS (April 2016) (Appendix F), contains a water wasting prohibition section that prohibits the wasteful use of water during normal water years. This section prohibits specific water wasting appurtenances (such as "once-through" cooling systems and "slip-n-slides"), general water waste, and requires proper maintenance of water pipes and fixtures to prevent leaks. This City Code is in line with the goals of the California Urban Water Conservation Council (CUWCC) MOU.

Table 9-1 lists documented water waste violations recorded by the City from 2011 through 2015. As shown, the number of recorded violations since 2011 is substantial, with a dramatic increase for 2015. As expected, this increase in recorded violations is reflected in a corresponding decrease of per capita water use: from 273 GPCD in 2011 to 215 GPCD in 2015 – a decline of 21 percent.

Table 9-1. Documented Water Waste Violations[(a)]

	2011	2012	2013	2014	2015
Number of Violations	742	637	566	384	3,914

[(a)] Written warnings and notices to customers, excludes informal interactions

For dry year conditions and other water supply shortages, the City has an Emergency Water Shortage Plan (Appendix F: Article 4) that includes specific water use restrictions. The City's Emergency Water Shortage Plan is further described in Chapter 8.

Implementation of this DMM will continue to help the City achieve its water use targets by minimizing the nonessential uses of water in order to increase availability for human consumption, sanitation, and fire protection.

9.2.2 Metering

The City commenced meter-based billing for the vast majority of its water accounts on January 1, 2011. In conjunction with a thorough public education campaign, the move to meter-based billing has resulted in a significant decrease in water consumption.

The installation of meters appears to have significantly modified customer behavior and is largely responsible for the 20 percent reduction in total City-wide water use from 2007 to 2011. The per capita water use, likewise, declined by 21.6 percent City-wide, 22.65 percent for single-family residential and 7.54 percent for multi-family residential, between 2011 and 2015 as customers began receiving and responding to their commodity-based monthly water bills.

In addition to motivating water use behavior change in rate-payers, the City's metering program also provides detailed usage information that has helped customers use water more efficiently. For example, the Automatic Meter Reading (AMR) systems installed at schools, religious institutions, City parks and other large, landscaped areas provides near real-time water usage information, empowering the customers with large irrigated landscapes to maximize the efficiency of its watering schedule.

Implementation of this DMM will continue to help the City achieve its water use targets by providing accurate water use information to the customer and the City.

9.2.3 Conservation Pricing

Municipal Financial Services conducted a water rate and capacity charge study in January 2014. Based on that study, the City adopted rates that went into effect July 1, 2014, and will increase every January 1st through 2019. The current pricing structure is comprised of three components. The first is the commodity charge, which is the cost of the water supply. Customers are charged per 1,000 gallons of water based on the account type. The second component of the pricing structure is the capacity charge. This charge accounts for the cost of the meter, operation and maintenance, as well as other facility costs. This charge is based on the meter size. The third component of the pricing structure is the customer charge, which accounts for the cost of mailing and processing bills along with other administrative costs. The customer charge is the same amount regardless of meter size or account type. The City's current water rate schedule is provided in Appendix H.

Since the implementation of these rates, water production has declined approximately 15 percent. Overall, with the installation of water meters and the conversion of all customers to meter-based billing, and the watering restrictions currently in place there has been approximately a 32 percent reduction in water use from 2008 to 2015.

Implementation of this DMM will continue to help the City achieve its water use targets by ensuring water customers pay the true cost of water. Implementation of this DMM will also continue to help adequately fund water system operations and maintenance, including capital repair and replacement programs, and water conservation programs.

9.2.4 Public Education and Outreach

The City has an active public information and outreach program. This program consists of distributing information to the public through a variety of methods, such as utility billing publication inserts, press releases via radio and newspaper, school curriculum, educational flyers, commercials on television and in theatres, and water conservation tips and videos on the City's webpage.

Since 2007, the City has implemented an aggressive and prominent environmental stewardship program known as "Go Green." The program is broad, but focuses specifically on conservation education. Program components include water use efficiency and conservation, stormwater pollution prevention, recycling, composting, and sanitary sewer overflow prevention. The "Go Green" educational activities related to water conservation over the past nine years include, but are not limited to:

- Website information,
- Utility bill inserts,
- Press releases,
- Print media campaigns/columns,
- Local cable TV public information,
- Booths at fairs/exhibitions,
- Presentation to local service organizations and similar groups

The City's primary school-age public education campaign is the "Go Green Week" program, which engages students in activities that teach the importance of environmentally-responsible behavior. Currently in its ninth year, "Go Green Week" is coordinated each year with participating schools in the Turlock Unified School District. Through a partnership of City staff, teachers, administrators, community organizations, and volunteers, students learn about conservation and pollution prevention strategies such as recycling, composting, water conservation and waste reduction. In addition to "Go Green Week," the City promotes a "Green Teen of the Month" award, the "Team Green Kids Club," and various other school programs and materials. City staff also conduct periodic classroom presentations on water conservation and other environmental issues, as well as provide student tours of the City's wastewater treatment facility.

Implementation of this DMM will continue to help the City achieve its water use targets by educating water users about the importance of improving water use efficiency, and avoiding water waste.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

A water audit is a method of accounting water use throughout a water system in order to quantify unaccounted-for water. Unaccounted-for water is the difference between metered production and metered usage on a system-wide basis. With the implementation of meter-based billing for all water accounts, the City is better able to track water losses and unaccounted water use. As a

member of the CUWCC, the City uses AWWA's software to complete a biennial Water Audits and Balance Analysis. A copy of the City's most recent AWWA audit can be found in Appendix I.

In addition to the AWWA water audits, the City's loss prevention program involves leak detection and repair, focusing primarily on areas with a high probability for leakage. Due to the flat nature of the San Joaquin Valley and the shallow depth of the City's water mains, water leaks are detected fairly easily. Utility staff monitor for water leaks as part of their daily operations, and respond to calls from customers concerned about potential leaks. Although the City does not perform "formal" pipeline inspections at regular intervals, these "spot check" inspections help contribute to approximately 100 leak repairs per year.

Implementation of this DMM will continue to help the City achieve its water use targets by identifying sources of water loss quickly so repairs can be made and losses minimized.

9.2.6 Water Conservation Program Coordination and Staffing Support

In line with the CUWCC's MOU, the City has designated staff to actively develop, promote, enforce, and maintain water conservation programs. Currently, two full-time employees allot a portion of their time to serve the duties of a Water Conservation Coordinator. These employees are responsible for implementing and monitoring the City's water conservation activities. Further, two twenty hour per week year-round employees assist the conservation coordinator by responding to water complaints, monitoring water waste, and checking for excess landscape water use.

The effectiveness of this DMM will be evaluated in conjunction with the success of the City's water conservation efforts as a whole. As the City grows and water resources become more limited and expensive, the water conservation programs will gain in importance. As the water conservation program grows, these duties will increase and additional staffing may be necessary.

Implementation of this DMM will continue to help the City achieve its water use targets by making implementation of the City's water conservation program a top priority.

9.3 OTHER DEMAND MANAGEMENT MEASURES

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

- Residential Water Survey Program,
- Residential WaterSense Toilet Rebate Program,
- High-Efficiency Washing Machine Rebate Program,
- Large Landscape Conservation Program, and
- Conservation for Commercial and Industrial Accounts.

These programs are described below.

9.3.1 Residential Water Survey Program

The City began implementation of its residential water survey program in 2010. The program was developed by City staff based on training provided by the CUWCC, and consists of offering residential water survey kits to the City's customers. The survey kits allow customers to perform a home water audit, gauging how efficient they are with their water use. By performing the audit, the customer is able to identify areas of potential improvement, as well as identify potential leaks. Free water saving devices (low-flow shower heads and faucet aerators) are provided to customers who complete and submit a survey response form.

9.3.2 Residential WaterSense Toilet Rebate Program

This program provides incentives for residential customers to replace existing toilets with high efficiency models that meet the EPA's WaterSense specifications. The City offers a rebate of $75 per toilet for the replacement of a 3.6 or greater gallons per flush (gpf) model with one that uses 1.28 gpf or less.

9.3.3 High-Efficiency Washing Machine Rebate Program

The City's Municipal Services Department offers a high-efficiency washing machine rebate program which provides financial incentives to qualifying customers who install high-efficiency washing machines in their homes. Rebates for the purchase of high-efficiency clothes washers are available for up to $100 per washer. In addition to the City's rebate, the City's main electrical utility (TID) currently offers a $35 rebate for customers who purchase a high-efficiency clothes washer (Energy Star compliant). These rebates can be combined for additional savings.

9.3.4 Large Landscape Conservation Program

Beginning in 2006, the City began monitoring water use of landscape and irrigation customers. This program was further enhanced by the installation of a fixed-based AMR system that allows the City to monitor water consumption on a daily basis. The City has worked with large landscape customers such as the Turlock Unified School District and a number of religious institutions to increase efficiency and reduce overall water use. The City has also installed meters and AMR devices at all City parks and City-owned landscaped areas to ensure efficient landscape irrigation.

9.3.5 Conservation for Commercial and Industrial Accounts

Compared to residential customers, the City's commercial, institutional, and industrial (CII) customers have significant economic incentive to conserve water, as CII customers pay for both water and sewer services volumetrically (meter-based). The incentive to conserve is especially strong for those commercial and light industrial customers who do not have a separate landscape water meter, as their monthly sewer charge is based on their water meter reading (which in this case likely includes landscape irrigation water). Since the Regional Board required the City to convert its RWQCF to disinfected tertiary treatment, the City's sewer utility rates are higher than the City's water rates. High volumetric sewer utility rates make conservation appealing to CII facilities, because it reduces the use of metered water and therefore, reduces the volume of sewage.

The City's Environmental Compliance Inspector (ECI) reviews CII water meter readings on a monthly basis, and conducts annual inspections of all significant industrial users. By analyzing meter data and production processes, the City's ECI has been able to reduce water consumption for a variety of CII accounts.

9.4 MEMBERS OF THE CALIFORNIA URBAN WATER CONSERVATION COUNCIL

In 1991 (amended September 16, 1999), an MOU regarding urban water conservation in California was made to formalize an agreement between DWR, water agencies, environmental organizations, and other interested groups to implement Best Management Practices (BMPs) and make a cooperative effort to reduce the consumption of California's water resources. This MOU is administered by the CUWCC.

In August 2009, the City became a member of the CUWCC and in May 2011 submitted its first BMP annual report for 2009-2010 to the Council. The most recent CUWCC compliance report is from 2013.

CWC Section 10631 (j) allows for an urban retail water agency that is a signatory (member) of the CUWCC to meet the DMM requirements by documenting that the CUWCC has determined the urban water agency is complying with all of the provisions of the MOU. Documentation of the City's CUWCC MOU compliance is provided in Appendix J.

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CHAPTER 10
UWMP Adoption, Submittal, and Implementation

This chapter provides information regarding the notification, public hearing and adoption of the UWMP.

10.1 INCLUSION OF ALL 2015 DATA

Because 2015 is the first compliance year for SB X7-7, the 2015 UWMPs must contain data through the end of 2015. If the water supplier bases its accounting on a calendar year, the data must be through the end of the 2015 calendar year (December 2015).

As indicated in Chapter 2, the City uses a calendar year for water supply and demand accounting, and therefore this 2015 UWMP includes data through December 2015.

10.2 NOTICE OF PUBLIC HEARING

The City provided 60-day notice of the preparation of its 2015 UWMP, and notice of the 2015 UWMP Public Hearing to the City and County as listed in Table 10-1 (DWR 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
City of Turlock	☑	☑
County Name	**60 Day Notice**	**Notice of Public Hearing**
Stanislaus County	☑	☑

Other agencies notified included the following:

- California State University, Stanislaus
- City of Ceres
- City of Hughson
- City of Modesto
- Denair Community Services District
- East Stanislaus Regional Water Management Partnership
- Eastside Water District
- Keyes Community Services District
- Merced County Public Works Department
- Merced Irrigation District

- Modesto Irrigation District
- Stanislaus Regional Water Authority
- Turlock Groundwater Basin Association
- Turlock Irrigation District

10.2.1 Notice to the Public

Public hearing notifications for adopting the UWMP were published in the local newspaper (Turlock Journal). Copies of the published Notice of Public Hearing are included in Appendix D.

10.3 PUBLIC HEARING AND ADOPTION

The City has encouraged community and public interest involvement in the UWMP update through the use of mailings, public meetings, and web-based communication. Copies of the City's outreach efforts are included in Appendix D.

The public hearings provided an opportunity for all City water users and the general public to become familiar with the UWMP and ask questions about its water supply, in addition to the City's continuing plans for providing a reliable, safe, high-quality water supply. The adoption, implementation and economic impact of revised water use targets (described in Chapter 5) was also discussed. Hard copies of the draft UWMP were made available for public inspection at the City's Municipal Services Department during normal business hours and at the Turlock Public Library. An electronic version was placed on the City's website: http://www.cityofturlock.org/.

10.3.1 Adoption

This UWMP was adopted by the City Council on June 14, 2016. A copy of the adopted resolution is provided in Appendix K.

10.4 UWMP SUBMITTAL

A copy of this 2015 UWMP was submitted to DWR within 30 days of adoption and by July 1, 2016. The adopted 2015 UWMP was submitted electronically to DWR using the WUEdata submittal tool. A CD or hardcopy of the adopted 2015 UWMP was also submitted to the California State Library.

No later than 30 days after adoption, a copy of the adopted 2015 UWMP, including the Water Shortage Contingency Plan, will be provided to the cities and counties to which the City provides water.

10.5 PUBLIC AVAILABILITY

Upon submittal to DWR, hard copies of this UWMP will be available for public review at the City's Municipal Services Department during normal business hours and at the Turlock Public Library. An electronic copy of this UWMP will also be available for review and download on the City's website: http://www.cityofturlock.org/.

10.6 UWMP IMPLEMENTATION

This UWMP will be the source document for any Senate Bill 610 Water Supply Assessments or Senate Bill 221 Water Supply Verifications required for any proposed projects between 2016 and 2020 that are subject to California Environmental Quality Act (CEQA) and would demand an amount of water equivalent or greater than the amount of water required by a 500 dwelling unit project. This UWMP will also be used for regulatory compliance and provide guidance on development of new local supplies and implementation of water conservation programs and recycled water expansion to meet the requirements of the Act.

10.7 AMENDING AN ADOPTED UWMP

If the City amends its 2015 UWMP, copies of amendments or changes to the plans will be submitted to DWR, the California State Library, and any city or county within which the City provides water supplies within 30 days after adoption.

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APPENDIX A

Legislative Requirements

- California Water Code – Urban Water Management Planning
- California Water Code – Sustainable Water Use and Demand Reduction

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California Water Code
Urban Water Management Planning

California Water Code Division 6, Part 2.6.

Chapter 1. General Declaration and Policy §10610-10610.4
Chapter 2. Definitions §10611-10617
Chapter 3. Urban Water Management Plans
Article 1. General Provisions §10620-10621
Article 2. Contents of Plans §10630-10634
Article 2.5. Water Service Reliability §10635
Article 3. Adoption And Implementation of Plans §10640-10645
Chapter 4. Miscellaneous Provisions §10650-10656

Chapter 1. General Declaration and Policy

SECTION 10610-10610.4

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

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.

(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.

(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.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

Chapter 2. Definitions

SECTION 10611-10617

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

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.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

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.

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

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.

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

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

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.

Chapter 3. Urban Water Management Plans

Article 1. General Provisions

SECTION 10620-10621

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that

share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(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.

10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero, except as provided in subdivision (d).

(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) 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).

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

Article 2. Contents of Plan

SECTION 10630-10634

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.

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 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.

(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). If groundwater is identified as an existing or planned source of

water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of 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.

(2) 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 basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) 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.

(4) 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) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(A) An average water year.

(B) A single-dry water year.

(C) Multiple-dry water years.

(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(J) Distribution system water loss.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(3) (A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(4) (A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(g) 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 average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(h) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

(i) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(j) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

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.

10631.2. (a) In addition to the requirements of Section 10631, an urban water management plan may, but is not required to, include any of the following information:

(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.

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has

submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.

(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are

appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

(6) Penalties or charges for excessive use, where applicable.

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

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

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

(b) Commencing with the urban water management plan update due July 1, 2016, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

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.

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

Article 2.5. Water Service Reliability

SECTION 10635

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Article 3. Adoption and Implementation of Plans

SECTION 10640-10645

10640. 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.

10641. An urban water supplier required to prepare a 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.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area.

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

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

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) (1) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part.

The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(2) A report to be submitted pursuant to paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section 10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

Chapter 4. Miscellaneous Provisions

SECTION 10650-10656

10650. Any actions or proceedings 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 shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan 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.

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.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation 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 prepared to meet 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.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26

(commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

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California Water Code
Sustainable Water Use and Demand Reduction

California Water Code Division 6, Part 2.55.

Chapter 1. General Declarations and Policy

SECTION 10608-10608.8

10608. The Legislature finds and declares all of the following:

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

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

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

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

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

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

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

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

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

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.

10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to

January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

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

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

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

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

Chapter 2 Definitions

SECTION 10608.12

10608.12. Unless the context otherwise requires, the following definitions govern the construction of this part:

(a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.

(b) "Base daily per capita water use" means any of the following:

(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

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

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

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

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

(g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.

(2) The net volume of water that the urban retail water supplier places into long-term storage.

(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.

(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

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

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

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

(k) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.

(l) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.

(m) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050, that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:

(1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:

(A) Metered.

(B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.

(C) Treated to a minimum tertiary level.

(D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.

(2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.

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

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

(2) The use of recycled water.

(3) The desalination of brackish groundwater.

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

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

(p) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.

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

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

Chapter 3 Urban Retail Water Suppliers

SECTION 10608.16-10608.44

10608.16.(a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.

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

10608.20.(a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

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

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

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

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

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.

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

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

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

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

(A) Consider climatic differences within the state.

(B) Consider population density differences within the state.

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

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

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

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

(c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method

described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

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

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

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

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

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

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

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

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

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

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the

Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

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

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

10608.22. Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph(3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

10608.24.(a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

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

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

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

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.
(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

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

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in

paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

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

(f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

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

10608.26.(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

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

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

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

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

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

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

an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

(2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

10608.28.(a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

(1) Through an urban wholesale water supplier.

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

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

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

(5) By hydrologic region.

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

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

10608.32. All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

10608.36. Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans

submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

10608.42.(a) The department shall review the 2015 urban water management plans and report to the Legislature by July 1, 2017, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.

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

10608.43. The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

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

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

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

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

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

10608.44. Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

Chapter 4 Agricultural Water Suppliers

SECTION 10608.48

10608.48.(a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).

(b) Agricultural water suppliers shall implement all of the following critical efficient management practices:

(1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).

(2) Adopt a pricing structure for water customers based at least in part on quantity delivered.

(c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:

(1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

(2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

(3) Facilitate the financing of capital improvements for on-farm irrigation systems.

(4) Implement an incentive pricing structure that promotes one or more of the following goals:

(A) More efficient water use at the farm level.

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

(F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

(5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

(6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.

(7) Construct and operate supplier spill and tailwater recovery systems.

(8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.

(9) Automate canal control structures.

(10) Facilitate or promote customer pump testing and evaluation.

(11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.

(12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:

(A) On-farm irrigation and drainage system evaluations.

(B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.

(C) Surface water, groundwater, and drainage water quantity and quality data.

(D) Agricultural water management educational programs and materials for farmers, staff, and the public.

(13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.

(14) Evaluate and improve the efficiencies of the supplier's pumps.

(d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.

(e) The data shall be reported using a standardized form developed pursuant to Section 10608.52.

(f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.

(g) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.

(h) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.

(i) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).

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

Chapter 5 Sustainable Water Management

Section 10608.50

10608.50.(a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

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

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

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

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

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

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

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

Chapter 6 Standardized Data Collection

SECTION 10608.52

10608.52.(a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

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

Chapter 7 Funding Provisions

Section 10608.56-10608.60

10608.56.(a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

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

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

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

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

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

10608.60.(a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

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

Chapter 8 Quantifying Agricultural Water Use Efficiency

SECTION 10608.64

10608.64. The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

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APPENDIX B

DWR UWMP Tables

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Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
CA5010019	City of Turlock	18,686	5,675
	TOTAL	18,686	5,675
NOTES: Volumes are in MG. Total volume supplied includes both potable and raw water supplies.			

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

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
☐	Agency is a wholesaler
☑	Agency is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
Unit	MG
NOTES:	

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 CWC 10631.
Turlock Irrigation District

Table 3-1 Retail: Population - Current and Projected						
Population Served	2015[a]	2020[b]	2025[b]	2030[b]	2035[b]	2040*(opt)* [b]
	71,043	79,016	87,883	97,746	108,715	120,915

NOTES:

(a) Source: Department of Finance.

(b) Future population growth assumes an annual 2.15% growth rate based on the Turlock 2012 General Plan.

Table 4-1 Retail: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description *(as needed)*	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	2,495
Multi-Family		Drinking Water	560
Commercial		Drinking Water	533
Industrial		Drinking Water	1,075
Landscape		Drinking Water	269
Institutional/Governmental		Drinking Water	106
Other	City Meters (non-billed)	Drinking Water	82
Other	Unmetered water	Drinking Water	443
Other	Park Wells	Raw Water	113
		TOTAL	5,675
NOTES: Volumes are in MG.			

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type	Additional Description *(as needed)*	Projected Water Use				
		2020	2025	2030	2035	2040-opt
Single Family		3,323	3,696	4,111	4,572	5,085
Multi-Family		767	853	948	1,055	1,173
Commercial		626	696	774	861	958
Industrial		1,161	1,292	1,437	1,598	1,777
Landscape		435	484	538	598	665
Institutional/Governmental		171	191	212	236	262
Other	City Meters (non-billed)	104	116	129	143	159
Other	Unmetered Water	1,726	1,920	2,135	2,375	2,641
Other	Parks Non-Potable Wells	149	149	149	149	149
TOTAL		8,462	9,394	10,432	11,586	12,870

NOTES: Volumes are in MG.
Projections are based on 2012 percentage by water use sector.

Table 4-3 Retail: Total Water Demands						
	2015	2020	2025	2030	2035	2040 *(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	5,675	8,462	9,394	10,432	11,586	12,870
Recycled Water Demand *From Table 6-4*	360	489	619	748	748	748
TOTAL WATER DEMAND	6,035	8,951	10,013	11,180	12,334	13,618
**Recycled water demand fields will be blank until Table 6-4 is complete.*						
NOTES: Volumes are in MG.						

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date	Volume of Water Loss
01/2013	896
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES: Volumes are in MG.	

Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	Yes
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc… utilized in demand projections are found.	Section 4.4
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

Table 5-1 Baselines and Targets Summary *Retail Agency or Regional Alliance Only*					
Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*1997*	*2006*	*356*	*320*	*284*
5 Year	*2003*	*2007*	*352*		
*All values are in Gallons per Capita per Day (GPCD).					
NOTES:					

Table 5-2: 2015 Compliance

*Retail Agency or Regional Alliance Only**

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments to 2015 GPCD *From Methodology 8*					2015 GPCD *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events	Economic Adjustment	Weather Normalization	TOTAL Adjustments	Adjusted 2015 GPCD		
215	320				0	215	215	Yes

**All values are in Gallons per Capita per Day (GPCD).*

NOTES: Volumes are in MG.

Table 6-1 Retail: Groundwater Volume Pumped						
☐	Supplier does not pump groundwater. The supplier will not complete the table below.					
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Turlock Subbasin within the San Joaquin Valley Groundwater Basin	6,847	7,161	7,595	6,710	5,675
	TOTAL	6,847	7,161	7,595	6,710	5,675
NOTES: Volumes are in MG.						

Table 6-2 Retail: Wastewater Collected Within Service Area in 2015						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2015 service area covered by wastewater collection system *(optional)*					
	Percentage of 2015 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?	Volume of Wastewater Collected from UWMP Service Area 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?
City of Turlock	Estimated	3,413	City of Turlock	Turlock Regional Water Quality Control Facility	Yes	No
Total Wastewater Collected from Service Area in 2015:		3,413				

NOTES: Volumes are in MG.
Wastewater generated outside the City's service area, including wastewater from Community Service Districts of Keyes and Denair and the City of Ceres, is treated within the City's service area.

Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2015

☑	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)*	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Turlock Regional Water Quality Control Facility	Harding Drain Bypass Pipeline	San Joaquin River		River or creek outfall	Yes	Tertiary	3,413	3,038	360	0
						Total	3,413	3,038	360	0

NOTES: Volumes are in MG.
There is a difference between the volume of treated wastewater and the volume discharged and recycled because some of the treated wastewater remains at the RWQCF for onsite purposes.

Table 6-4 Retail: Current and Projected 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 Agency Producing (Treating) the Recycled Water:	City of Turlock
Name of Agency Operating the Recycled Water Distribution System:	City of Turlock

Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	2015	2020	2025	2030	2035	2040 (opt)
Agricultural irrigation								
Landscape irrigation (excludes golf courses)	Irrigation at Pedretti Sports Fields	Tertiary	18	18	18	18	18	18
Golf course irrigation								
Commercial use								
Industrial use								
Geothermal and other energy production	Walnut Energy Center Cooling Tower through TID	Tertiary	342	471	601	730	730	730
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR*)								
Surface water augmentation (IPR*)								
Direct potable reuse								
Other *(Provide General Description)*	Recycled Water Filling Stations	Tertiary	0	Varies	Varies	Varies	Varies	Varies
		Total:	360	489	619	748	748	748

**IPR - Indirect Potable Reuse*

NOTES: Volumes are in MG.
The City will begin implementing its recycled water filling station program in 2016. The City has not set a limit on the amount of recycled water that can be trucked off-site other than 300 gallons per vehicle per trip. The City does not know how popular this new program will be and, therefore, is not sure what volume of recycled water to assume will be needed for this program in future years.

Table 6-5 Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual			
☐	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.		
Use Type		2010 Projection for 2015	2015 actual use
Agricultural irrigation		0	0
Landscape irrigation (excludes golf courses)		20	18
Golf course irrigation		0	0
Commercial use		0	0
Industrial use		0	0
Geothermal and other energy production		380	342
Seawater intrusion barrier		0	0
Recreational impoundment		0	0
Wetlands or wildlife habitat		0	0
Groundwater recharge (IPR)		0	0
Surface water augmentation (IPR)		0	0
Direct potable reuse		0	0
Other	*Other*	0	0
Total		400	360
NOTES: Volumes are in MG.			

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.		
Page 6-11	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Recycled Water to TID[(a)]	Agriculture Irrigation	2018	652
Recycled Water to Del Puerto Water District[(a)]	Agriculture Irrigation	2018	3,071
Recycled Water to Darling Ingredients International[(a)]	Industrial	2016	37
Recycled Water for Filling Stations[(b)]	Residential or Commercial	2016	Varies
		Total	3,760

NOTES: Volumes are in MG.
(a) These actions will result in recycled water supplied to areas outside of the City's service area.
(b) The City will begin implementing its recycled water filling station program in 2016. The City has not set a limit on the amount of recycled water that can be hauled off-site other than 300 gallons per vehicle per trip. The City does not know how popular this new program will be and, therefore, is not sure what volume of recycled water to assume will be needed for this program in future years.

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.					
Page 6-1	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
Stanislaus Regional Surface Water Supply Project	Yes	Stanislaus Regional Water Authority		2020	Average Year	5,475
Stanislaus Regional Surface Water Supply Project	Yes	Stanislaus Regional Water Authority		2020	Single-Dry Year	5,475
Stanislaus Regional Surface Water Supply Project	Yes	Stanislaus Regional Water Authority		2020	Multi-Dry Year	5,475

Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality	Total Right or Safe Yield *(optional)*
Groundwater	City's domestic supply wells	5,562	Drinking Water	
Groundwater	Non-potable park irrigation water	113	Raw Water	
Recycled Water		360	Recycled Water	
	Total	6,035		0
NOTES: Volumes are in MG.				

Table 6-9 Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*									
		2020		**2025**		**2030**		**2035**		**2040** *(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)*
Groundwater		2,987		3,919		4,957		6,111		7,395	
Surface water		5,475		5,475		5,475		5,475		5,475	
Recycled Water		489		619		748		748		748	
Total		8,951	0	10,013	0	11,180	0	12,334	0	13,618	0

NOTES: Volumes are in MG.
In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.
The City assumes 5,475 MG of surface water from the Stanislaus Regional Water Supply Project will be available by 2020, however the project is still in the planning phase and this water may not be available until a later date.

Table 7-1 Retail: Basis of Water Year Data			
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 1999-2000, use 2000*	**Available Supplies if Year Type Repeats**	
		☐ Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____	
		☑ Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
		Volume Available	**% of Average Supply**
Average Year	1992	-	100%
Single-Dry Year	1999	-	100%
Multiple-Dry Years 1st Year	1987	-	100%
Multiple-Dry Years 2nd Year	1988	-	100%
Multiple-Dry Years 3rd Year	1989	-	100%
NOTES: Volumes are in MG. In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.			

Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill from Table 6-9)*	8,951	10,013	11,180	12,334	13,618
Demand totals *(autofill from Table 4-3)*	8,951	10,013	11,180	12,334	13,618
Difference	0	0	0	0	0

NOTES: Volumes are in MG.
In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.
The City assumes 5,475 MG of surface water from the Stanislaus Regional Water Supply Project will be available by 2020, however the project is still in the planning phase and this water may not be available until a later date.

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	8,951	10,013	11,180	12,334	13,618
Demand totals	8,951	10,013	11,180	12,334	13,618
Difference	0	0	0	0	0

NOTES: Volumes are in MG.
In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand. The City assumes 5,475 MG of surface water from the Stanislaus Regional Water Supply Project will be available by 2020, however the project is still in the planning phase and this water may not be available until a later date.

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	8,951	10,013	11,180	12,334	13,618
	Demand totals	8,951	10,013	11,180	12,334	13,618
	Difference	0	0	0	0	0
Second year	Supply totals	8,951	10,013	11,180	12,334	13,618
	Demand totals	8,951	10,013	11,180	12,334	13,618
	Difference	0	0	0	0	0
Third year	Supply totals	8,951	10,013	11,180	12,334	13,618
	Demand totals	8,951	10,013	11,180	12,334	13,618
	Difference	0	0	0	0	0

NOTES: Volumes are in MG.
In all year types, if demand cannot be met from Surface Water and Recycled Water alone, it is assumed that groundwater will supply all remaining demand.
The City assumes 5,475 MG of surface water from the Stanislaus Regional Water Supply Project will be available by 2020, however the project is still in the planning phase and this water may not be available until a later date.

Table 8-1 Retail Stages of Water Shortage Contingency Plan		
Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition (*Narrative description)*
I	10%	Turlock Municipal Code Section 6-7-405(a)
II	20%	Turlock Municipal Code Section 6-7-405(b)
III	30%	Turlock Municipal Code Section 6-7-405(c)
IV	50%	Turlock Municipal Code Section 6-7-405(d)
[1] *One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.*		
NOTES: Includes updates per Ordinance No. 1222-CS approved April 12, 2016.		

Table 8-2 Retail Only: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement?
N/A	Landscape - Limit landscape irrigation to specific times	Turlock Municipal Code: 6-7-301(a)	Yes
N/A	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-301(b)	Yes
N/A	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-301(c)	Yes
N/A	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-301(d)	Yes
N/A	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-301(e)	Yes
N/A	Landscape - Prohibit certain types of landscape irrigation	Turlock Municipal Code: 6-7-302(a)	Yes
N/A	Other - Prohibit use of potable water for washing hard surfaces	Turlock Municipal Code: 6-7-302(b)	Yes
N/A	Other water feature or swimming pool restriction	Turlock Municipal Code: 6-7-302(c)	Yes
N/A	Other - Require automatic shut of hoses	Turlock Municipal Code: 6-7-302(d)	Yes
N/A	Landscape - Restrict or prohibit runoff from landscape irrigation	Turlock Municipal Code: 6-7-408(b)	Yes
N/A	Landscape - Other landscape restriction or prohibition	Turlock Municipal Code: 6-7-408(c); Prohibit outdoor landscape watering during, and 48 hours after, rain	Yes
N/A	Other - Require automatic shut of hoses	Turlock Municipal Code: 6-7-408(d); Wash vehicles, boats, or equipment during designated times and/or use an open hose equipped with a quick-action automatic shut-off valve	Yes
N/A	Other - Prohibit use of potable water for washing hard surfaces	Turlock Municipal Code: 6-7-408(e)	Yes
N/A	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Turlock Municipal Code: 6-7-408(f)	Yes
N/A	Other	Turlock Municipal Code: 6-7-408(g); evaporative coolers must be equipped with a recirculating pump	Yes
1	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-405(a)(1)	Yes
1	Landscape - Limit landscape irrigation to specific times	Turlock Municipal Code: 6-7-405(a)(2)	Yes
1	Other - Require automatic shut of hoses	Turlock Municipal Code: 6-7-405(a)(4); Residential vehicle washing requires a quick-acting automatic positive shut-off valve and is limited to one washing per week during designated watering times.	Yes
2	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-405(b)(1)	Yes
2	Landscape - Limit landscape irrigation to specific times	Turlock Municipal Code: 6-7-405(b)(2)	Yes
2	CII - Other CII restriction or prohibition	Turlock Municipal Code: 6-7-405(b)(3); Large commercial landscapes and City parks limited to irrigation two days per week	Yes
2	Other - Require automatic shut of hoses	Turlock Municipal Code: 6-7-405(b)(4); Residential vehicle washing requires a quick-acting automatic positive shut-off valve and is limited to one washing per week during designated watering times.	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	Turlock Municipal Code: 6-7-405(b)(5)	Yes
3	Landscape - Limit landscape irrigation to specific days	Turlock Municipal Code: 6-7-405(c)(1)	Yes
3	Landscape - Limit landscape irrigation to specific times	Turlock Municipal Code: 6-7-405(c)(2)	Yes
3	CII - Other CII restriction or prohibition	Turlock Municipal Code: 6-7-405(c)(2); Large commercial landscapes and City parks limited to irrigation one day per week	Yes
3	Other water feature or swimming pool restriction	Turlock Municipal Code: 6-7-405(c)(4); Filling newly constructed or drained swimming pools is prohibited.	Yes
3	Other - Prohibit use of potable water for construction and dust control	Turlock Municipal Code: 6-7-405(c)(5)	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	Turlock Municipal Code: 6-7-405(c)(6)	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	Turlock Municipal Code: 6-7-405(c)(7)	Yes
4	Landscape - Prohibit all landscape irrigation	Turlock Municipal Code: 6-7-405(d)(1)	Yes
4	CII - Other CII restriction or prohibition	Turlock Municipal Code: 6-7-405(d)(2); Industry and commercial businesses must curtail consumption in order to maintain adequate supplies of water for health and safety	Yes
NOTES: Per Turlock Municipal Code and Corresponding Ordinances.			

Table 8-3 Retail Only: **Stages of Water Shortage Contingency Plan - Consumption Reduction Methods**		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference *(optional)*
All Stages	Offer Water Use Surveys	Section 9.3.1
All Stages	Provide Rebates on Plumbing Fixtures and Devices	Section 9.3.2 & 9.3.3
NOTES:		

Table 8-4 Retail: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	6,850	6,997	7,148
NOTES: Volumes are in MG.			

Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
City of Turlock	☑	☑
County Name	60 Day Notice	Notice of Public Hearing
Stanislaus County	☑	☑

APPENDIX C

DWR UWMP Checklist

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Appendix C. Urban Water Management Plan Checklist
Checklist Arranged by Subject

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
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	**Section 2.1 (page 2-1)**
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 2.5.2	**Section 2.5 (page 2-3)**
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.	Plan Preparation	Section 2.5.2	**Section 2.5.2 (page 2-4)**
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	**Section 3.2 (page 3-1)**
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	**Section 3.3 (page 3-1)**
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	**Section 3.4 (page 3-2)**
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	**Section 3.4.1 (page 3-3)**
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	**Section 3.4 (page 3-2)**
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	**Section 4.2 (page 4-2)**
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	**Section 4.3 (page 4-4)**
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	**Section 4.5 (page 4-6);**
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	**Section 5.6 (page 5-4); Appendix H**
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	Chapter 5 and App E	**Section 5.5, 5.6, 5.7 (page 5-3); Appendix H**
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 is the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	**Section 5.6.1 (page 5-4); Appendix H**
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	**Section 5.7 (page 5-5); Appendix H**
1608.24(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 5.8.2	**N/A**
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	Section 5.1	**N/A**
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	**Section 5.7 (page 5-5); Appendix H**
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	**Section 6.9 (page 6-14)**
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	**Section 6.2 (page 6-1)**
10631(b)(1)	Indicate whether a 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 6.2.2	**Section 6.2 (page 6-1)**
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	**Section 6.2.1 (page 6-2)**
10631(b)(2)	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 6.2.2	**Section 6.2.2 (page 6-3)**
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	System Supplies	Section 6.2.3	**Sections 6.2.2 and 6.2.3 (page 6-3)**

Appendix C. Urban Water Management Plan Checklist
Checklist Arranged by Subject

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years.	System Supplies	Section 6.2.4	**Section 6.2.7 (page 6-6)**
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	**Sections 6.9 (page 6-14)**
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	**Section 6.7 (page 6-13)**
10631(g)	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 multiple-dry years.	System Supplies	Section 6.8	**Section 6.8 (page 6-13)**
10631(i)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	**Section 6.6 (page 6-13)**
10631(j)	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 2.5.1 (page 2-3)**
10631(j)	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	Section 2.5.1	**N/A**
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	**Section 6.5.1 (page 6-8)**
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	System Supplies (Recycled Water)	Section 6.5.2	**Section 6.5.2 (page 6-8)**
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 6.5.2.2	**Section 6.5.2 (page 6-8)**
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	**Section 6.5.3 (page 6-10)**
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	**Section 6.5.4 (page 6-10)**
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	**Section 6.5.4 (page 6-10)**
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 6.5.5	**Section 6.5.5 (page 6-11)**
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	**Section 6.5.5 (page 6-11)**
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 7.4	**Section 7.4 (page 7-9)**
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	**Section 7.1 (page 7-1)**
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	**Section 7.2 (page 7-5)**
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	**Section 7.1 (page 7-1)**
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	**Section 7.1.3 (page 7-3)**
10635(a)	Assess the water supply reliability during normal, dry, and multiple dry 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 7.3	**Section 7.3 (page 7-7)**
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	**Section 8.1 (page 8-1); Appendix G**
10632(a)(2)	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency.	Water Shortage Contingency Planning	Section 8.9	**Section 8.9 (page 8-8)**
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	**Section 8.8 (page 8-7)**

Appendix C. Urban Water Management Plan Checklist Checklist Arranged by Subject				
CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	**Section 8.2 (page 8-1)**
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	**Section 8.4 (page 8-6)**
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	**Section 8.3 (page 8-6)**
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	**Section 8.6 (page 8-7)**
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	**Section 8.7 (page 8-7); Appendix G**
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	**Section 8.5 (page 8-6)**
10631(f)(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	Sections 9.2 and 9.3	**Section 9.2 (page 9-2)**
10631(f)(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	Sections 9.1 and 9.3	**N/A**
10631(j)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	**Section 9.4 (page 9-7); Appendix K**
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	**Section 10.3 (page 10-1); Appendix D**
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.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	**Section 10.2 (page 10-1); Appendix D**
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	**Section 10.4 (page 10-2)**
10635(b)	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 60 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**Section 10.4 (page 10-2)**
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	**Section 10.3 (page 10-2); Appendix D**
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	Sections 10.2.1	**Section 10.2 (page 10-1)**
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	**Section 10.3.1 (page 10-2); Appendix L**
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 10.4.3	**Section 10.4 (page 10-2)**
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 10.4.4	**Section 10.4 (page 10-2)**
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	**Sections 10.4 and 10.7 (page 10-2)**
10645	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	**Section 10.5 (page 10-2)**

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APPENDIX D

Agency and Public Notices

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GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Dana S. Hertfelder
Director
Merced County Public Works Department
715 Martin Luther King Jr Way
Merced CA 95341

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Dana S. Hertfelder:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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 update. The City will be reviewing the UWMP 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 greynolds@turlock.ca.us.

Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Casey Hashimoto
General Manager
Turlock Irrigation District
PO Box 949
Turlock CA 95381-0949

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Casey Hashimoto:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

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Regulatory Affairs Manager

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REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Jim Holgersson
City Manager
City of Modesto
PO Box 642
Modesto CA 95353

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Jim Holgersson:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Toby E. Wells
City Manager
City of Ceres
2720 2nd St
Ceres CA 95307

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Toby E. Wells:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Raul L. Mendez
City Manager
City of Hughson
PO Box 9
Hughson CA 95326

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Raul L. Mendez:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. James G. Crecelius
Chairman
Eastside Water District
PO Box 280
Denair CA 95316

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. James G. Crecelius:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Ron Allen
Chairman
Denair Community Services District
3850 N Gratton Rd
Denair CA 95316

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Ron Allen:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Ernie Garza
General Manager
Keyes Community Services District
5601 7th St
Keyes CA 95328

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Ernie Garza:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Matthew J. Machado, P.E., L.S.
Director
Stanislaus County Public Works Department
1716 Morgan Rd
Modesto CA 95358

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Matthew J. Machado, P.E., L.S.:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Michael Brinton
Interim General Manager
Stanislaus Regional Water Authority
City of Ceres
2220 Magnolia St
Ceres CA 95307

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Michael Brinton:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Jim Alves, P.E.
Associate Civil Engineer
East Stanislaus Regional Water Management Partnership
City of Modesto
1010 Tenth St Ste 4600
Modesto CA 95343

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Jim Alves, P.E.:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Ms. Melody Maffei
Associate Vice President
Capital Planning & Facilities Management Services
California State University, Stanislaus
One University Cir CY 600
Turlock CA 95382

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Ms. Melody Maffei:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Ms. Debbie Liebersbach
President
Turlock Groundwater Basin Association
Turlock Irrigation District
PO Box 949
Turlock CA 95381-0949

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Ms. Debbie Liebersbach:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

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Regulatory Affairs Manager

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REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Hicham Eltal
Deputy General Manager, Water Supply/Rights
Merced Irrigation District
744 W 20th St
Merced CA 95340

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Hicham Eltal:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

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REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. John Davids
Modesto Irrigation District
PO Box 4060
Modesto CA 95352-4060

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. John Davids:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

GARNER REYNOLDS
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPARTMENT

156 S BROADWAY Ste. 270 | TURLOCK CALIFORNIA 95380 | PHONE 209-668-5590 ext. 4407 | FAX 209-668-5695

February 4, 2016

Mr. Michael I. Cooke
Interim City Manager
City of Turlock
156 S Broadway Suite 230
Turlock CA 95380

SUBJECT: Notice of Preparation of the City of Turlock's Urban Water Management Plan 2015 Update

Dear Mr. Michael I. Cooke:

The City of Turlock (City) is currently in the process of updating its Urban Water Management Plan ("UWMP"). 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. 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.

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Sincerely,

Garner Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Gary R. Hampton
City Manager
City of Turlock
156 S Broadway Suite 230
Turlock CA 95380

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Gary R. Hampton:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

The City has completed the draft 2015 UWMP and has scheduled a public hearing for review of the updated 2015 UWMP on Tuesday, June 14, 2016 at 6:00 pm in the Yosemite Room at the City of Turlock's City Hall located at 156 South Broadway. It is anticipated to formally adopt the 2015 UWMP following the public hearing.

At this time we invite your agency to review the draft 2015 UWMP located at the City of Turlock's Municipal Services Department (156 S. Broadway, Ste. 270), the Turlock Public Library (550 N. Minaret Ave.), and the City's website (www.cityofturlock.org). Please forward your comments no later than end of day Monday, June 13, 2016.

Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Casey Hashimoto
General Manager
Turlock Irrigation District
PO Box 949
Turlock CA 95381-0949

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Casey Hashimoto:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

The City has completed the draft 2015 UWMP and has scheduled a public hearing for review of the updated 2015 UWMP on Tuesday, June 14, 2016 at 6:00 pm in the Yosemite Room at the City of Turlock's City Hall located at 156 South Broadway. It is anticipated to formally adopt the 2015 UWMP following the public hearing.

At this time we invite your agency to review the draft 2015 UWMP located at the City of Turlock's Municipal Services Department (156 S. Broadway, Ste. 270), the Turlock Public Library (550 N. Minaret Ave.), and the City's website (www.cityofturlock.org). Please forward your comments no later than end of day Monday, June 13, 2016.

Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Jim Holgersson
City Manager
City of Modesto
PO Box 642
Modesto CA 95353

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Jim Holgersson:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Toby E. Wells
City Manager
City of Ceres
2720 2nd St
Ceres CA 95307

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Toby E. Wells:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Raul L. Mendez
City Manager
City of Hughson
PO Box 9
Hughson CA 95326

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Raul L. Mendez:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. James G. Crecelius
Chairman
Eastside Water District
PO Box 280
Denair CA 95316

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. James G. Crecelius:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Ron Allen
Chairman
Denair Community Services District
3850 N Gratton Rd
Denair CA 95316

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Ron Allen:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Ernie Garza
General Manager
Keyes Community Services District
5601 7th St
Keyes CA 95328

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Ernie Garza:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Matthew J. Machado, P.E., L.S.
Director
Stanislaus County Public Works Department
1716 Morgan Rd
Modesto CA 95358

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Matthew J. Machado, P.E., L.S.:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Dana S. Hertfelder
Director
Merced County Public Works Department
715 Martin Luther King Jr Way
Merced CA 95341

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Dana S. Hertfelder:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Michael Brinton
Interim General Manager
Stanislaus Regional Water Authority
City of Ceres
2220 Magnolia St
Ceres CA 95307

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Michael Brinton:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Jim Alves, P.E.
Associate Civil Engineer
East Stanislaus Regional Water Management Partnership
City of Modesto
1010 Tenth St Ste 4600
Modesto CA 95343

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Jim Alves, P.E.:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Ms. Melody Maffei
Associate Vice President
Capital Planning & Facilities Management Services
California State University, Stanislaus
One University Cir CY 600
Turlock CA 95382

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Ms. Melody Maffei:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

CITY OF TURLOCK INC. 1908

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

million acts of kindness

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Ms. Debbie Liebersbach
President
Turlock Groundwater Basin Association
Turlock Irrigation District
PO Box 949
Turlock CA 95381-0949

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Ms. Debbie Liebersbach:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

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REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. Hicham Eltal
Deputy General Manager, Water Supply/Rights
Merced Irrigation District
744 W 20th St
Merced CA 95340

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. Hicham Eltal:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

Garner R. Reynolds
REGULATORY AFFAIRS MANAGER
greynolds@turlock.ca.us

MUNICIPAL SERVICES DEPT
ADMINISTRATION

156 S. BROADWAY, SUITE 270 | TURLOCK, CALIFORNIA 95380 | PHONE 209-668-5599 ext. 4407 | FAX 209-668-5695

May 18, 2016

Mr. John Davids
Modesto Irrigation District
PO Box 4060
Modesto CA 95352-4060

SUBJECT: Notice of Public Hearing for City of Turlock 2015 Urban Water Management Plan Update

Dear Mr. John Davids:

In accordance with the Urban Water Management Planning Act (California Water Code Section 10610 et seq.), the City of Turlock is required to update its Urban Water Management Plan (UWMP) to meet the California Department of Water Resources requirements for a 2015 UWMP. The City's 2010 UWMP was adopted in June 2011.

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Sincerely,

Garner R. Reynolds
Regulatory Affairs Manager

The following was posted in the Turlock Journal on
May 25, 2016 and June 1, 2016.

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PUBLIC NOTICE

NOTICE OF PUBLIC HEARING BY THE CITY COUNCIL OF THE CITY OF TURLOCK

Public hearing will be held on **TUESDAY, JUNE 14, 2016, AT 6:00 P.M.**, in the **Yosemite Community Room of the Turlock City Hall, 156 S. Broadway, Turlock, CA, to consider** the adoption of the **2015 Urban Water Management Plan and the method for determining urban water use targets as required by the Water Conservation Act of 2009.** In accordance with the Urban Water Management Planning Act (California Water Code Sections 10610 – 10657), the City of Turlock is required to update its Urban Water Management Plan (UWMP) and submit it to the State of California's Department of Water Resources by July 1, 2016. In addition to the 2015 UWMP, the City must also allow community input regarding the method for determining urban water use targets as required by the Water Conservation Act of 2009, SB X7-7 (better known as 20% by 2020), which requires cities to achieve a 20% per capita per day reduction by 2020.

The City of Turlock released the Draft UWMP on May 18, 2016. The Draft UWMP is available for public review and comment through the end of the public hearing described above. The Draft UWMP can be viewed at the following locations: City of Turlock City Clerk's Office (156 S. Broadway, Ste. 230); City of Turlock Municipal Services Department (156 S. Broadway, Ste. 270); Turlock Public Library (550 N. Minaret Ave.); City of Turlock website (www.cityofturlock.org). For questions or more information on the Draft UWMP please contact Garner Reynolds, Regulatory Affairs Manager, City of Turlock Municipal Services Department at (209) 668-5590.

Both verbal and written public comments on the proposed updates to the 2015 Draft Urban Water Management Plan are invited at the public hearing. Written comments may also be provided prior to the public hearing via: (a) hand-delivered or mailed letter to the City of Turlock Municipal Services Department, Attn: Garner Reynolds, 156 S. Broadway, Suite 270, Turlock, CA 95380, (b) faxed to (209) 668-5695, Attn: Garner Reynolds, or (c) email to greynolds@turlock.ca.us. Written comments submitted in advance will receive the same attention as comments received at the public hearing; however, they must be received no later than Friday, June 10, 2016 at 5:00 p.m.

The public hearing will be held to consider and adopt proposed revisions and updates to the 2015 Draft Urban Water Management Plan.

Challenges in court to any of the items identified in this public notice may be limited to only those issues raised at the public hearing described in this notice, or in written correspondence delivered to the Turlock City Council at, or prior to, the public hearing.

Pursuant to California Constitution Article III, Section 6, establishing English as the official language for the State of California, notice is hereby given that all proceedings before the Turlock City Council shall be in English and anyone wishing to address the Council is required to have a translator present who will take an oath to make an accurate translation from any language not English into the English language.

_____

/s/Kellie E. Weaver,
City Clerk, City of Turlock

Publish: 5/25/16 & 6/1/16

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APPENDIX E

SB X7-7 Tables

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SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*
Million Gallons
**The unit of measure must be consistent with Table 2-3*
NOTES:

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	8,489	Million Gallons
	2008 total volume of delivered recycled water	361	Million Gallons
	2008 recycled water as a percent of total deliveries	4%	Percent
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	1997	
	Year ending baseline period range[3]	2006	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[4]	2007	

[1] If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period. *[2] The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.*

[3] The ending year must be between December 31, 2004 and December 31, 2010.

[4] The ending year must be between December 31, 2007 and December 31, 2010.

NOTES:

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
☑	**1. Department of Finance** (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: Service Area Population		
Year		**Population**
10 to 15 Year Baseline Population		
Year 1	1997	51,254
Year 2	1998	52,227
Year 3	1999	53,635
Year 4	2000	55,811
Year 5	2001	58,061
Year 6	2002	59,846
Year 7	2003	61,439
Year 8	2004	63,242
Year 9	2005	65,301
Year 10	2006	65,674
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	61,439
Year 2	2004	63,242
Year 3	2005	65,301
Year 4	2006	65,674
Year 5	2007	66,784
2015 Compliance Year Population		
2015		71,043
NOTES: Populations are from the Department of Finance		

SB X7-7 Table 4: Annual Gross Water Use *								
Baseline Year *Fm SB X7-7 Table 3*		**Volume Into Distribution System** *This column will remain blank until SB X7-7 Table 4-A is completed.*	**Deductions**					**Annual Gross Water Use**
			Exported Water	**Change in Dist. System Storage** (+/-)	**Indirect Recycled Water** *This column will remain blank until SB X7-7 Table 4-B is completed.*	**Water Delivered for Agricultural Use**	**Process Water** *This column will remain blank until SB X7-7 Table 4-D is completed.*	
10 to 15 Year Baseline - Gross Water Use								
Year 1	1997	6,852			-		-	6,852
Year 2	1998	6,179			-		-	6,179
Year 3	1999	6,930			-		-	6,930
Year 4	2000	7,464			-		-	7,464
Year 5	2001	7,489			-		-	7,489
Year 6	2002	8,184			-		-	8,184
Year 7	2003	8,186			-		-	8,186
Year 8	2004	8,299			-		-	8,299
Year 9	2005	8,293			-		-	8,293
Year 10	2006	8,255			-		-	8,255
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**7,613**
5 Year Baseline - Gross Water Use								
Year 1	2003	8,186			-		-	8,186
Year 2	2004	8,299			-		-	8,299
Year 3	2005	8,293			-		-	8,293
Year 4	2006	8,255			-		-	8,255
Year 5	2007	8,359			-		-	8,359
5 year baseline average gross water use								**8,278**
2015 Compliance Year - Gross Water Use								
2015		5,562	-		-		-	**5,562**

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3

NOTES:

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

Complete one table for each source.

Name of Source	Groundwater
This water source is:	
☑	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System	Meter Error Adjustment* *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1997	6,852		6,852
Year 2	1998	6,179		6,179
Year 3	1999	6,930		6,930
Year 4	2000	7,464		7,464
Year 5	2001	7,489		7,489
Year 6	2002	8,184		8,184
Year 7	2003	8,186		8,186
Year 8	2004	8,299		8,299
Year 9	2005	8,293		8,293
Year 10	2006	8,255		8,255
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2003	8,186		8,186
Year 2	2004	8,299		8,299
Year 3	2005	8,293		8,293
Year 4	2006	8,255		8,255
Year 5	2007	8,359		8,359
2015 Compliance Year - Water into Distribution System				
2015		5,562		5,562

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

NOTES: Although gross water use should include water entering the City's distribution system that is treated and untreated, the City did not start keeping records of non-potable park irrigation wells until 2008. Therefore, the 2015 volume number does not include the 113 Million Gallons of non-potable park irrigation water that was supplied in 2015 so that the comparison between 2015 and the 10 Year and 5 Year Baselines were most accurate.

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Annual Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1997	51,254	6,852	366
Year 2	1998	52,227	6,179	324
Year 3	1999	53,635	6,930	354
Year 4	2000	55,811	7,464	366
Year 5	2001	58,061	7,489	353
Year 6	2002	59,846	8,184	375
Year 7	2003	61,439	8,186	365
Year 8	2004	63,242	8,299	360
Year 9	2005	65,301	8,293	348
Year 10	2006	65,674	8,255	344
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**356**
5 Year Baseline GPCD				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use
Year 1	2003	61,439	8,186	365
Year 2	2004	63,242	8,299	360
Year 3	2005	65,301	8,293	348
Year 4	2006	65,674	8,255	344
Year 5	2007	66,784	8,359	343
5 Year Average Baseline GPCD				**352**
2015 Compliance Year GPCD				
2015		71,043	5,562	**215**
NOTES:				

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	356
5 Year Baseline GPCD	352
2015 Compliance Year GPCD	215
NOTES:	

SB X7-7 Table 7: 2020 Target Method *Select Only One*		
Target Method		Supporting Documentation
☑	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D
☐	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	**2020 Target** **GPCD**
356	**284**
NOTES:	

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target			
5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target[1]	Calculated 2020 Target[2]	**Confirmed 2020 Target**
352	334	284	**284**

[1] Maximum 2020 Target is 95% of the 5 Year Baseline GPCD *[2] 2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target.*

NOTES:

SB X7-7 Table 8: 2015 Interim Target GPCD		
Confirmed 2020 Target *Fm SB X7-7 Table 7-F*	10-15 year Baseline GPCD *Fm SB X7-7 Table 5*	**2015 Interim Target GPCD**
284	356	**320**
NOTES:		

SB X7-7 Table 9: 2015 Compliance								
Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments *(in GPCD)* Enter "0" if Adjustment Not Used: Extraordinary Events	Weather Normalization	Economic Adjustment	TOTAL Adjustments	Adjusted 2015 GPCD	2015 GPCD *(Adjusted if applicable)*	**Did Supplier Achieve Targeted Reduction for 2015?**
215	320	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	215	215	**YES**
NOTES:								

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APPENDIX F

Water Conservation and Rationing Plan

- Ordinance No. 1209-CS
- Ordinance No. 1222-CS
- Turlock Municipal Code, Title 6, Chapter 7, Water Conservation and Education, Revised July 2015

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BEFORE THE CITY COUNCIL OF THE CITY OF TURLOCK

IN THE MATTER OF AMENDING TURLOCK MUNICIPAL CODE TITLE 6, CHAPTER 7, REGARDING WATER CONSERVATION AND EDUCATION; TITLE 6, CHAPTER 5, SECTIONS 105(f), 114, 117(e), 701, AND 702(a) REGARDING WATER CONSERVATION MEASURES AND CONSTRUCTION WATER; AND TITLE 6, CHAPTER 6, SECTION 02(r) REGARDING CROSS-CONNECTION CONTROL AND BACKFLOW PREVENTION DEVICES	**ORDINANCE NO. 1209-CS**

WHEREAS, on April 25, 2014, the Governor of the State of California proclaimed a continued State of Emergency to exist throughout California due to the ongoing drought; and

WHEREAS, on April 14, 2015, the Turlock City Council proclaimed and supported the City's implementation of Stage 3 of the Water Shortage Plan; and

WHEREAS, the City of Turlock has determined it necessary to implement additional water conservation strategies to reduce overall water consumption and lessen the demand on local water supply; and

WHEREAS, the proposed language in Title 6 Chapter 7 Water Conservation and Education has been updated to be more consistent with the intent of the chapter, provide additional clarification, and to further promote water conservation strategies; and

WHEREAS, updates are necessary in Title 6 Chapters 5 and 6 regarding water meters, water conservation measures, construction water, and cross-connection control and backflow prevention devices to reflect current regulations and practices.

BE IT ORDAINED by the City Council of the City of Turlock as follows:

SECTION 1. AMENDMENT: Title 6, Chapter 7, is hereby amended to read as follows:

Chapter 6-7
WATER CONSERVATION AND EDUCATION

Sections:

Article 1. Purpose

6-7-101 Repeal.

Turlock City Council Resolution No. 90-68 is hereby repealed in its entirety by this section.

6-7-102 Purpose.

The purpose and intent of the Council in enacting this Chapter is to protect the health, safety, welfare and interest of the public, and of patrons of establishments regulated by this Code by requiring that the patrons, establishments and persons conserve and not waste water by requiring that such establishments and persons conform to the water conservation procedures set forth in this chapter.

6-7-103 Findings.

(a) As a result of the drought and the understanding that water is a precious resource, the City Council finds that any ordinance relating to the conservation of water is an urgency matter for the health, safety and general welfare of the public; and

(b) The Constitution of the State of California and California Case Law provide that water shall not be wasted; and

(c) The provisions of Turlock Municipal Code Section 6-5-117(e) entitled "Prohibited acts" provides that no person shall waste water; and

(d) To prevent the waste of water it is the intent of the City Council of the City of Turlock to adopt reasonable rules regulating the use of water for outdoor landscape watering and other ancillary uses; and

(e) The City Council is mindful of the importance of conserving water.

Article 2. Education

6-7-201 Education.

(a) The City Council, as part of supplementation of this Chapter, will provide information to the public through the City Manager and City departments regarding the proper use to minimize the volume of water needed for a given function.

(b) The Council, in an effort to carry out its findings and legislative purpose, sponsors this educational program with the intent that through proper education and implementation of water conservation procedures persons and establishments may continue to function with a significant savings in the volume of water.

Article 3. Water Conservation Schedule and Prohibitions

6-7-301 Outdoor Landscape Watering.

All users of water within the City limits of the City of Turlock are subject to the following regulations:

(a) Outdoor landscape watering is prohibited between the hours of 12:00 p.m. and 6:00 p.m.

(b) From March 1 to October 31 addresses which end with an odd number are authorized to water on Sunday, Wednesday, and Friday.

(c) From March 1 to October 31 addresses which end with an even number are authorized to water on Tuesday, Thursday, and Saturday.

(d) No watering is permitted on Monday.

(e) Winter outdoor landscape watering schedule shall be as follows: From November 1 to February 28 outdoor landscape watering is only permitted on Saturday for addresses which end with an even number and Sunday for addresses which end with an odd number.

6-7-302 Prohibitions.

(a) Newly planted lawns may be allowed daily watering only until the second mowing has been completed upon notification of the Municipal Services Department prior to planting.

(b) The washing down or hosing of recreational vehicles, sidewalks, gutters, outside structures, or other exterior surfaces without prior written consent of the Municipal Services Director or his designee is prohibited and a violation of this chapter. Sweeping or brushing is required unless prior approval for water use is obtained.

(c) The filling of wading pools is permitted, but "slip-n-slides" and other recreational activities requiring a constant flow of water are prohibited.

(d) The washing of vehicles at a residence is allowed only if a quick-acting automatic positive shut-off valve is used and in proper operating condition and is limited to one (1) such washing per week per vehicle during designated watering days and times.

Article 4. Emergency Water Shortage Plan

6-7-401 Title.

There is hereby established the "City of Turlock Emergency Water Shortage Plan." (785-CS, Amended, 06/23/1992; 778-CS, Enacted, 04/28/1992)

6-7-402 Declaration of policy: Purpose.

(a) Declaration of policy. The City Council hereby declares that the general welfare requires that the water resources available to the City be put to the maximum beneficial use to the extent to which the City is capable, and that the waste of, unreasonable use of, or unreasonable method of use of water be prevented. The conservation of such

water is to ensure the reasonable and beneficial use thereof in the interests of the people of the City of Turlock and for the public welfare.

(b) Purpose. The City Council finds and declares that consolidating the provisions of Ordinance Number 778-CS and Ordinance Number 782-CS into one readily accessible document shall provide a more professional and usable work product as well as promote a better public understanding of the various procedures and provisions of the Turlock Emergency Water Shortage Plan. Additionally, adding provisions prohibiting water wasting and defining the acts which so constitute water wasting advances the purpose and policy of the Turlock Emergency Water Shortage Plan.

6-7-403 City Manager: Authorized action.

The City Manager, or his or her designee, is hereby authorized and directed to implement the provisions of this chapter upon a determination that same is necessary to protect the public welfare and safety.

6-7-404 Application.

The provisions of this chapter shall apply to all persons, customers and property served by the City of Turlock.

6-7-405 Water conservation stages.

(a) Stage 1. Mandatory Water Conservation Compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to Section 6-7-403 of this Code, and publication of notice that Stage 1 Mandatory Water Conservation Compliance Measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering. Outdoor landscape watering shall be limited to three times per week on an odd-even basis If the address ends in an even number, the water days shall be Tuesdays, Thursdays and Saturdays. If the address ends in an odd number, the watering days shall be Wednesday, Friday and Sundays. No outdoor landscape watering on Monday. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 12:00 p.m. and 6:00 p.m.

(3) Large commercial landscapes and City parks may have individual watering schedules approved by the Municipal Services Department.

(4) Residential vehicle washing. Residents shall be allowed to wash their vehicles as established by 6-7-302(d).

(b) Stage 2. Mandatory Water Conservation Compliance: Warning. Upon implementation of this Chapter by the City Manager pursuant to Section 6-7-403 of this Code, and publication of notice that Stage 2 Mandatory Water Conservation Compliance Measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering. Outdoor landscape watering shall be limited to two times per week. If the address ends in an even number, the watering days shall be Tuesday and Saturday. If the address ends in an odd number, the watering days shall be Wednesday and Sunday. No outdoor landscape watering on Monday, Thursday, and Friday. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 6:00 a.m. and 9:00 p.m. on weekdays and between the hours of 12:00 p.m. and 12:00 a.m. on weekends.

(3) Large commercial landscapes and City parks shall also be limited to two days per week, as scheduled by the Municipal Services Department.

(4) Residential vehicle washing. Residents shall be allowed to wash their vehicles as established by 6-7-302(d).

(5) Further use of decorative fountains or reflection ponds shall be discontinued until further notice.

(c) Stage 3. Mandatory Water Conservation Compliance: Warning. Upon implementation of this Chapter by the City Manager pursuant to Section 6-7-403 of this code, and publication of notice that Stage 3 Mandatory Water Conservation Compliance Measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering shall be limited to one day per week. If the address ends in an even number, the watering day shall be Saturday. If the address ends in an odd number, the watering day shall be Sunday. No outdoor landscape watering Monday through Friday. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 12:00 p.m. and 12:00 a.m.

(3) Large commercial landscaping and City parks shall be limited to one (1) day per week, as scheduled by the Municipal Services Department.

(4) Filling newly constructed or drained swimming pools with City water shall be prohibited.

(5) Construction water from City fire hydrants shall be banned but treated effluent water from the City of Turlock's Regional Water Quality Control Facility may be made available for construction water purposes.

(6) Further use of decorative fountains or reflection ponds shall be discontinued until further notice.

(7) Washing of automobiles, trucks, trailers, boats, airplanes and other types of mobile equipment not occurring upon the immediate premises of commercial car washes and commercial service stations and not in immediate interest of the public health, safety, and welfare shall be prohibited.

(d) Stage 4. Mandatory Water Conservation Compliance: Warning. Upon implementation of this Chapter by the City Manager pursuant to Section 6-7-403 of this Code, and publication of notice that Stage 4 Mandatory Water Conservation Compliance Measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering shall be prohibited. This includes multi-purpose commercial landscapes and City parks and median strips, and drip irrigation

(2) Industry and commercial businesses shall be required to curtail consumption in order to maintain adequate supplies of water for health and safety.

(3) If there is total well failure, disaster relief from outside the City of Turlock shall be required.

6-7-406 Mandatory water conservation compliance phase implementation.

(a) The Municipal Services Director, or his or her designee, shall monitor the projected supply and demand for water by its customers, with heightened emphasis during the months of March through October;

(b) The Municipal Services Director, or his or her designee, shall recommend to the City Manager the extent of the Conservation Compliance Stage required in order for the City to prudently plan for and supply water to its customers.

(c) The City Manager may order that the appropriate Stage of water conservation be implemented or terminated in accordance with the applicable provisions of this Chapter. When implementing Mandatory Water Conservation Compliance Stages 2, 3, and 4 said order shall be made by public announcement and shall be published a minimum of one (1) time in a daily newspaper of general circulation and shall become effective immediately upon such publication.

6-7-407 Water wasting prohibited.

Water wasting, as defined by Section 6-7-408 of this Code, is prohibited.

6-7-408 Acts constituting water wasting.

For the purposes of this title, acts constituting water wasting shall mean and include, but shall not be limited to, any of the following acts:

(a) Failure to comply with the City of Turlock Emergency Water Shortage Plan, any conservation stage declared thereunder, and/or any guidelines or outdoor landscape watering schedules in effect pursuant thereto.

(b) Watering outdoor landscape areas or gardens such that excess water leaves the property or area being watered.

(c) Watering outdoor landscaping while raining and within 48 hours following any measurable rainfall.

(d) Washing vehicles, boats, or equipment during restricted days or hours; and/or using an open hose not equipped with a quick-action automatic shut-off valve while so doing.

(e) Hosing down driveways, streets, sidewalks, parking lots, and building exteriors without the prior written consent of the Director of Municipal Services or his designee. If consent is given, any restrictions on the frequency, timing or method would remain in effect unless a health or safety condition existed.

(f) Having leaky faucets, irrigation valves, sprinkler heads or plumbing fixtures on the premises.

(g) Operating evaporated coolers which are not equipped with a recirculating pump.

6-7-409 Notice of Acts Constituting Water Wasting.

(a) Any person committing any act which constitutes the wasting of water, as provided in Section 6-7-408 of this Code, shall be served Notice of Acts Constituting Water Wasting.

(b) This Notice of Acts Constituting Water Wasting shall serve as a first warning and first Notice of Acts Constituting Water Wasting and shall:

(1) Identify the date, time and circumstances of the violation;

(2) State the amount of the potential penalty for water wasting;

(3) Advise the customer of his or her appeal rights as provided herein;

(c) The Notice of Acts Constituting Water Wasting shall be served on any person committing any act which constitutes the wasting of water, as provided in Section 6-7-408 of this Code shall be served Notice of Act Constituting Water Wasting.

6-7-410 Penalty fee assessment for water wasting.

(a) A penalty in the sum of Fifty and no/100ths ($50.00) Dollars shall be assessed to the utility customer's account for a second violation within said one (1) year after being served with a first warning and a first Notice of Acts Constituting Water Wasting, pursuant to Section 6-7-409 of this Code. This penalty shall be waived if the owner of the premises where the violation occurred, or the occupant (if different than the owner, and the occupant committed the violation), attends a water conservation education

workshop offered by the City within sixty (60) days after date of the penalty notice; provided that only one such penalty waiver shall be allowed for the premises within any twenty-four (24) month period.

(b) A penalty in the sum of One Hundred and no/100ths ($100.00) Dollars shall be assessed to the utility customer's account for a third violation within said one (1) year after being served with a Notice of Acts Constituting Water Wasting, pursuant to Section 6-7-409 of this Code.

(c) A penalty in the sum of Two Hundred-Fifty and no/100ths ($250.00) Dollars shall be assessed to the utility customer's account for a fourth and each subsequent violation within said one (1) year after being served with a Notice of Acts Constituting Water Wasting, pursuant to Section 6-7-409 of this Code.

6-7-411 Appeal.

(a) Any person issued a Notice of Acts Constituting Water Wasting shall have the right to appeal to the Municipal Services Director, or his or her designee, the Notice of Acts Constituting Water Wasting, or any water wasting penalty assessed to his or her account.

(b) The appeal hearing shall be held before the Municipal Services Director, or his or her designee. . After hearing all of the evidence presented, he or she shall make the final administrative determination regarding the matter.

(c) The customer shall be allowed to present such witnesses and evidence as he or she may desire.

(d) Such appeal hearing is an administrative hearing and the rules of evidence shall not apply.

6-7-412 Appeal hearing request.

(a) The utility customer must request an appeal hearing in writing within fifteen (15) calendar days from the date of service of the Notice of Acts Constituting Water Wasting, or any water wasting penalty assessed to his or her account, unless the fifteenth day falls on a weekend or City observed holiday.

(b) The request for hearing shall be addressed to the Municipal Services Director and shall be deemed served only when received by the City. Failure to properly serve the request for hearing within the fifteen (15) calendar day period shall be deemed a waiver of the right to appeal the matter and the penalty will be assessed against the customer's account unless the fifteenth day falls on a weekend or City observed holiday.

(c) The hearing officer shall give written notice by mall to the utility customer of the date, time, and location of the appeal hearing, which hearing shall be held no sooner than ten (10) days from receipt of the request for hearing and no longer than thirty (30) days from receipt of such request.

(d) The decision of the hearing officer shall be final. If the Notice of Acts Constituting Water Wasting, or any water wasting penalty assessed to an account is upheld, the penalty shall be assessed to the customer's account.

6-7-413 Failure to pay penalty fee.

Failure of any utility customer to pay the penalty imposed pursuant to this article as required shall be grounds to discontinue utility service until compliance is obtained.

SECTION 2. AMENDMENT: Title 6, Chapter 5, Section 105(F) is hereby amended to read as follows:

6-5-105(f) Installation of water meters.

(f) Upon installation of a water meter and start of water service, customers shall be charged a set-up fee as adopted by City Council and the applicable metered service rates pursuant to TMC 6-5-501.

SECTION 3. AMENDMENT: Title 6, Chapter 5, Section 114 is hereby amended to read as follows:

6-5-114 Limited irrigation and sprinkling water.

City water may be used for limited irrigation and sprinkling in compliance with Chapter 6-7 Water Conservation and Education, except during declared emergencies, power failures, or when requested by the City. The use of City water for such purposes in such situations shall constitute a violation of the provisions of this chapter.

SECTION 4. AMENDMENT: Title 6, Chapter 5, Section 117(e) is hereby amended to read as follows:

6-5-117(e) Prohibited acts.

(e) No person shall waste water as defined by TMC 6-7-408.

SECTION 5. AMENDMENT: Title 6, Chapter 5, Section 701 is hereby amended to read as follows:

6-5-701 Rates for off-site construction water.

(a) Construction water for off-site improvements.

(1) Off-site construction water shall be taken from hydrants designated by the Municipal Services Department and delivered directly to an approved tank truck for distribution. All water delivered to water trucks shall be taken from the two and one-half inch (2-1/2") discharge port of the hydrant only. Hydrants are to be operated, using a hydrant spanner wrench only.

(2) Only under special conditions deemed beneficial by the Municipal Services Department shall a direct discharge from the four and one-half inch (4-1/2") hydrant port be allowed. This use shall only be allowed under the direct supervision of the Municipal Services Department.

(b) A fire hydrant meter shall be obtained from the Municipal Services Department by depositing a fee as approved by City Council resolution with the Municipal Services Department. The deposit shall be refunded, less the amount for water used, upon return of the meter in good condition. In addition to actual consumption, customer shall pay a meter rental fee as follows:

Meter Size	Rate Per Month
1" or less	$2.00
1-1/2"	$4.50
2"	$5.50
3"	$13.50
4"	$27.50
6"	$48.50
8"	$86.50
10"	$140.50

(c) Hydrant Meter Rate (dollars per 1,000 gallons):

Existing	Effective July 1, 2004	Effective July 1, 2005	Effective July 1, 2006	Effective July 1, 2007	Effective July 1, 2008
$ 0.85	$ 1.17	$ 1.42	$ 1.64	$ 1.84	$ 1.93

Dollars per 1,000 gallons, provided aHydrant Meter Rate minimum charge:

Existing	Effective July 1, 2004	Effective July 1, 2005	Effective July 1, 2006	Effective July 1, 2007	Effective July 1, 2008
$9.45	$13.00	$15.75	$18.25	$20.50	$21.50

SECTION 6. AMENDMENT: Title 6, Chapter 5, Section 702(a) is hereby amended to read as follows:

6-5-702(a) Rates for on-site construction water.
(a) All water services shall be metered. Meter fees shall be paid on the building permit. Upon payment of the meter fee through the building permit, a utility account shall be established and a water meter installed. Water charges shall start when the utility account is established.

SECTION 7. AMENDMENT: Title 6, Chapter 6, Section 02(r) is hereby amended to read as follows:

6-6-02(r) Definitions.
(r) Certified tester. "Certified tester" shall mean a person who has met the requirements of, and has been certified by, the CA-NV Section of the American Water Works Association as qualified to inspect and maintain backflow prevention devices. A certified tester shall also be acceptable to the City, and annually maintain and provide an annual calibration certificate for each backflow test kit to the City. The City may maintain and make available a list of persons qualified to inspect and maintain backflow prevention devices. CA-NV Section of the American Water Works Association certification shall be kept current by the certified tester.

SECTION 8. VALIDITY: If any section, subsection, sentence, clause, word, or phrase of this ordinance is held to be unconstitutional or otherwise invalid for any reason, such decision shall not affect the validity of the remainder of this ordinance. The Turlock City Council hereby declares that they would have passed this ordinance, and each section, subsection, sentence, clause, word, or phrase thereof, irrespective of the fact that one or more section, subsection, sentence, clause, word, or phrase be declared invalid or unconstitutional.

SECTION 9. ENACTMENT: Prior to the expiration of fifteen (15) days from the passage and adoption thereof, this ordinance shall be published in a newspaper of general circulation printed and published in the County of Stanislaus, State of California, together with names of the members of the City Council voting for and against the same.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Turlock this 26th day of May, 2015, by the following vote:

AYES:	Councilmembers DeHart, Nascimento, Bublak, Jacob and Mayor Soiseth.
NOES:	None
NOT PARTICIPATING:	None
ABSENT:	None

Signed and approved this 26th day of May, 2015.

GARY SOISETH, Mayor

ATTEST:

Kellie E. Weaver, City Clerk,
City of Turlock, County of Stanislaus,
State of California

BEFORE THE CITY COUNCIL OF THE CITY OF TURLOCK

IN THE MATTER OF AMENDING TURLOCK MUNICIPAL CODE TITLE 6, CHAPTER 7, ARTICLE 3, SECTION 01 REGARDING OUTDOOR LANDSCAPE WATERING AND TITLE 6, CHAPTER 7, ARTICLE 4, SECTION 05 REGARDING WATER CONSERVATION STAGES	ORDINANCE NO. 1222-CS

WHEREAS, the City of Turlock's watering hours shall be prohibited throughout the year between 9:00 a.m. and 7:00 p.m., Monday through Sunday; and

WHEREAS, the City of Turlock has determined this amendment will reduce the amount of water wasting notices issued and assist with providing a consistent message since surrounding agencies have adopted the same prohibited hours.

BE IT ORDAINED by the City Council of the City of Turlock as follows:

SECTION 1. AMENDMENT: Title 6, Chapter 7, Article 3, Section 01 is hereby amended to read as follows:

Article 3. Water Conservation Schedule and Prohibitions Revised 7/15

6-7-301 Outdoor landscape watering. Revised 7/15

All users of water within the City limits of the City of Turlock are subject to the following regulations:

(a) Outdoor landscape watering is prohibited between the hours of 9:00 a.m. and 7:00 p.m.

(b) From March 1st to October 31st addresses which end with an odd number are authorized to water on Sunday, Wednesday, and Friday.

(c) From March 1st to October 31st addresses which end with an even number are authorized to water on Tuesday, Thursday, and Saturday.

(d) No watering is permitted on Monday.

(e) Winter outdoor landscape watering schedule shall be as follows: from November 1st to February 28th outdoor landscape watering is only permitted on Saturday for addresses which end with an even number and Sunday for addresses which end with an odd number.

(1209-CS, Amended, 06/25/2015; 849-CS, Amended, 04/26/1994; 746-CS, Amended, 08/13/1991; 724-CS, Enacted, 03/26/1991)

SECTION 2. AMENDMENT: Title 6, Chapter 7, Article 4, Section 05 is hereby amended to read as follows:

Article 4. Emergency Water Shortage Plan Revised 7/15

6-7-405 Water conservation stages. Revised 7/15

(a) Stage 1. Mandatory water conservation compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to TMC 6-7-403, and publication of notice that Stage 1 mandatory water conservation compliance measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering. Outdoor landscape watering shall be limited to three (3) times per week on an odd-even basis. If the address ends in an even number, the water days shall be Tuesdays, Thursdays, and Saturdays. If the address ends in an odd number, the watering days shall be Wednesdays, Fridays, and Sundays. No outdoor landscape watering on Mondays. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 9:00 a.m. and 7:00 p.m.

(3) Large commercial landscapes and City parks may have individual watering schedules approved by the Municipal Services Department.

(4) Residential vehicle washing. Residents shall be allowed to wash their vehicles as established by TMC 6-7-302(d).

(b) Stage 2. Mandatory water conservation compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to TMC 6-7-403, and publication of notice that Stage 2 mandatory water conservation compliance measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering. Outdoor landscape watering shall be limited to two (2) times per week. If the address ends in an even number, the watering days shall be Tuesday and Saturday. If the address ends in an odd number, the watering days shall be Wednesday and Sunday. No outdoor landscape watering on Monday, Thursday, and Friday. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 9:00 a.m. and 7:00 p.m.

(3) Large commercial landscapes and City parks shall also be limited to two (2) days per week, as scheduled by the Municipal Services Department.

(4) Residential vehicle washing. Residents shall be allowed to wash their vehicles as established by TMC 6-7-302(d).

(5) Further use of decorative fountains or reflection ponds shall be discontinued until further notice.

(c) Stage 3. Mandatory water conservation compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to TMC 6-7-403, and publication of notice that Stage 3 mandatory water conservation compliance measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering shall be limited to one (1) day per week. If the address ends in an even number, the watering day shall be Saturday. If the address ends in an odd number, the watering day shall be Sunday. No outdoor landscape watering Monday through Friday. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 9:00 a.m. and 7:00 p.m.

(3) Large commercial landscaping and City parks shall be limited to one (1) day per week, as scheduled by the Municipal Services Department.

(4) Filling newly constructed or drained swimming pools with City water shall be prohibited.

(5) Construction water from City fire hydrants shall be banned but treated effluent water from the City of Turlock's Regional Water Quality Control Facility may be made available for construction water purposes.

(6) Further use of decorative fountains or reflection ponds shall be discontinued until further notice.

(7) Washing of automobiles, trucks, trailers, boats, airplanes and other types of mobile equipment not occurring upon the immediate premises of commercial car washes and commercial service stations and not in immediate interest of the public health, safety, and welfare shall be prohibited.

(d) Stage 4. Mandatory water conservation compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to TMC 6-7-403, and publication of notice that Stage 4 mandatory water conservation compliance measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering shall be prohibited. This includes multi-purpose commercial landscapes and City parks and median strips, and drip irrigation.

(2) Industry and commercial businesses shall be required to curtail consumption in order to maintain adequate supplies of water for health and safety.

(3) If there is total well failure, disaster relief from outside the City of Turlock shall be required.

(1209-CS, Amended, 06/25/2015; 785-CS, Amended, 06/23/1992; 782-CS, Amended, 06/09/1992; 778-CS, Enacted, 04/28/1992)

SECTION 3. VALIDITY: If any section, subsection, sentence, clause, word, or phrase of this ordinance is held to be unconstitutional or otherwise invalid for any reason, such decision shall not affect the validity of the remainder of this ordinance. The Turlock City Council hereby declares that they would have passed this ordinance, and each section, subsection, sentence, clause, word, or phrase thereof, irrespective of the fact that one or more section, subsection, sentence, clause, word, or phrase be declared invalid or unconstitutional.

SECTION 4. ENACTMENT: Prior to the expiration of fifteen (15) days from the passage and adoption thereof, this ordinance shall be published in a newspaper of general circulation printed and published in the County of Stanislaus, State of California, together with names of the members of the City Council voting for and against the same.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Turlock this 12th day of April, 2016, by the following vote:

AYES:	Councilmember DeHart, Nascimento, Bublak, Jacob and Mayor Soiseth
NOES:	None
NOT PARTICIPATING:	None
ABSENT:	None

Signed and approved this 12th day of April, 2016.

GARY SOISETH, Mayor

ATTEST:

Kellie E. Weaver, City Clerk,
City of Turlock, County of Stanislaus,
State of California

Chapter 6-7
WATER CONSERVATION AND EDUCATION Revised 7/15

Sections:

Article 1. Purpose Revised 7/15

6-7-101 Repeal. Revised 7/15

Turlock City Council Resolution No. 90-68 is hereby repealed in its entirety by this section.

(1209-CS, Amended, 06/25/2015; 724-CS, Enacted, 03/26/1991)

6-7-102 Purpose. Revised 7/15

The purpose and intent of the Council in enacting this chapter is to protect the health, safety, welfare, and interest of the public and of patrons of establishments regulated by this Code by requiring that the patrons, establishments, and persons conserve and not waste water by requiring that such establishments and persons conform to the water conservation procedures set forth in this chapter.

(1209-CS, Amended, 06/25/2015; 724-CS, Enacted, 03/26/1991)

6-7-103 Findings. Revised 7/15

(a) As a result of the drought and the understanding that water is a precious resource, the City Council finds that any ordinance relating to the conservation of water is an urgency matter for the health, safety, and general welfare of the public; and

(b) The Constitution of the State of California and California Case Law provide that water shall not be wasted; and

(c) The provisions of TMC 6-5-117(e) entitled “Prohibited acts” provides that no person shall waste water; and

(d) To prevent the waste of water it is the intent of the City Council of the City of Turlock to adopt reasonable rules regulating the use of water for outdoor landscape watering and other ancillary uses; and

(e) The City Council is mindful of the importance of conserving water.

(1209-CS, Amended, 06/25/2015; 724-CS, Enacted, 03/26/1991)

Article 2. Education Revised 7/15

6-7-201 Education. Revised 7/15

(a) The City Council, as part of supplementation of this chapter, will provide information to the public through the City Manager and City departments regarding the proper use to minimize the volume of water needed for a given function.

(b) The Council, in an effort to carry out its findings and legislative purpose, sponsors this educational program with the intent that through proper education and implementation of water conservation procedures persons and establishments may continue to function with a significant savings in the volume of water.

(1209-CS, Amended, 06/25/2015; 724-CS, Enacted, 03/26/1991)

Article 3. Water Conservation Schedule and Prohibitions Revised 7/15

6-7-301 Outdoor landscape watering. Revised 7/15

All users of water within the City limits of the City of Turlock are subject to the following regulations:

(a) Outdoor landscape watering is prohibited between the hours of 12:00 p.m. and 6:00 p.m.

(b) From March 1st to October 31st addresses which end with an odd number are authorized to water on Sunday, Wednesday, and Friday.

(c) From March 1st to October 31st addresses which end with an even number are authorized to water on Tuesday, Thursday, and Saturday.

(d) No watering is permitted on Monday.

(e) Winter outdoor landscape watering schedule shall be as follows: from November 1st to February 28th outdoor landscape watering is only permitted on Saturday for addresses which end with an even number and Sunday for addresses which end with an odd number.

(1209-CS, Amended, 06/25/2015; 849-CS, Amended, 04/26/1994; 746-CS, Amended, 08/13/1991; 724-CS, Enacted, 03/26/1991)

6-7-302 Prohibitions. Revised 7/15

(a) Newly planted lawns may be allowed daily watering only until the second mowing has been completed upon notification of the Municipal Services Department prior to planting.

(b) The washing down or hosing of recreational vehicles, sidewalks, gutters, outside structures, or other exterior surfaces without prior written consent of the Municipal Services Director or his designee is prohibited and a violation of this chapter. Sweeping or brushing is required unless prior approval for water use is obtained.

(c) The filling of wading pools is permitted, but “slip-n-slides” and other recreational activities requiring a constant flow of water are prohibited.

(d) The washing of vehicles at a residence is allowed only if a quick-acting automatic positive shut-off valve is used and in proper operating condition and is limited to one (1) such washing per week per vehicle during designated watering days and times.

(1209-CS, Amended, 06/25/2015; 724-CS, Enacted, 03/26/1991)

Article 4. Emergency Water Shortage Plan Revised 7/15

6-7-401 Title. Revised 7/15

There is hereby established the “City of Turlock Emergency Water Shortage Plan.”

(1209-CS, Amended, 06/25/2015; 785-CS, Amended, 06/23/1992; 778-CS, Enacted, 04/28/1992)

6-7-402 Declaration of policy: Purpose. Revised 7/15

(a) Declaration of policy. The City Council hereby declares that the general welfare requires that the water resources available to the City be put to the maximum beneficial use to the extent to which the City is capable, and that the waste of, unreasonable use of, or unreasonable method of use of water be prevented. The conservation of such water is to ensure the reasonable and beneficial use thereof in the interests of the people of the City of Turlock and for the public welfare.

(b) Purpose. The City Council finds and declares that consolidating the provisions of Ordinance Number 778-CS and Ordinance Number 782-CS into one (1) readily accessible document shall provide a more professional and usable work product as well as promote a better public understanding of the various procedures and provisions of the Turlock Emergency Water Shortage Plan. Additionally, adding provisions prohibiting water wasting and defining the acts which so constitute water wasting advances the purpose and policy of the Turlock Emergency Water Shortage Plan.

(1209-CS, Amended, 06/25/2015; 785-CS, Amended, 06/23/1992; 778-CS, Enacted, 04/28/1992)

6-7-403 City Manager: Authorized action. Revised 7/15

The City Manager, or his or her designee, is hereby authorized and directed to implement the provisions of this chapter upon a determination that same is necessary to protect the public welfare and safety.

(1209-CS, Amended, 06/25/2015; 785-CS, Amended, 06/23/1992; 778-CS, Enacted, 04/28/1992)

6-7-404 Application. Revised 7/15

The provisions of this chapter shall apply to all persons, customers, and property served by the City of Turlock.

(1209-CS, Amended, 06/25/2015; 785-CS, Amended, 06/23/1992; 778-CS, Enacted, 04/28/1992)

6-7-405 Water conservation stages. Revised 7/15

(a) Stage 1. Mandatory water conservation compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to TMC 6-7-403, and publication of notice that Stage 1 mandatory water conservation compliance measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering. Outdoor landscape watering shall be limited to three (3) times per week on an odd-even basis. If the address ends in an even number, the water days shall be Tuesdays, Thursdays, and Saturdays. If the address ends in an odd number, the watering days shall be Wednesdays, Fridays, and Sundays. No outdoor landscape watering on Mondays. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 12:00 p.m. and 6:00 p.m.

(3) Large commercial landscapes and City parks may have individual watering schedules approved by the Municipal Services Department.

(4) Residential vehicle washing. Residents shall be allowed to wash their vehicles as established by TMC 6-7-302(d).

(b) Stage 2. Mandatory water conservation compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to TMC 6-7-403, and publication of notice that Stage 2 mandatory water conservation compliance measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering. Outdoor landscape watering shall be limited to two (2) times per week. If the address ends in an even number, the watering days shall be Tuesday and Saturday. If the address ends in an odd number, the watering days shall be Wednesday and Sunday. No outdoor landscape watering on Monday, Thursday, and Friday. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 6:00 a.m. and 9:00 p.m. on weekdays and between the hours of 12:00 p.m. and 12:00 a.m. on weekends.

(3) Large commercial landscapes and City parks shall also be limited to two (2) days per week, as scheduled by the Municipal Services Department.

(4) Residential vehicle washing. Residents shall be allowed to wash their vehicles as established by TMC 6-7-302(d).

(5) Further use of decorative fountains or reflection ponds shall be discontinued until further notice.

(c) Stage 3. Mandatory water conservation compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to TMC 6-7-403, and publication of notice that Stage 3 mandatory water conservation compliance measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering shall be limited to one (1) day per week. If the address ends in an even number, the watering day shall be Saturday. If the address ends in an odd number, the watering day shall be Sunday. No outdoor landscape watering Monday through Friday. Drip irrigation systems shall be exempt.

(2) Outdoor landscape watering is prohibited between the hours of 12:00 p.m. and 12:00 a.m.

(3) Large commercial landscaping and City parks shall be limited to one (1) day per week, as scheduled by the Municipal Services Department.

(4) Filling newly constructed or drained swimming pools with City water shall be prohibited.

(5) Construction water from City fire hydrants shall be banned but treated effluent water from the City of Turlock's Regional Water Quality Control Facility may be made available for construction water purposes.

(6) Further use of decorative fountains or reflection ponds shall be discontinued until further notice.

(7) Washing of automobiles, trucks, trailers, boats, airplanes and other types of mobile equipment not occurring upon the immediate premises of commercial car washes and

commercial service stations and not in immediate interest of the public health, safety, and welfare shall be prohibited.

(d) Stage 4. Mandatory water conservation compliance: Warning. Upon implementation of this chapter by the City Manager pursuant to TMC 6-7-403, and publication of notice that Stage 4 mandatory water conservation compliance measures are in effect, the following mandatory conservation compliance measures shall apply:

(1) Outdoor landscape watering shall be prohibited. This includes multi-purpose commercial landscapes and City parks and median strips, and drip irrigation.

(2) Industry and commercial businesses shall be required to curtail consumption in order to maintain adequate supplies of water for health and safety.

(3) If there is total well failure, disaster relief from outside the City of Turlock shall be required.

(1209-CS, Amended, 06/25/2015; 785-CS, Amended, 06/23/1992; 782-CS, Amended, 06/09/1992; 778-CS, Enacted, 04/28/1992)

6-7-406 Mandatory conservation compliance phase implementation. Revised 7/15

(a) The Municipal Services Director, or his or her designee, shall monitor the projected supply and demand for water by its customers, with heightened emphasis during the months of March through October.

(b) The Municipal Services Director, or his or her designee, shall recommend to the City Manager the extent of the conservation compliance stage required in order for the City to prudently plan for and supply water to its customers.

(c) The City Manager may order that the appropriate stage of water conservation be implemented or terminated in accordance with the applicable provisions of this chapter. When implementing mandatory water conservation compliance Stages 2, 3, and 4 said order shall be made by public announcement and shall be published a minimum of one (1) time in a daily newspaper of general circulation and shall become effective immediately upon such publication.

(1209-CS, Amended, 06/25/2015; 785-CS, Amended, 06/23/1992; 778-CS, Enacted, 04/28/1992)

6-7-407 Water wasting prohibited. Revised 7/15

Water wasting, as defined by TMC 6-7-408, is prohibited.

(1209-CS, Amended, 06/25/2015; 785-CS, Enacted, 06/23/1992)

6-7-408 Acts constituting water wasting. Revised 7/15

For the purposes of this title, acts constituting water wasting shall mean and include, but shall not be limited to, any of the following acts:

(a) Failure to comply with the City of Turlock Emergency Water Shortage Plan, any conservation stage declared thereunder, and/or any guidelines or outdoor landscape watering schedules in effect pursuant thereto.

(b) Watering outdoor landscape areas or gardens such that excess water leaves the property or area being watered.

(c) Watering outdoor landscaping while raining and within forty-eight (48) hours following any measurable rainfall.

(d) Washing vehicles, boats, or equipment during restricted days or hours; and/or using an open hose not equipped with a quick-action automatic shut-off valve while so doing.

(e) Hosing down driveways, streets, sidewalks, parking lots, and building exteriors without the prior written consent of the Director of Municipal Services or his designee. If consent is given, any restrictions on the frequency, timing, or method would remain in effect unless a health or safety condition existed.

(f) Having leaky faucets, irrigation valves, sprinkler heads, or plumbing fixtures on the premises.

(g) Operating evaporated coolers which are not equipped with a recirculating pump.

(1209-CS, Amended, 06/25/2015; 785-CS, Enacted, 06/23/1992)

6-7-409 Notice of Acts Constituting Water Wasting. Revised 7/15

(a) Any person committing any act which constitutes the wasting of water, as provided in TMC 6-7-408, shall be served Notice of Acts Constituting Water Wasting.

(b) This Notice of Acts Constituting Water Wasting shall serve as a first warning and first Notice of Acts Constituting Water Wasting and shall:

(1) Identify the date, time, and circumstances of the violation;

(2) State the amount of the potential penalty for water wasting;

(3) Advise the customer of his or her appeal rights as provided herein;

(c) The Notice of Acts Constituting Water Wasting shall be served on any person committing any act which constitutes the wasting of water, as provided in TMC 6-7-408, shall be served Notice of Act Constituting Water Wasting.

(1209-CS, Amended, 06/25/2015; 785-CS, Enacted, 06/23/1992)

6-7-410 Penalty fee assessment for water wasting. Revised 7/15

(a) A penalty in the sum of Fifty and no/100ths ($50.00) Dollars shall be assessed to the utility customer's account for a second violation within said one (1) year after being served with a first warning and a first Notice of Acts Constituting Water Wasting, pursuant to TMC 6-7-409. This penalty shall be waived if the owner of the premises where the violation occurred, or the occupant (if different than the owner, and the occupant committed the violation), attends a water conservation education workshop offered by the City within sixty (60) days after date of the penalty notice; provided, that only one (1) such penalty waiver shall be allowed for the premises within any twenty-four (24) month period.

(b) A penalty in the sum of One Hundred and no/100ths ($100.00) Dollars shall be assessed to the utility customer's account for a third violation within said one (1) year after being served with a Notice of Acts Constituting Water Wasting, pursuant to TMC 6-7-409.

(c) A penalty in the sum of Two Hundred-Fifty and no/100ths ($250.00) Dollars shall be assessed to the utility customer's account for a fourth and each subsequent violation within said one (1) year after being served with a Notice of Acts Constituting Water Wasting, pursuant to TMC 6-7-409.

(1209-CS, Amended, 06/25/2015; 785-CS, Enacted, 06/23/1992. Formerly 6-7-411)

6-7-411 Appeal. Revised 7/15

(a) Any person issued a Notice of Acts Constituting Water Wasting shall have the right to appeal to the Municipal Services Director, or his or her designee, the Notice of Acts Constituting Water Wasting, or any water wasting penalty assessed to his or her account.

(b) The appeal hearing shall be held before the Municipal Services Director, or his or her designee. After hearing all of the evidence presented, he or she shall make the final administrative determination regarding the matter.

(c) The customer shall be allowed to present such witnesses and evidence as he or she may desire.

(d) Such appeal hearing is an administrative hearing and the rules of evidence shall not apply.

(1209-CS, Amended, 06/25/2015; 785-CS, Enacted, 06/23/1992. Formerly 6-7-412)

6-7-412 Appeal hearing request. Revised 7/15

(a) The utility customer must request an appeal hearing in writing within fifteen (15) calendar days from the date of service of the Notice of Acts Constituting Water Wasting, or any water wasting penalty assessed to his or her account, unless the fifteenth day falls on a weekend or City observed holiday.

(b) The request for hearing shall be addressed to the Municipal Services Director and shall be deemed served only when received by the City. Failure to properly serve the request for hearing within the fifteen (15) calendar day period shall be deemed a waiver of the right to appeal the matter and the penalty will be assessed against the customer's account unless the fifteenth day falls on a weekend or City observed holiday.

(c) The hearing officer shall give written notice by mail to the utility customer of the date, time, and location of the appeal hearing, which hearing shall be held no sooner than ten (10) days from receipt of the request for hearing and no longer than thirty (30) days from receipt of such request.

(d) The decision of the hearing officer shall be final. If the Notice of Acts Constituting Water Wasting, or any water wasting penalty assessed to an account is upheld, the penalty shall be assessed to the customer's account.

(1209-CS, Amended, 06/25/2015; 785-CS, Enacted, 06/23/1992. Formerly 6-7-413)

6-7-413 Failure to pay penalty fee. Revised 7/15

Failure of any utility customer to pay the penalty imposed pursuant to this article as required shall be grounds to discontinue utility service until compliance is obtained.

(1209-CS, Amended, 06/25/2015; 785-CS, Enacted, 06/23/1992. Formerly 6-7-415)

APPENDIX G

Water Emergency/Disaster Response Plan

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Water Emergency / Disaster Response Plan

July 2015

City of Turlock

Water Emergency / Disaster Response Plan

1) Objective:

   a. The objective of Municipal Services is to maintain a minimum service level and mitigate the public health risks from any drinking water contamination that may occur during a disaster or other emergency event. The following plan defines how the Department will respond to emergencies and/or disasters that are likely to affect its operations. Disaster/emergencies that are possible include: earthquake, major fire emergencies, water outage due to loss of electrical power, water contamination, and/or acts of sabotage.

2) Designated Responsible Personnel:

   a. See the attached “Emergency and Disaster Personnel list”.

3) Inventory of Resources:

   a. Suppliers:

      Sierra Chemical- 12.5% liquid chlorine – (800)-777-8965: **City contract supplier**

      Shore Chemical – 12.5% liquid chlorine - 634-2144: Local emergency source with 53-gallon drums and 300-gallon totes.

      Howk Systems - Well Pump Repair - 529-4110

      United Rentals - Equipment Rentals – 632-5084

      Ferguson DBA Groeniger– Pipe, valves, fire hydrants, etc. – 577-3333

      Gomes and Sons – Diesel Fuel for generators – 632-3111

4) Water System Information:

   a. Well logs and other system information – Paper files are located at 901 S. Walnut, the Water Shop at 701 S. Walnut and City Hall 156 S. Broadway. Valve location maps are available at the Water Shop as well as the City maintained GIS system located on

the intranet.

b. Production data is kept on the computer network P drive and is available to all Department employees at P:/Municipal Services/Muniserv/Well Information/All Active Wells as well as P:/Municipal Services/Muniserv/WATER.

c. The City GIS system is available on the City Intranet and has maps of wells and water pipe locations and size.

d. Analytical data for the water system is located in the laboratory at 901 S. Walnut and also on the P drive under All Active Wells as shown above.

5) Emergency Equipment:

a. The City has 7 emergency generators located at various wells. According to the 2009 Water Master Plan in the event of a total system electrical failure, these generators would be able to provide enough electricity to power the 7 associated wells and thus provide enough water for firefighting and sanitation purposes.

6) Emergency Operations Center:

a. The Municipal Services Department office has been designated as the communication network emergency operations center. The telephone, FAX and City radio system will be the primary mode of communication in an emergency. Cell phones are also available to all supervisory personnel and will supplement the other communication equipment. A computer link to the police and fire departments is also available as an additional backup system.

b. Fire and Police services share the same radio and phone systems and are readily available if necessary. All of the field radios have a channel that allows direct contact with the Police Dispatcher.

	Phone numbers:	FAX numbers:
Municipal Services Dept.	(209) 668-5590	(209) 668-5695
City of Turlock Police	(209) 668-1200 or 911	(209) 667-5226
City of Turlock Fire	(209) 668-1200 or 911	(209) 668-5558
Stanislaus County Sheriff	911	

c. Other Agency Coordination:

i. In the event of a water emergency that has affected the water quality and or quantity or threatens the water quality and or quantity, the following agencies need to be contacted:

State of California Department of Health Services

	Weekdays	Evenings/Weekends
Bhupinder Sahota	(209) 948-3881	(209) 952-0952
Brian Kidwell	(209) 948-3963	(209) XXX-XXXX

ii. If the above personnel are not available, contact the Office of Emergency Services (24 hours) at (916) 845--8510.

Stanislaus County Department of Environmental Resources

	Weekdays	Evenings/Weekends
Janis Minn	(209) 525-6717	(209) 552-3911 Dispatch
Tom Wolf	(209) 525-6700	(209) 552-3911 Dispatch
Denise Wood	(209) 525-6700	(209) 552-3911

7) Emergency Response Procedures:

a. The first priority is to determine as quickly as possible, the status of employees, assess damages, and provide logistics for emergency repairs and disinfection. Communications with the appropriate health officials and customers should be started using the "Emergency Notification Plan" on file if water quality is affected. Contact the Police and Fire Departments and make them aware of the emergency.

b. Major leaks, pressure loss or service interruptions (Earthquake, etc.):

   i. Isolate the leak(s). Turn off all flow if necessary to control the leak. In a massive break, well sites near the affected areas may have to be shut down. Contact the Fire Department and let them know which areas have low water pressure and/or will not be available for fire suppression.

   ii. Repair or isolate the break(s) as necessary to allow resumption of service to the maximum number of customers. Try and maintain service to critical customers if possible; i.e. hospital. Flush and disinfect repaired lines as per AWWA standards and/or start chlorination of all the City water supply until normal service is resumed and the contamination risk has been eliminated.

   iii. Sample the affected areas for bacteriological contamination and continue sampling until three consecutive samples show no contamination exists.

   iv. Restore normal service.

c. Loss of Electrical Power (Total or partial):

   i. Immediately proceed to the wells that have emergency generators and ensure the generators are operating and the wells are on line.

   ii. Contact TID and determine when full electrical service will be restored.

   iii. Monitor fuel usage and order new supplies well in advance of any need.

d. Sabotage/Theft:

   i. Notify the Police Department and photograph damage. Wait for the Police Department to respond before entering the site.

   ii. Report all fires to the Fire Department.

e. Water Quality Failure:

   i. Begin customer notification procedures based on the attached "Customer Notification Guidelines" attached.

ii. Follow the procedures in the Repeat Sample Guidelines.

iii. If water analyses show a failure to comply with primary drinking water standards, the results must be reported to the Department of Health Services (DHS) within 24 hours.

iv. If the Coliform maximum contaminate levels are reached or exceeded, DHS must be notified immediately by telephone (listed above) with all the applicable data.

v. If repeat sampling shows the well is contaminated, it should be immediately turned off.

vi. If a "Boil Water Order" or "Unsafe Drinking Water Alert" has been issued, the only agency that can rescind the public notice is the Department of Health Services. They will require additional sampling and testing of the affected drinking water.

f. Terrorism:

i. Notify the Municipal Services Director or designee.

ii. Any incident where terrorism is suspected must be reported immediately to the Police Department. The Police must contact the FBI and explain the situation.

iii. If water contamination is suspected, follow the guidelines in the "Water Contamination by Suspected Terrorism" plan.

g. Water Shortage:

i. In cases of a water shortage contact a certified bulk water hauler to supplement supply of potable water into system. List of certified bulk haulers can be found at City Hall 156 S. Broadway on the P: Drive under P:\Municipal Services\MuniServ\EMERGENCY PLANS.

ii. Currently, there are two storage tanks that are equipped to easily receive bulk potable water from water haulers. A third storage tank is in the process of being constructed and will also be equipped to receive bulk potable water supplies.

iii. Alternative water sources are as follows:

a. The City of Modesto has three small independent water systems located

within the City. Currently, two of the systems use City of Turlock water as a backup source of water. Because of their small size they would be able to supply a limited amount of water.

b. The Donnelly Park storm pond can be used by tanker trucks to supply water for fighting fires. This water would not be potable. During irrigation season, TID irrigation laterals would also be a source of water for firefighting purposes.

c. Cities of Denair, Hilmar, Delhi, Keyes, Ceres and Modesto are nearby water systems where water could be obtained for transport in tankers to the City of Turlock.

d. In the case of a water shortage a public notice will be drafted to inform the public of the situation as well as create a list of nonessential water uses to be curtailed during the shortage period. To help facilitate this public outreach the City may contact Stanislaus County Office of Emergency Services for assistance, which can be reached at (209) 552-3600.

h. Resume Normal Operations:

i. Once the emergency has passed, normal operations may resume. A report on the emergency situation must be prepared and submitted to the City Manager. Consult specific emergency plan to determine if any other appropriate reporting methods are necessary

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APPENDIX H

Water Rates

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BEFORE THE CITY COUNCIL OF THE CITY OF TURLOCK

IN THE MATTER OF AMENDING TURLOCK MUNICIPAL CODE TITLE 6, CHAPTER 5, ARTICLE 5, SECTION 01 AND TITLE 6, CHAPTER 5, ARTICLE 7, SECTION 01(b) TO IMPLEMENT UPDATED FEES AND CHARGES FOR PROPERTY RELATED WATER SERVICES	}	ORDINANCE NO. 1194-CS

WHEREAS, on January 29, 2014, a public notice was mailed to the affected property owners regarding the proposed changes of fees and charges for property related water services, pursuant to the provisions of Section 6, Article XIIID of the California Constitution (Proposition 218); and

WHEREAS, the Turlock City Council held a public hearing on March 25, 2014 to consider the adoption of water fees and charges; and

WHEREAS, a majority of written protests was not received in opposition to the proposed changes in water fees and charges; and

WHEREAS, the City Council has elected to adopt the new water fees and charges.

BE IT ORDAINED by the City Council of the City of Turlock as follows:

SECTION 1. AMENDMENT: Title 6, Chapter 5, Article 5, Section 01 is hereby amended to read as follows:

6-5-501 Fees and Charges.
(a) All service connections shall be metered.

(b) Fees and Charges.

(1) Monthly water charges shall consist of the following three components: Commodity Charge, Capacity Charge, and a Customer Charge.

(2) Each service connection shall pay the fees and charges as set forth below:

Effective date >	7/1/2014	1/1/2015	1/1/2016	1/1/2017	1/1/2018	1/1/2019
Commodity Charge, $ per 1000 gallons						
Single/Multi Residential	$0.48	$0.57	$0.63	$0.74	$0.84	$0.94
Commercial/Industrial/Institutional	$0.37	$0.43	$0.46	$0.54	$0.60	$0.67
Landscape	$0.51	$0.60	$0.65	$0.75	$0.84	$0.94
Capacity Charge, $ per meter per month						
1" or less	$17.50	$20.00	$21.20	$24.10	$26.50	$29.40
1-1/2"	$35.00	$40.00	$42.40	$48.20	$53.00	$58.80
2"	$56.00	$64.00	$67.90	$77.20	$84.80	$94.10
3"	$123.00	$140.00	$149.00	$169.00	$186.00	$206.00
4"	$210.00	$240.00	$255.00	$290.00	$318.00	$353.00
6"	$438.00	$500.00	$530.00	$603.00	$663.00	$735.00
8"	$840.00	$960.00	$1,018.00	$1,157.00	$1,272.00	$1,412.00
10"	$1,330.00	$1,520.00	$1,612.00	$1,832.00	$2,014.00	$2,235.00
Customer Charge, $ per account per month	$2.20	$2.50	$2.60	$3.00	$3.30	$3.60

(c) Inaccurate Meter. An inaccurate meter shall be charged as follows:

(1) Either an average of the three (3) following months' usage (after its repair); or

(2) The charge of the same month for the previous year, whichever is greater.

(d) Standby Charges (this rate is in addition to the water charges shown above). This charge is for customers who use the City water supply as a backup water source.

Size of Service	Effective July 1, 2007	Effective July 1, 2008
2"	$219.00	$230.00
4"	$655.00	$687.00
6"	$1,310.00	$1,374.00
8"	$2,293.00	$2,405.00

SECTION 2. AMENDMENT: Title 6, Chapter 5, Article 7, Section 01(b) is hereby amended to read as follows:

6-5-701(b) Fees for off-site construction water.
(b) In the event that a fire hydrant meter is requested, the meter may be obtained by depositing Seven Hundred and no/100ths ($700.00) Dollars with the Municipal Services Department. The deposit shall be refunded, less the amount for water used, upon return of the meter in good condition. In addition to actual consumption, customer shall pay a meter rental fee as follows:

Meter Size	Rate Per Month
1" or less	$2.00
1-1/2"	$4.50
2"	$5.50
3"	$13.50
4"	$27.50
6"	$48.50
8"	$86.50
10"	$140.50

SECTION 3. VALIDITY: If any section, subsection, sentence, clause, word, or phrase of this ordinance is held to be unconstitutional or otherwise invalid for any reason, such decision shall not affect the validity of the remainder of this ordinance. The Turlock City Council hereby declares that they would have passed this ordinance, and each section, subsection, sentence, clause, word, or phrase thereof, irrespective of the fact that one or more section, subsection, sentence, clause, word, or phrase be declared invalid or unconstitutional.

SECTION 4. ENACTMENT: Prior to the expiration of fifteen (15) days from the passage and adoption thereof, this ordinance shall be published in a newspaper of general circulation printed and published in the County of Stanislaus, State of California, together with names of the members of the City Council voting for and against the same.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Turlock this 8th day of April, 2014, by the following vote:

AYES:	Councilmembers DeHart, Nascimento, White and Mayor Lazar
NOES:	Councilmember Bublak
NOT PARTICIPATING:	None
ABSENT:	None

Signed and approved this 8th day of April, 2014.

JOHN S. LAZAR, Mayor

ATTEST:

Kellie E. Weaver, City Clerk,
City of Turlock, County of Stanislaus,
State of California

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APPENDIX I

Water Audit

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AWWA Water Loss Control Committee (WLCC) Free Water Audit Software v4.1

WAS v4.1

PURPOSE: This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format, and is not meant to take the place of a full-scale, comprehensive water audit format.

USE: The spreadsheet contains several separate worksheets. Sheets can be accessed using the tabs towards the bottom of the screen, or by clicking the buttons on the left below. Descriptions of each sheet are also given below.

THE FOLLOWING KEY APPLIES THROUGHOUT:

- Value can be entered by user
- Value calculated based on input data
- These cells contain recommended default values

Please begin by providing the following information, then proceed through each sheet in the workbook:

NAME OF CITY OR UTILITY: City of Turlock COUNTRY: USA

REPORTING YEAR: 2013 START DATE(MM/YYYY): 01/2013 END DATE(MM/YYYY): 12/2013

NAME OF CONTACT PERSON: Toni Cordell E-MAIL: tcordell@turlock.ca.us TELEPHONE: (209) 668-5590 Ext.

PLEASE SELECT PREFERRED REPORTING UNITS FOR WATER VOLUME: Million gallons (US)

Click to advance to sheet… Click here: ? for help about units and conversions

Instructions	The current sheet
Reporting Worksheet	Enter the required data on this worksheet to calculate the water balance
Water Balance	The values entered in the Reporting Worksheet are used to populate the water balance
Grading Matrix	Depending on the confidence of audit inputs, a grading is assigned to the audit score
Service Connections	Diagrams depicting possible customer service connection configurations
Definitions	Use this sheet to understand terms used in the audit process
Loss Control Planning	Use this sheet to interpret the results of the audit validity score and performance indicators

Comments:

Add comments here to track additional supporting information, sources or names of participants

If you have questions or comments regarding the software please contact us at: wlc@awwa.org

AWWA WLCC Free Water Audit Software: Reporting Worksheet

WAS v4.1

Back to Instructions

? Click to access definition

Water Audit Report for: City of Turlock

Reporting Year: 2013 | 1/2013 - 12/2013

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 (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

WATER SUPPLIED

<< Enter grading in column 'E'

Volume from own sources:	?	9	7,432.200	Million gallons (US)/yr (MG/Yr)
Master meter error adjustment (enter positive value):	?	7		MG/Yr
Water imported:	?	n/a	0.000	MG/Yr
Water exported:	?	9	10.400	MG/Yr
WATER SUPPLIED:			7,421.800	MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:	Value:
Billed metered:	?	9	6,341.500	MG/Yr		
Billed unmetered:	?	10	0.000	MG/Yr		
Unbilled metered:	?	9	91.000	MG/Yr		
Unbilled unmetered:	?	6	92.900	MG/Yr		92.900
AUTHORIZED CONSUMPTION:	?		6,525.400	MG/Yr		

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

WATER LOSSES (Water Supplied - Authorized Consumption)

896.400 MG/Yr

Apparent Losses

					Pcnt:	Value:
Unauthorized consumption:	?		18.555	MG/Yr	0.25%	

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

Customer metering inaccuracies:	?	6	97.957	MG/Yr	1.50%	
Systematic data handling errors:	?	9	0.250	MG/Yr		
Apparent Losses:	?		116.761			

? Choose this option to enter a percentage of billed metered consumption. This is NOT a default value

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses:	?	779.639	MG/Yr
WATER LOSSES:		896.400	MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER:	?	1,080.300	MG/Yr

= Total Water Loss + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	?	6	246.0	miles
Number of active AND inactive service connections:	?	9	18,365	
Connection density:			75	conn./mile main
Average length of customer service line:	?	9	30.0	ft (pipe length between curbstop and customer meter or property boundary)
Average operating pressure:	?	10	45.0	psi

COST DATA

Total annual cost of operating water system:	?	9	$5,900,000	$/Year
Customer retail unit cost (applied to Apparent Losses):	?	7	$0.51	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	?	9	$492.52	$/Million gallons

PERFORMANCE INDICATORS

Financial Indicators

Non-revenue water as percent by volume of Water Supplied:	14.6%
Non-revenue water as percent by cost of operating system:	9.1%
Annual cost of Apparent Losses:	$59,548
Annual cost of Real Losses:	$383,988

Operational Efficiency Indicators

Apparent Losses per service connection per day:	17.42	gallons/connection/day
Real Losses per service connection per day*:	116.31	gallons/connection/day
Real Losses per length of main per day*:	N/A	
Real Losses per service connection per day per psi pressure:	2.58	gallons/connection/day/psi
? Unavoidable Annual Real Losses (UARL):	79.96	million gallons/year
From Above, Real Losses = Current Annual Real Losses (CARL):	779.64	million gallons/year
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	9.75	

* only the most applicable of these two indicators will be calculated

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 84 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: Customer metering inaccuracies

2: Volume from own sources

3: Unauthorized consumption

For more information, click here to see the Grading Matrix worksheet

APPENDIX J

CUWCC Reporting

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CUWCC BMP Retail Coverage Report **2013**

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.1 Operation Practices

7042 City of Turlock

1. Conservation Coordinator provided with necessary resources to implement BMPs?

Name:	Toni Cordell
Title:	Staff Services Technician
Email:	tcordell@turlock.ca.us

On Track

2. Water Waste Prevention Documents

WW Document Name	WWP File Name	WW Prevention URL	WW Prevention Ordinance Terms Description
Option A Describe the ordinances or terms of service adopted by your agency to meet the water waste prevention requirements of this BMP.		http://www.codepublishing.com/CA/Turlock/	The City's Municipal Code contains ordinances supporting water waste prevention in Section 6-7 as well as the following sections below (the URL above is the link to the entire Municipal Code). 6-5-114 Limited irrigation and 6-5-117 Prohibited Act
Option B Describe any water waste prevention ordinances or requirements adopted by your local jurisdiction or regulatory agencies within your service area.			
Option C Describe any documentation of support for legislation or regulations that prohibit water waste.			
Option D Describe your agency efforts to cooperate with other entities in the adoption or enforcement of local requirements consistent with this BMP.			
Option E Describe your agency support positions with respect to adoption of legislation or regulations that are consistent with this BMP.			
Option F Describe your agency efforts to support local ordinances that establish permits requirements for water efficient design in new development.			

CUWCC BMP Retail Coverage Report **2013**

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.1 Operation Practices

On Track

BMP 1.2 Water Loss Control

2013

Agency name: City of Turlock

Reporting unit number: 7042

Reporting unit name (District name): City of Turlock

AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software: Yes

Water Audit Validity Score from AWWA spreadsheet: 84

Email to office@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

Agency Completed Training In The AWWA Water Audit Method: Yes

Agency Completed Training In The Component Analysis Process: Yes

Completed/Updated the Component Analysis (at least every 4 years)? Yes

Component Analysis Completed/Updated Date: 4/18/2011 12:00:00 AM

Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective: No

Recording Keeping Requirements:

- Date/Time Leak Reported
- Type of Leaking Pipe Segment or Fitting
- Leak Volume Estimate
- Leak Location
- Leak Running Time From Report to Repair
- Cost of Repair

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective: Yes

Type of Program Activities Used to Detect Unreported Leaks

Does your agency maintain in-house records of audit results or the completed AWWA worksheet for the completed audit which could be forwarded to CUWCC? No

Does your agency keeps records of each component analysis performed, and incorporates results into future annual standard water balances? Yes

Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

Total Leak Repaired	Economic Value Of Real Loss	Economic Value Of Apparent Loss	Miles Of System Surveyed For Leaks	Pressure Reduction Undertaken For Loss Reduction	Cost Of Interventions	Water Saved (AF/Year)
34			180	V	240750	1.2

Comments:

CUWCC BMP Coverage Report 2013

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.3 Metering With Commodity

7042	City of Turlock

Numbered Unmetered Accounts	Yes	**Not On Track**
Metered Accounts billed by volume of use	Yes	**On Track**
Number of CII Accounts with Mixed Use Meters	853	
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No	**Not On Track**
Feasibility Study provided to CUWCC?	Yes	**On Track**
Completed a written plan, policy or program to test, repair and replace meters	Yes	**On Track**

At Least As Effective As **Yes**

CUWCC BMP Coverage Report 2013

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.4 Retail Consrvation Pricing

7042 City of Turlock

Implementation (Water Rate Structure)

Customer Class	Water Rate Type	Conserving Rate?
Single-Family	Increasing Block	Yes
Multi-Family	Increasing Block	Yes
Commercial	Increasing Block	Yes
Industrial	Increasing Block	Yes
Single-Family	Non-Volumetric Flat Rate	No
Multi-Family	Non-Volumetric Flat Rate	No
Commercial	Non-Volumetric Flat Rate	No

On Track

	Customer Class	Water Rate Type	(V) Total Revenue Comodity Charges	(M) Total Revenue Fixed Carges
	Single-Family	Increasing Block	357737.02	4771002.6
	Multi-Family	Increasing Block	347373.55	293441.4
	Commercial	Increasing Block	346134.08	286826.4
	Industrial	Increasing Block	454560.43	6085.8
	Single-Family	Non-Volumetric Flat Rate		831.81
	Multi-Family	Non-Volumetric Flat Rate		69598.97
	Commercial	Non-Volumetric Flat Rate		9775.02
			1505805.08	**5437562**

Calculate: V / (V + M) **22 %**

Implementation Option: Use Annual Revenue As Reported

Agency Provide Sewer Service: Yes

Customer Class	Rate Type	Conserving Rate?
Single-Family	Allocation Based	Yes
Multi-Family	Allocation Based	Yes
Commercial	Allocation Based	Yes
Industrial	Allocation Based	Yes

CUWCC BMP Coverage Report 2013

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.4 Retail Consrvation Pricing

Customer Class	Rate Type	Conserving Rate?
Institutional	Allocation Based	Yes
Commercial	Allocation Based	Yes

On Track

At Least As Effective As **No**

CUWCC BMP Coverage Report 2013

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 2.1 Public Outreach

7042 City of Turlock Retail Only

Does a wholesale Agency implement Public Outreach Programs? Yes

List of wholesale Agencies

	Public Outreach Program List	Number
	Newsletter articles on conservation	3
	Website	7
	Flyers and/or brochures (total copies), bill stuffers, messages printed on bill, information packets	2
	Landscape water conservation media campaigns	1
	Total	**13**
		On Track

	Number Media Contacts	Number
	Articles or stories resulting from outreach	5
	Television contacts	1
	News releases	1
	Total	**7**
		On Track

An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly) Yes

	Annual Budget Category	Annual Budget Amount
	Water Conservation Supplies	10000
	Advertising	5000
	Total Amount:	**15000**
		On Track

Description of all other Public Outreach programs

1. Uploaded CCR document that includes a page on water conservation
2. Student-created PSA's about water conservation
3. Uploaded Go Green Newsletter with Water Conservation info
4. Added information about free services (sprinkler set up, rebate)

On Track

Public Outreah Additional Programs
(online) access to water usage information for customer accts (real-time meter data)
Free City Assistance- Residential Water Survey, free conservation devices and free sprinkler timer set-ups
Online Water Waste Reporting

CUWCC BMP Coverage Report 2013

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 2.1 Public Outreach

At Least As Effective As **No**

CUWCC BMP Coverage Report 2013

Foundational Best Manegemant Practices for Urban Water Efficiency

Foundational BMPs

BMP 2.2 School Education Programs

7042 City of Turlock — Retail Only

Does a wholesale Agency implement School Education Programs? Yes

List of wholesale Agencies

Materials meet state education framework requirements and are grade-level appropriate? Yes

Curriculum materials developed and/or provided by Agency:

In house publications created with our mascot/brand identity as well as
utilizing outsourced publications that meet state standards to suppliment.

Materials Distributed to K-6? Yes

Describe K-6 Materials

The City of Turlock's "Go Green Week" program features a week-long variety of presentations, assemblies, activities and info provided by community organizations and City staff to most K-12 schools within the district.

Materials distributed to 7-12 students? Yes (Info Only)

Annual budget for school education program: 15000.00

Description of all other water supplier education programs

In house publications created with our mascot/brand identity as well as
utilizing outsourced publications that meet state standards to suppliment. The City of Turlock's "Go Green Week" program features a week-long variety of presentations, assemblies, activities and info provided by community organizations and City staff to most K-12 schools within the district. Team Green Kids Club
Green Teen of The Month Award Program Go Green Week Calendar Contest and T-shirt design contest- Students create artwork that depicts an environmental issue/conservation message. Annual Student-Created PSA's

On Track

At Least As Effective As **No**

Reporting Unit: City of Turlock
Signatory: City of Turlock
RU Type: Retail

Welcome **Toni Cordell** | Logout
Role:Data Entry User

Home | Annual Input Forms | Base Year Data | Reports | Reporting Unit

Select Signatory: City of Turlock | **Report Unit Level:** All | **Select The Reporting Unit:** City of Turlock | **Reporting Year:** 2013 | Load Reports
Sel: City of Turlock

Water Sources and Usage
- Base Year Data
- Water Sources Non Potable
- Water Sources Potable
- Water Uses Non Potable
- Water Uses Potable

BMP 1
- 1.1 Coverage Report Retail
- 1.1 Operation Practices Retail
- 1.2 Coverage Report Retail
- 1.2 Water Loss Control Retail
- 1.3 Coverage Report Retail
- 1.3 Metering With Commodity Retail
- 1.4 Coverage Report Retail
- 1.4 Retail Conservation Pricing

BMP 2
- 2.1 Coverage Report Retail
- 2.2 Public Information Programs Retail
- 2.1 Coverage Report Retail
- 2.2 School Education Programs Retail

BMP 3
- 3.1 Coverage Report Residential

BMP 4
- 4.1 Coverage Report CII

BMP 5
- 5.1 Coverage Report Landscape

FlexTrack Summary Coverage Report

GPCD
- GPCD

Select Report To Refresh Data

GPCD

100%

CUWCC BMP Coverage Report 2013

7042 City of Turlock

GPCD in 2006: 333.21

GPCD in 2013

GPCD Target for 2018: 315.20

Biennial GPCD Compliance Table **ON TRACK**

		Target		Highest Acceptable Bound	
Year	Report	% Base	GPCD	% Base	GPCD
2010	1	96.4%	321.20	100%	333.20
2012	2	92.8%	309.20	96.4%	321.20
2014	3	89.2%	297.20	92.8%	309.20
2016	4	85.6%	285.20	89.2%	297.20
2018	5	82.0%	315.20	82.0%	273.20

7042 City of Turlock

GPCD in 2006:

GPCD in 2013

GPCD Target for 2018:

Biennial GPCD Compliance Table **ON TRACK**

		Target		Highest Acceptable Bound	
Year	Report	% Base	GPCD	% Base	GPCD
2010	1	96.4%		100%	
2012	2	92.8%		96.4%	
2014	3	89.2%		92.8%	
2016	4	85.6%		89.2%	
2018	5	82.0%		82.0%	

APPENDIX K

UWMP Adoption Resolution

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BEFORE THE CITY COUNCIL OF THE CITY OF TURLOCK

IN THE MATTER OF RESCINDING RESOLUTION NO. 2011-112 AND ADOPTING THE 2015 URBAN WATER MANAGMENT PLAN UPDATE WITH RECOMMENDED EDITS INCLUDING THE METHOD FOR DETERMINING URBAN WATER USE TARGETS AS REQUIRED BY THE WATER CONSERVATION ACT OF 2009	**RESOLUTION NO. 2016-129**

WHEREAS, the Urban Water Management Planning Act (Act) requires water suppliers with 3,000 connections or more or supplying 3,000 or more acre-feet of water per year to prepare an Urban Water Management Plan (UWMP) every five years; and

WHEREAS, the UWMP assists water suppliers in mapping out long-term water resource planning to ensure an adequate water supply is available to meet existing and future water demands over a 20-year planning horizon; and

WHEREAS, water suppliers are required to report, describe, and evaluate water deliveries and uses, existing and future water supply sources, efficient water uses, demand management measures, water shortage contingency planning and drought response actions; and

WHEREAS, the City must adopt the method for determining urban water use targets as required by the Water Conservation Act of 2009 (SB X7-7), which requires cities to achieve a 20% per capita per day reduction by 2020; and

WHEREAS, the City of Turlock has prepared the 2015 UWMP in compliance with the Act; and

WHEREAS, the 2015 UWMP must be submitted to the State of California's Department of Water Resources by July 1, 2016.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Turlock does hereby rescind Resolution No. 2011-112 and adopt:

1. The 2015 Urban Water Management Plan Update with recommended edits.
2. Target Method 1 for calculating the final 2020 urban water use target.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Turlock this 14th day of June, 2016, by the following vote:

AYES:	Councilmembers DeHart, Nascimento, Bublak, Jacob, and Mayor Soiseth
NOES:	None
NOT PARTICIPATING:	None
ABSENT:	None

ATTEST:

Jennifer Land, Deputy City Clerk,
City of Turlock, County of Stanislaus,
State of California

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WEST YOST ASSOCIATES

CITY OF TURLOCK INC. 1908