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MAY 2016

CITY OF PLEASANTON

2015 Urban Water Management Plan



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Draft 2015 Urban Water Management Plan

Prepared for

City of Pleasanton

May 2016



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Project Manager
Elizabeth T. Drayer, PE

Date

QA/QC Review
James P. Connell, PE

Date

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List of Acronyms and Abbreviations

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACFCWCD	Alameda County Flood Control and Water Conservation District
Act	Urban Water Management Planning Act
ACWD	Alameda County Water District
ADWF	Average Dry Weather Flow
AF	Acre-Feet
AFA	Acre-Feet Per Year
AMI	Area Median Income
AWWA	American Water Works Association
BARDP	Bay Area Regional Desalination Project
Baseline GPCD	Baseline Gallons Per Capita Per Day
BBID	Byron Bethany Irrigation District
BDCP	Bay Delta Conservation Plan
Cal Water	California Water Services Company
Cawelo	Cawelo Water District
CDoF	California Department of Finance
CIP	Capital Improvement Program
City	City of Pleasanton
COL	Chain of Lakes
CUWCC	California Urban Water Conservation Council
CWC	California Water Code

CWSRF	Clean Water State Revolving Fund
Delta	Sacramento-San Joaquin Delta
DERWA	DSRSD-EBMUD Recycled Water Authority
DMMs	Demand Management Measures
DPH	Department of Public Health
DSRSD/District	Dublin San Ramon Services District
DWR	Department of Water Resources
DWR Guidebook	2015 Urban Water Management Plans Guidebook for Urban Water Suppliers
EBDA	East Bay Dischargers Authority
ETo	Reference Evapotranspiration
GIS	Geographical Information System
GPCD	Gallons Per Capita Per Day
GPM	Gallons Per Minute
GPQ	Groundwater Pumping Quota
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HET Program	High-Efficiency Toilet Rebate Program
LF	Lineal Feet
LWRP	City of Livermore's Water Reclamation Plant
M&I	Municipal and Industrial
MCL	Maximum Contaminated Level
MFUV	Microfiltration and Ultraviolet Disinfection Facilities
MG	Million Gallons
mg/L	Milligrams Per Liter
MGD	Million Gallons Per Day
MGDP	Mocho Groundwater Demineralization Plan
MIB	2-Methylisoborneol
MWQI Program	Municipal Water Quality Investigations Program
NAICS	North American Industry Classification System
NMP	Nutrient Management Plan
Project	Recycled Water Project
RWQCB	Regional Water Quality Control Board
RWTF	Recycled Water Treatment Facility
SB X7-7	Water Conservation Act of 2009
SBA	South Bay Aqueduct
Semitropic	Semitropic Water Storage District
SFPUC	San Francisco Public Utilities Company
SFUV	Filtration and Ultraviolet Disinfection Facilities
SGMA	Sustainable Groundwater Management Act of 2014
SMP	Salt Management Plan
SRVRWP	San Ramon Valley Recycled Water Program
SWP	State Water Project

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SWRCB	State Water Resources Control Board
T&O	Taste-and-Odor
TDS	Total Dissolved Solids
TOC/DOC	Total and Dissolved Organic Carbon
ULFT	Ultra-Low Flush Toilet
USBR	United States Bureau of Reclamation
UV	Ultraviolet Light
UWMP	Urban Water Management Plan
West Yost	West Yost Associates
WSE	Water Supply Evaluation
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant
Zone 7	Zone 7 Water Agency

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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, is 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 Pleasanton's (City's) water customers 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 per capita water use target.

ES.2 WATER CODE REQUIREMENTS

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

The Act has been modified over the years in response to the State's water shortages, droughts and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as 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 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 11,355 acre-feet of potable water to 22,004 water customers located within its service area. The City also provided approximately 105 acre-feet of recycled water 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's 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 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 of this document.

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 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 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 the California Department of Water Resources (DWR) in their March 2016 "2015 Urban Water Management Plans, Guidebook for Urban Water Suppliers" (DWR Guidebook).

DWR's Urban Water Management Plan Checklist, as provided in the DWR 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: Plan 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
- 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 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 7, 2016. The public hearing provides an opportunity for the City's water customers and the general public to become familiar with the Plan and to ask questions about its water supply and the City's continuing plans for 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 Office of the City Clerk, the Pleasanton Public Library and the City's website (www.cityofpleasantonca.gov).

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 early 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. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10 and provided in Appendix D.

This Plan was adopted by the Pleasanton City Council on June ____, 2016. A copy of the adoption resolution is provided in Appendix M.

Executive Summary



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 urban water supplier 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 location:

- Pleasanton Public Library (Reference Desk), 400 Old Bernal Avenue, Pleasanton

A copy of the adopted Plan will also be available for review and download on the City's website (www.cityofpleasantonca.gov).

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).

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CHAPTER 1

Introduction and Overview



This chapter provides an introduction and overview of the City of Pleasanton (City or Pleasanton) 2015 Urban Water Management Plan (UWMP), including the importance and extent of the City’s water management planning efforts, changes since the preparation of 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 INTRODUCTION

The Urban Water Management Planning Act (Act) was originally established by Assembly Bill (AB) 797 on September 21, 1983. Passage of the Act was recognition by state legislators that water is a limited resource and a declaration that efficient water use and conservation would be actively pursued throughout the state. The primary objective of the Act is to direct “urban water suppliers” to develop 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 IMPORTANCE AND EXTENT OF CITY’S WATER MANAGEMENT PLANNING EFFORTS

The purpose of the UWMP is to provide a planning tool for the City for developing and delivering municipal water supplies to the City’s water service area. The City lays predominately on flat land formed by alluvial deposits from prehistoric streams flowing through the Livermore, Amador, and San Ramon Valleys to the San Francisco Bay. The City receives about 80 percent of its water from the Zone 7 Water Agency (Zone 7) and provides water services to the City and unincorporated areas of Alameda County. To reduce the demands for potable water, the City has committed to participate in water conservation activities. To continue to meet the water needs of the community, the City carefully manages its available water resources. The City’s UWMP is a comprehensive guide for planning for a safe and adequate water supply.

1.3 CHANGES FROM 2010 UWMP

The Act has been modified over the years in response to the State’s water shortages, droughts and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor’s call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as 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 CWC 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 plan to the Department of Water Resources by July 1, 2016.
- SB 1420 (Wolk 2014)
 - CWC Section 10644(a)(2): Submittal Format
 - Requires the plan, or amendments to the plan, to be submitted electronically to the department.
 - CWC Section 10644(a)(2): Standardized Forms
 - Requires the plan, or amendments to the plan, 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 a plan 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.
 - The City has opted to not report on passive water savings in this 2015 UWMP.
- 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 2015 UWMP update, 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.
 - See Chapter 8 of this 2015 UWMP for a discussion of the City's water shortage contingency planning.

1.4 PLAN ORGANIZATION

This 2015 UWMP contains the appropriate sections and tables required per CWC Division 6, Part 2.6 (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 “2015 Urban Water Management Plans Guidebook for Urban Water Suppliers” (DWR Guidebook).

This 2015 UWMP is organized into the following chapters:

- Chapter 1: Introduction and Overview
- Chapter 2: Plan 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
- Chapter 8: Water Shortage Contingency Planning
- Chapter 9: Demand Management Measures
- Chapter 10: Plan 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 2015 UWMP Tables
- Appendix C: DWR 2015 UWMP Checklist
- Appendix D: Required Notices
- Appendix E: DWR Population Tool
- Appendix F: City of Pleasanton 2015 Water Audit
- Appendix G: SB X7-7 Verification Tables
- Appendix H: Zone 7 Groundwater Management Plan 2014 Annual Report
- Appendix I: City of Pleasanton Recycled Water Use 2015 Annual Report
- Appendix J: Zone 7 Water Supply Policy
- Appendix K: Water Shortage Contingency Plan
- Appendix L: Conservation Materials
- Appendix M: UWMP Adoption Resolution

Chapter 1

Introduction and Overview



Furthermore, this 2015 UWMP contains all of the tables recommended in the DWR Guidebook, both embedded into the UWMP chapters where appropriate and included in Appendix B.

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

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CHAPTER 2 Plan Preparation



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

2.1 BASIS FOR PREPARING A PLAN

The Act requires every “urban water supplier” to prepare and adopt 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.

As shown in Table 2-1, in 2015, the City provided water supplies to 22,004 customers (connections), and supplied 11,356 AF of water. Therefore, the City is required to prepare an UWMP. The City’s last UWMP, the 2010 UWMP, was adopted 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
CA0110008	City of Pleasanton	22,004	11,355
TOTAL		22,004	11,355
NOTES: Volumes are in acre-feet (AF); number of connections and volume of water supplied is for potable water system only.			

2.2 REGIONAL PLANNING

The City coordinates with its water wholesaler, Zone 7, to ensure that a safe and reliable water supply is delivered to its existing customers and that plans for serving future customers are implemented as efficiently as possible. The City also routinely coordinates with the region’s other water retailers (Dublin San Ramon Services District (DSRSD/District), City of Livermore and California Water Service Company (Cal Water) Livermore District) on water supply and water conservation matters, and in conjunction with the assessment of the region’s available water supply and projected water demands for Zone 7’s 2015 Water Supply Evaluation (WSE) Update and for Zone 7’s 2015 UWMP. Additionally, the City coordinates with the San Francisco Public Utilities Commission which supplies water to the unincorporated Castlewood area within Pleasanton, and the Town of Sunol adjacent to Pleasanton. Zone 7 also provided assistance to the City in the preparation of this UWMP. The projected future availability and reliability of water supplies from Zone 7 is discussed in Chapters 6 and 7 of this 2015 UWMP.

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). As described below in Section 2.5, the City has notified and coordinated with appropriate regional agencies and constituents, including the Zone 7 (the region’s water wholesaler) and DSRSD, City of Livermore and Cal Water Livermore District (the region’s other water retailers).

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

Select Only One	Type of Plan	Name of RUWMP or Regional Alliance <i>if applicable</i>
<input checked="" type="checkbox"/>	Individual UWMP	
<input type="checkbox"/>	Regional Urban Water Management Plan (RUWMP)	

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

The City is a water retailer.

The City’s 2015 UWMP has been prepared on a calendar year basis. Water use and planning data for the entire calendar year of 2015 has been included.

The City’s reporting of water volumes in this 2015 UWMP is reported in AF.

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)	
<input type="checkbox"/>	Agency is a wholesaler
<input checked="" type="checkbox"/>	Agency is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables Are in Calendar Years
<input type="checkbox"/>	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
Unit	AF

2.5 COORDINATION AND OUTREACH

This section includes a discussion of the City’s inter-agency coordination and coordination with the general public. The UWMP Act requires the City to coordinate the preparation of its 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. The City coordinated the preparation of its Plan with Zone 7 (the region’s water wholesaler) and DSRSD, the City of Livermore, and Cal Water Livermore District (the region’s other water retailers). These and other neighboring water agencies, as well as the public, participated in the coordination and preparation of this 2015 UWMP, and are summarized below.

Copies of agency notices and public notices are provided in Appendix D.

2.5.1 Wholesale and Retail Coordination

Water Code § 10631

(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).

The City is one of four water retailers that purchase water on a wholesale basis from Zone 7. As noted in Table 2-4, the City notified Zone 7 of the development of its 2015 UWMP and provided Zone 7 with a copy of the Draft Plan. In addition, the City has participated in Zone 7’s development of its respective UWMP by providing the City’s water demand projections and providing comments on Zone 7’s Draft UWMP. The City, in turn, received information from Zone 7 on its existing and planned sources of water.

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.
Wholesale Water Supplier Name
Zone 7 Water Agency (Zone 7)

2.5.2 Coordination with Other Agencies and the Community

The City coordinated its UWMP preparation with other local agencies and the community.

2.5.2.1 Coordination with Other Agencies

Water Code § 10620 (d)(2)

(d) (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.

As described above, the City routinely coordinates with Zone 7 (the region's water wholesaler) and DSRSD, the City of Livermore, and Cal Water Livermore District (the region's other water retailers) on water supply and water conservation matters. Land use planning and development approvals within City are the responsibility of the City and Alameda County. These and other agencies, as well as the public, participated in the coordination and preparation of this 2015 UWMP, as discussed further in Chapter 10.

2.5.2.2 Coordination with the Community

Water Code §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.

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

As part of development of this 2015 UWMP update, the City allowed 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, the Draft UWMP update was made available at the Office of the City Clerk, the Pleasanton Public Library and on the City's website (www.cityofpleasantonca.gov).

2.5.3 Notice to Cities and Counties

Water Code §10621(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.

Water Code §10621(b) requires agencies to notify the cities and counties to which they serve water at least 60 days in advance of the public hearing that the plan is being updated and reviewed. In early 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. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed further in Chapter 10 and are included in Appendix D.

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

3.1 GENERAL DESCRIPTION

Pleasanton's inception can be traced back to the 1850's as a stagecoach stop along the main route to the gold fields. In the twentieth century it grew into a thriving agricultural center with the production of grain, hay, and hops. The City was incorporated in 1894 and is located in southeastern Alameda County at the junction of Interstate 580 and Interstate 680, and is approximately 22 square miles. Water service is currently provided to all City residents and commercial customers, as well as approximately 250 customers in unincorporated Alameda County along Kilkare Canyon Road, just north of the Town of Sunol.

3.2 WATER SERVICE AREA

As described above, the City's water service area includes the City, as well as approximately 250 customers in unincorporated Alameda County along Kilkare Canyon Road, just north of the Town of Sunol. Pleasanton's service area lies within the Alameda Creek watershed, a drainage basin covering about 675 square miles between Mount Hamilton and Mount Diablo. The location of the City's current water service area is illustrated on Figure 3-1.

The City lies predominately on flat land formed by alluvial deposits from prehistoric streams flowing through the Livermore, Amador, and San Ramon Valleys to the San Francisco Bay. Geologic activity in the area has resulted in varying deposits of sand and gravel in the northeastern portion of the City, and once supported the cultivation of crops and livestock. Modernly, Pleasanton has predominately been urbanized, with the exception of several vineyards at the eastern edge of the City and livestock grazing on Pleasanton Ridge and in the Southeastern Hills.

The majority of Pleasanton occupies the Valley floor, which ranges in elevation from approximately 320 to 400 feet. Pleasanton is enclosed by hills on the west and southeast. The Pleasanton and Main Ridges to the west rise sharply above Foothill Road to peaks of 1,500 feet. These two ridges remain seismically active and feature complex terrain, densely wooded vegetation, and landslide prone soils. A series of gentle to steeply sloping hills extend south from Pleasanton into a valley containing the San Antonio Reservoir.

3.3 WATER SUPPLY

Water supplies for the Pleasanton area were first developed in the late 1800's. In 1898, the Spring Valley Water Company constructed artesian water wells at the Bernal Well Field in Pleasanton. The Pleasanton Township County Water District was formed in 1914 for the purpose of negotiating with Spring Valley for water supplies. In 1956, the City took over the retail distribution of water from the Pleasanton Township Water District. It was in 1972 that the City took over the remaining functions of the Pleasanton Township Water District.

To solve problems of flooding, drainage, channel erosion, water supply and conservation, the Alameda County Flood Control and Water Conservation District (ACFCWCD) was created in 1949 by the California State Legislature through the passage of Act 205 of the California Uncodified Water Code. The southeastern portion of Alameda County, including Pleasanton, falls within Zone 7 of the ACFCWCD.

To alleviate problems of groundwater overdraft, Zone 7 entered into a water supply contract with the State of California DWR in 1961. In 1962, Zone 7 began to import water from the State Water Project (SWP) through the South Bay Aqueduct (SBA).

The City and Zone 7 entered into an agreement for a treated water supply in 1968. The City receives Zone 7 supplies through seven different turnout locations. The City's agreement with Zone 7 also includes provisions that allow the City to pump up to 3,500 acre-feet per year (AFA) from City-owned wells without incurring a groundwater replenishment fee. An additional clause within the agreement allows the City to maintain a carryover of 700 AF of unused well quota from year to year without accruing a fee.

The majority of Pleasanton's potable water supply has been supplied by Zone 7 since 1968. The City currently purchases approximately 80 percent of its water from Zone 7. The remaining 20 percent produced from the City's groundwater wells.

As described in *Chapter 6 System Supplies*, in 2015 the City began construction of its recycled water project to deliver recycled water supplies from DSRSD's Recycled Water Treatment Facility (RWTF) and the City of Livermore Water Reclamation Plant (LWRP) to irrigation customers along the recycled water distribution system, currently in the northern portions of the City.

3.4 WATER SYSTEM DESCRIPTION

3.4.1 Zone 7 Supply Turnouts

Water from Zone 7 enters the City's water system at seven different turnout locations, as follows:

- Turnout 1 is located on Santa Rita Road near Stoneridge Drive;
- Turnout 2 is located on Hopyard Road near Valley Trails Drive;
- Turnout 3 is located at the east end of West Las Positas Boulevard near Gulfstream Street;
- Turnout 4 is located on Hopyard Road at Stoneridge Drive;
- Turnout 5 is located on Bernal Avenue at Nevada Street;
- Turnout 6 is located on Machado Drive at Vineyard Avenue; and
- Turnout 7 is located on Vineyard Avenue at Ruby Hills Boulevard.

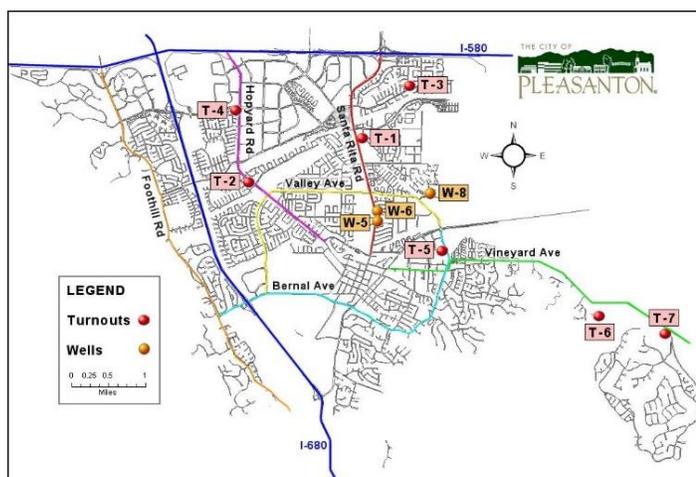
Chapter 3

System Description

Turnouts 1, 2, 3, 4 and 5 are equipped with fluoridation facilities. Turnouts 6 and 7 supply water directly to water pump stations that pump into the City water system. Both of these pump stations are also equipped with fluoridation facilities. The fluoridation facilities fluoridate the water provided by Zone 7 prior to entering the City system.

3.4.2 City Groundwater Wells

The City owns and operates three groundwater wells. The water from the City's wells is treated with chlorine, ammonia and fluoride at the well sites prior to entering into the water distribution system.

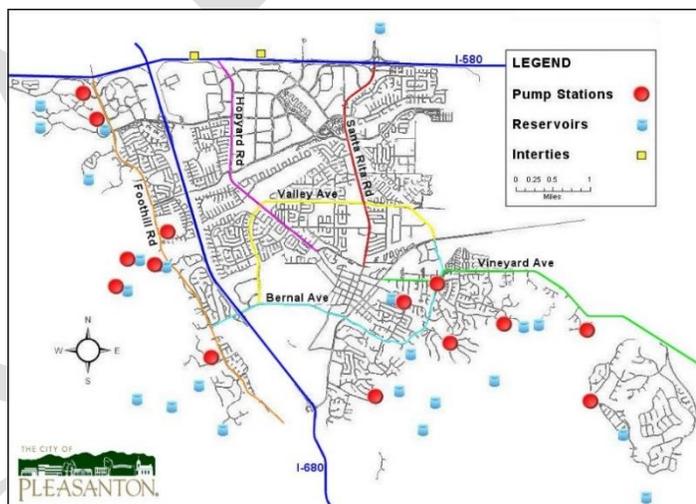


3.4.3 City Potable Water Distribution System

The City's distribution system currently consists of 330 miles of pipelines and 22,004 water service connections. There are fourteen pump stations, twenty-two water storage reservoirs and one hydropneumatic tank in the distribution system. There are fourteen different pressure zones within the City service area.

3.4.4 Emergency Interties

The City currently has two existing pipeline interties with DSRSD and one pipeline intertie with the City of Livermore for rapid emergency response. These interties are strictly for emergency conditions, such as a major pipeline break, supply contamination or interruption of deliveries due to earthquake, flood, or other disaster.



3.4.5 Recycled Water Facilities

As described in *Chapter 6 System Supplies*, the City's on-going Recycled Water Project (Project) includes the construction of approximately 51,570 lineal feet (LF) of new recycled water pipeline, ranging in diameter from 6-inches to 20-inches, and approximately 22,400 LF of existing potable pipeline being repurposed into the recycled water system.

By the end of 2015, approximately 20 percent of the construction was completed. Completion of the Project construction is anticipated in October 2016. The Project is projected to service a total of 94 permitted recycled water irrigation use sites (135 metered connections) once all customers have been hooked up to the system.

3.5 SERVICE AREA CLIMATE

The City’s climate is characteristically Mediterranean, with hot, dry summers and cool, moist winters. The historical climate characteristics affecting water management in the City’s water service area, including average evapotranspiration (ET_o), rainfall and temperature, are shown in Table 3-1. The average annual precipitation is approximately 16.18 inches of water, while the total evapotranspiration is approximately 50.65 inches of water, and average monthly temperatures vary from 46 to 70 degrees Fahrenheit throughout the year.

Table 3-1. Monthly Average Climate Data Summary

Month	Standard Monthly Average ET _o , inches ^(a)	Average Total Rainfall, inches ^(b)	Average Temperature, degrees Fahrenheit ^(b)
January	1.50	2.22	46.5
February	2.08	2.50	50.4
March	3.63	2.59	53.9
April	4.89	1.35	56.3
May	6.25	0.44	60.8
June	6.93	0.20	66.4
July	7.37	0.03	70.0
August	6.51	0.05	68.8
September	4.89	0.05	67.0
October	3.36	1.04	60.7
November	1.90	1.75	52.2
December	1.34	3.97	46.8
Total	50.65	16.18	-

Source: California Irrigation Management Information System (CIMIS) Station #191 (Pleasanton)

(a) Downloaded on January 5, 2016
 (b) Data reported from October 2004 to December 2015

3.6 SERVICE AREA POPULATION AND DEMOGRAPHICS

3.6.1 Service Area Population

As described in *Chapter 5 SB X7-7 Baselines and Targets*, the DWR Population Tool has been used to determine the City’s historical and 2015 population for purposes of confirming the City’s SB X7-7 baseline and target per capita water use, as well as confirming the City’s compliance with their 2015 per capita water use target. In general, the current estimated service area populations are slightly less than those used in the City’s 2010 UWMP. The 2008 service area population was estimated to be 68,789 people, slightly less than the 69,215 people as included in the City’s 2010 UWMP. Based on the DWR Population Tool, the 2015 service area population was estimated to be 71,776. A copy of the DWR Population Tool results for the City is provided in Appendix E.

Population projections from 2020 to 2040 for the City’s Sphere of Influence were developed by the Association of Bay Area Governments (ABAG) as part of their *Plan Bay Area 2013* study. ABAG uses estimates from the California Department of Finance (CDoF) to tabulate these estimates. By 2040, Pleasanton’s population is projected to grow by approximately 29.8 percent to 93,188.

The City’s current and projected populations are presented in Table 3-2.

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

Population Served	2015	2020	2025	2030	2035	2040(opt)
	71,776	78,137	81,569	85,217	89,126	93,188

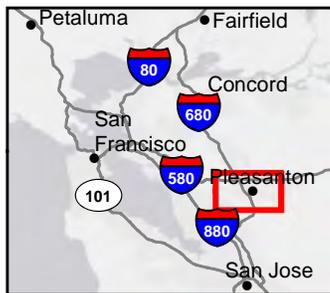
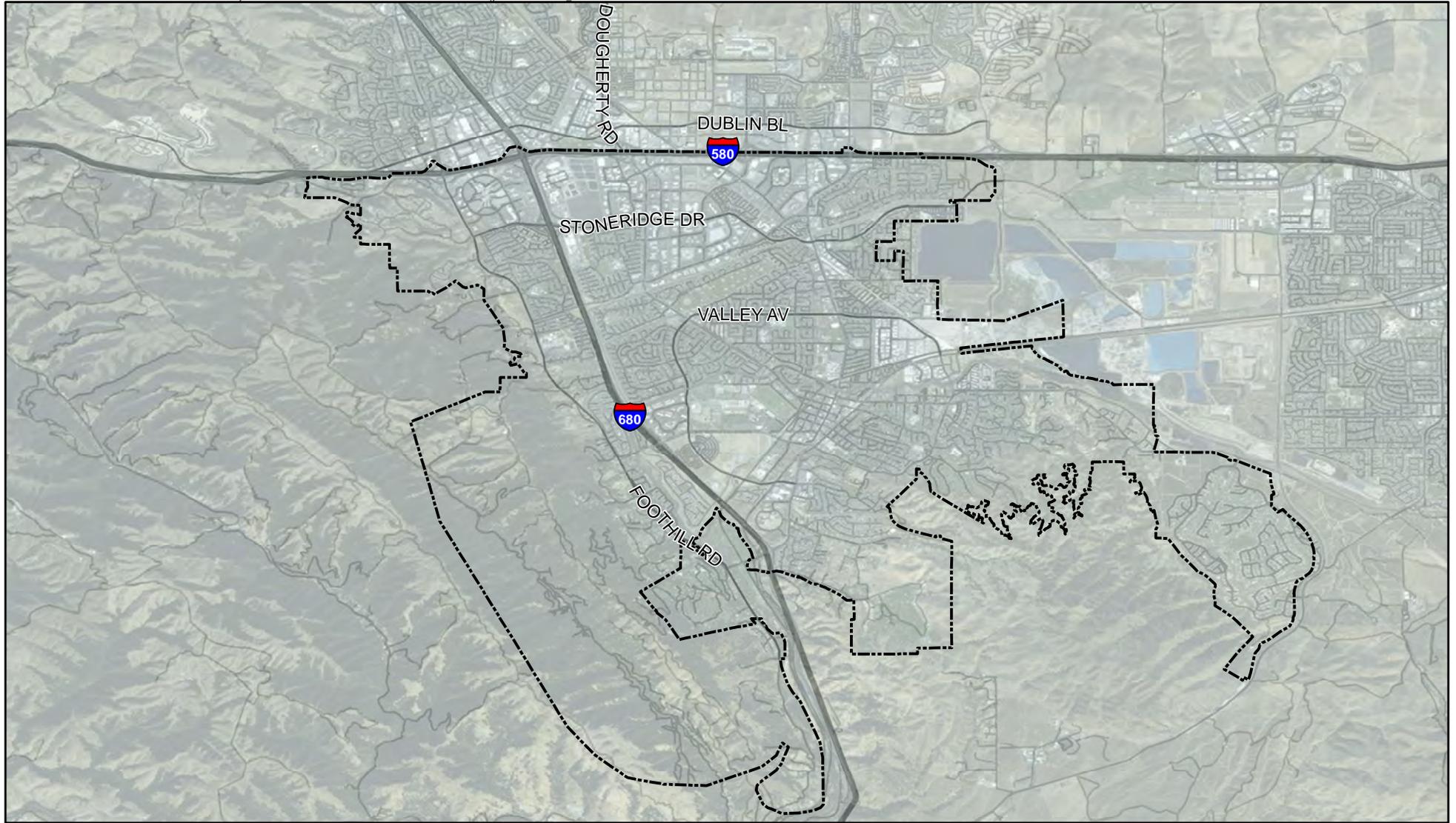
NOTES: 2015 population is calculated from the DWR Population Tool. Population projections are according to ABAG's Plan Bay Area 2013.

3.6.2 Demographic Factors

During the past two decades, the City has experienced a diverse pattern of growth including substantial new residential, commercial, office, and industrial development. As a small suburban city, the City has developed a reputation as a desirable place in which to live and work, with an excellent school system, fine parks and recreational facilities, a traditional downtown area, and a low crime rate. Land use planning within the City’s service area is guided by the City’s *General Plan (2005-2023)* and *Housing Element (2015-2023)*.

The single-family residential sector still remains as the largest water customer sector in Pleasanton (46 percent of all potable demands in 2015).

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Symbology
[Dashed Line] Water Service Area

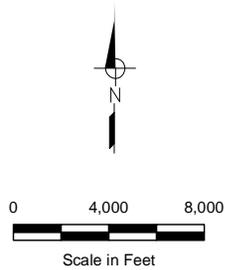


Figure 3-1
City of Pleasanton
Current Water Service Area

City of Pleasanton
2015 Urban Water
Management Plan

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This chapter describes and quantifies the City's past, current, and projected water use. Water demand projections are based on the revised SB X7-7 water use targets (see *Chapter 5 SB X7-7 Baselines and Targets*) combined with the ABAG projected populations as included in the City's 2015-2023 Housing Element. Accurately tracking and reporting of current and projected water demands allows the City to properly analyze the use of their resources and conduct good resource planning.

4.1 RECYCLED VERSUS POTABLE AND RAW WATER DEMAND

The City currently provides both potable water and recycled water to customers within its service area.

Potable water is water that is safe to drink and which typically has had various levels of treatment and disinfection. The City receives its potable water supply from two sources: purchases from Zone 7 and groundwater pumped from City wells.

Recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again. The City receives recycled water from the DSRSD-EBMUD Recycled Water Authority (DERWA), which operates the San Ramon Valley Recycled Water Program (SRVRWP) and the LWRP. Both the SRVRWP and the Livermore WRP provide recycled water that meets Title 22 disinfected tertiary recycled water requirements to landscape irrigation customers.

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

The City's water supplies are described further in *Chapter 6 System Supplies*.

4.2 WATER USES BY SECTOR

This section describes the City's past, current and projected water use by sector through the year 2040 in five-year increments. Water demand projections are based on the revised SB X7-7 water use targets (see *Chapter 5 SB X7-7 Baselines and Targets*) combined with the ABAG projected populations for the City's service area. 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, multifamily residential, commercial, industrial, institutional/governmental, landscape irrigation, agricultural, and others. These classifications were used to analyze current consumption patterns among various types of customers. The City uses the same definitions for each sector as outlined in the DWR Guidebook:

- **Single-family residential:** A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.
- **Multi-family:** Multiple dwelling units contained within one building or several buildings within one complex.
- **Commercial:** A water user that provides or distributes a product or service (CWC 10608.12 (d)).

- **Industrial:** A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development (CWC 10608.12 (h)).
- **Institutional (and governmental):** A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions (CWC 10608.12 (i)).
- **Landscape:** Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.
- **Agricultural:** Water used for commercial agricultural irrigation.
- **Other:** Any other water demand that is not adequately described by the water sectors defined above. Unlike previous UWMPs, system water losses are not to be reported in the “Other” category.

The City’s past water use among water use sectors are reported in Table 4-1. These are the same values reported in the City’s 2010 UWMP.

Table 4-1. Historical Water Use by Customer Type

Water Use Type	2005 Actual Volume, AFA	2010 Actual Volume, AFA
Single Family	9,035	8,326
Multi-Family	744	722
Lower Income	N/A	120
Commercial	1,927	1,759
Industrial	64	57
Institutional/ Governmental	50	50
Landscape	4,678	4,015
System Flushing	35	18
Known leaks	N/A	8
Potable System Losses	1,527	1,056
Potable Water Subtotal	18,060	16,131
Recycled Water	0	0
Total Water Use	18,060	16,131

The City’s actual water potable demands for the year 2015 are presented in Table 4-2.

Table 4-2. Retail: Demands for Potable and Raw Water – Actual (DWR Table 4-1)

Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	5,264
Multi-Family		Drinking Water	943
Industrial		Drinking Water	40
Landscape		Drinking Water	2,357
Other	Commercial and Institutional	Drinking Water	1,392
Other	Unbilled Unmetered	Drinking Water	141
Losses		Drinking Water	1,218
TOTAL			11,355
NOTES: Volumes are in AF; unbilled unmetered is estimated to be 1.25 percent of total supply per AWWA Water Audit assumptions.			

Water demand projections in this report are based on population projections and the SB X7-7 targets for the City. The population projections documented in Chapter 3 (Section 3.4) were based on ABAG projections for the City’s Sphere of Influence and were included in the City’s 2015-2023 Housing Element. The water use projections for 2020 through 2040 assume that the City will achieve its revised 2020 water use target (197 gallons per capita per day (GPCD) (see *Chapter 5 SB X7-7 Baselines and Targets*).

The City projects 1,800 AF of recycled water demand for 2020 through 2040. Approximately 25 percent of the recycled water demand (i.e. ~500 AF) is assumed to be new landscape and construction water demands. The remaining 1,300 AF of projected recycled water demand will offset existing landscape demands currently met with potable water.

The City’s projected water demands through the year 2040 are presented in Table 4-3. Approximately 1,300 AF of projected landscape demands are assumed to use recycled water and are therefore not included in the potable demand projections shown in Table 4-3. There are no existing or projected uses for saline barriers, groundwater recharge, conjunctive use, or raw water use within the City’s service area.

Table 4-3. 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		7,993	8,344	8,717	9,117	9,533
Multi-Family		1,432	1,494	1,562	1,633	1,708
Industrial		61	64	67	70	73
Landscape		2,279	2,436	2,603	2,782	2,968
Other	Commercial and Institutional	2,114	2,207	2,306	2,411	2,521
Other	Unbilled Unmetered	214	224	233	244	255
Losses		1,849	1,931	2,017	2,110	2,206
TOTAL		15,942	16,700	17,505	18,367	19,264

NOTES: Volumes are in AF; approximately 1,300 AF of projected landscape demands are assumed to use recycled water and are therefore not included in the projected potable water landscape demands.

The actual and projected water demands reported in Tables 4-2 and 4-3, and the recycled water demands reported in Table 6-6, are summarized in Table 4-4.

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

	2015	2020	2025	2030	2035	2040 (opt)
Potable and Raw Water <i>From Tables 4-1 and 4-2</i>	11,355	15,942	16,700	17,505	18,367	19,264
Recycled Water Demand* <i>From Table 6-4</i>	104	1,800	1,800	1,800	1,800	1,800
TOTAL WATER DEMAND	11,459	17,742	18,500	19,305	20,167	21,064

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

4.3 DISTRIBUTION SYSTEM WATER LOSSES

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

The City uses the American Water Works Association (AWWA) method to annually evaluate its distribution system losses. The City has prepared the annual water audit on a fiscal year basis, to be compatible with the City’s financial record keeping¹. For the 2014/2015 fiscal year, the City’s water losses were estimated to be approximately 1,068 AF, or approximately 8.8 percent of total water production. A copy of the City’s 2014/2015 fiscal year Water Audit worksheet is provided in Appendix F.

Table 4-5 summarizes the monthly system losses as the difference between the annual production and annual sales for the most recent 12-month period available. The most recent 12-month period began on July 1, 2014.

Table 4-5. Retail: 12-Month Water Loss Audit Reporting (DWR Table 4-4)

Reporting Period Start Date	Volume of Water Loss*
07/2014	1,068
<i>* Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.</i>	
NOTES: Volumes are in AF; a copy of the City's 2014/2015 Fiscal Year Water Audit is provided in Appendix F.	

4.4 ESTIMATING FUTURE WATER SAVINGS

Water savings from codes, standards, ordinances, or transportation and land use plans can decrease the water use for new and future customers. As indicated in Table 4-7 below, to be conservative, these “passive” water savings have not been included in the City’s projected future water demands.

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

SB 1087 (2006) requires that water providers develop written policies that give priority to development that includes affordable housing to low-income households. The projections shown in Tables 4-2 and 4-3 include water use for single family and multifamily residential housing needed for low-income households, as identified in the City’s Housing Element. A lower income household is defined as a household that has an income below 80 percent of the Area Median Income (AMI), adjusted for family size. According to the City Housing Element (2015-2023) adopted in January 2015, the percent of City households with incomes below 80 percent of the AMI was 19 percent in 2010².

¹ Although this 2015 UWMP has been prepared based on calendar year basis (see Table 2-3), the City’s annual water audit is prepared on a fiscal year basis to be consistent with the City’s financial record keeping. This difference in the water audit reporting period is consistent with the guidance provided in the DWR Guidebook (Section 4.2.1.12 Distribution System Losses).

² Table 14: Household Income by Tenure – 2010, City of Pleasanton Housing Element Update- Background 2015-2015, adopted January 6, 2015.

Therefore, based on the 2010 housing data for the City, it is estimated that approximately 19 percent of the City’s water demands are attributed to low income households. The water demand projections related to low income households are summarized in Table 4-6. The estimated percent of the City’s low income households, and the City’s amount of low income water demands, are assumed to remain constant in future projections.

Table 4-6. Projected Water Demands for Lower Income Households

Water Use Sector	Lower Income Water Demands, AFA				
	2020	2025	2030	2035	2040
Single Family	1,519	1,585	1,656	1,732	1,811
Multi-Family	272	284	297	310	324
Total	1,791	1,869	1,953	2,042	2,136

Table 4-7 indicates that lower income household demands shown in Table 4-6 have been included in the City’s water demand projections.

Table 4-7. 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)	No
Are Lower Income Residential Demands Included In Projections?	Yes

4.6 CLIMATE CHANGE

The City’s future water demand and use patterns may be impacted by climate change. Increased landscaping and irrigation demand is anticipated to occur with temperature rise, increased evaporative losses due to warmer temperature, and a longer growing season. In addition, wildfire frequency may increase as a result of climate change which would increase the fire industry’s water demands. Increasing the use of recycled water for these demands could mitigate the effects of climate change on water demand.

The potential impacts of climate change on the City’s water supplies are described in *Chapter 6 System Supplies*.

CHAPTER 5

SB X7-7 Baselines and Targets



In November 2009, 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 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 U.S. Census data was not finalized until 2012).

The DWR 2015 Guidebook indicates that there were significant discrepancies between the California Department of Finance (CDoF) 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 that these water suppliers must recalculate their baseline population for the 2015 UWMP using 2000 and 2010 U.S. Census data, and baseline and 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 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). As discussed in this chapter, the City has achieved compliance with its 2015 interim target, as discussed below, and is well positioned to achieve its 2020 final target.

Additional information on the City’s baselines, targets, and compliance is provided in the SB X7-7 Verification Forms which are referenced throughout this chapter and included in Appendix G.

5.1 UPDATING CALCULATIONS FROM 2010 UWMP

CWC 10608.20 (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).

Methodologies DWR 2016, Methodology 2 Service Area Population Page 25 - Water suppliers may revise population estimates for baseline years between 2000 and 2010 when 2010 census information becomes available. DWR will examine discrepancy between the actual population estimate and DOF’s projections for 2010; if significant discrepancies are discovered, DWR may require some or all suppliers to update their baseline population estimates.

DWR 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.

Population data from the 2010 U.S. Census were not made available until 2012, after the City submitted its 2010 UWMP. Therefore, the City's population data and baseline and target calculations have been updated 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 for those urban water retailers that met at least 10 percent of their 2008 water demand using recycled water, the urban water retailer can extend the Baseline GPCD calculation for a maximum of a continuous 15-year baseline period, ending no earlier than December 31, 2004 and no later than December 31, 2010; however, the City did not deliver any recycled water in 2008.

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: 1996 to 2005
- 5-year Baseline Period: 2004 to 2008

These baseline periods are listed in SB X7-7 Table 1 in Appendix G. It should be noted that the 10-year and 5-year periods are the same as reported in the City's 2010 UWMP.

5.3 SERVICE AREA POPULATION

DWR 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. Service area population reported in the City's 2010 UWMP did not include 2010 U.S. Census data because the full U.S. Census data set was not available until 2012.

As described in Chapter 3, the City's service area generally includes the City of Pleasanton. However, as described in the City's 2010 UWMP, the City is categorized as a "Category 2" water supplier (a Category 2 supplier is one whose actual distribution area overlaps with less than

95 percent of city boundaries, and has an electronic geographic information system map of their distribution area). Geographic information system (GIS) analysis indicates that less than 95 percent of the City's actual distribution area overlaps with the City's boundaries (actual: 77 percent).

As indicated in SB X7-7 Table 2 in Appendix G, the DWR Population Tool was used to determine the City's historical and current (2015) service area population for purposes of confirming/revising the City's baselines and targets and confirming the City's compliance with its 2015 SB X7-7 target. The City's 1990, 2000 and 2010 service area boundaries were uploaded to the DWR Population Tool and service area connection data was entered to determine the City's service area population for the 1990, 2000 and 2010 U.S. Census years, interim years, and 2015. In general, the current estimated service area populations are slightly less than those used in the City's 2010 UWMP. The 2010 service area population is now estimated to be 69,244 people, slightly less than the 69,300 people as included in the City's 2010 UWMP. Based on the DWR Population Tool, the 2015 service area population is estimated to be 71,776. The DWR Population Tool results for the City's service area are provided in Appendix E and the population values are included in SB X7-7 Table 3 in Appendix G.

5.4 GROSS WATER USE

Annual gross water use is the water that enters the City's distribution system over a 12-month period (calendar year) with certain exclusions. This section discusses the City's annual gross water use for each year in the baseline periods, as well as 2015, in accordance with Methodology 1: Gross Water of DWR's *Methodologies* document.

CWC 10608.12 (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.*

California Code of Regulations Title 23 Division 2 Chapter 5.1 Article Section 596 (a) An urban retail water supplier that has a substantial percentage of industrial water use in its service area is eligible to exclude the process water use of existing industrial water customers from the calculation of its gross water use to avoid a disproportionate burden on another customer sector

The City's annual gross water use for the baseline periods and 2015 are summarized in Table 5-1 and included in SB X7-7 Table 4-A in Appendix G. The values reported in SB X7-7 Table 4-A are the same as documented in the City's 2010 UWMP.

Table 5-1. Gross Water Use for Baseline Years and 2015

Year	Total Supplies, AF
Baseline Years^(a)	
1996	15,328
1997	16,924
1998	15,332
1999	16,656
2000	16,952
2001	18,155
2002	18,214
2003	17,699
2004	18,854
2005	18,061
2006	18,303
2007	19,118
2008	18,752
Compliance Year^(b)	
2015	11,356
<small>(a) Baseline year data from Table 3-7 of City's 2010 UWMP. (b) Compliance year data from City of Pleasanton Production Report for Calendar Year 2015.</small>	

5.5 BASELINE DAILY PER CAPITA WATER USE

Daily per capita water use is reported in GPCD. Annual gross water use is divided by annual service area population to calculate the annual per capita water use for each year in the baseline periods. As discussed above, the City has used updated service area population data for this 2015 UWMP. The City's baseline daily per capita was use has been calculated as follows:

- 10-year Base Daily Per Capita Water Use
 - 246 GPCD (for the period from 1996 to 2005)
 - This value is 2 GPCD greater than the value calculated in the 2010 UWMP (244 GPCD)
- 5-year Base Daily Per Capita Water Use
 - 245 GPCD (for the period from 2004 to 2008)
 - This value is 1 GPCD greater than the value calculated in the 2010 UWMP (244 GPCD)

These values are shown in SB X7-7 Table 5 in Appendix G.

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 Water Code Section 10608.20(a)(1), and the fourth method was developed by DWR. The 2020 water use target is calculated using one of the following four methods:

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

Analysis using Methods 1 and 3 are included in Appendix G (SB X7-7 Tables 7A and 7E). The calculated 2020 target using Method 1 is 197 GPCD. The 2020 target using Method 3 is 124 GPCD. Methods 2 and 4 require specific detailed data which were not readily available, so those two methods were not considered. Target Method 1 results in the highest allowable SB X7-7 final (2020) target (197 GPCD by 2020), and would therefore be most favorable to the City.

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 2020 targets calculated for each of the respective target methods. The 2015 interim 2015 target is the midpoint between the City’s 10-Year Base Daily Per Capita Water Use (246 GPCD) and the final 2020 target (197 GPCD). Therefore, the City interim 2015 target is 222 GPCD.

Urban water suppliers must verify that 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 G, the City’s maximum 2020 target is 233 GPCD (95 percent of the City’s 5-year base daily per capita water use of 245 GPCD). The City’s Method 1 2020 target of 197 GPCD complies with the minimum reduction.

The City’s interim and final targets are summarized in Table 5-2.

Table 5-2. 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	1996	2005	246	222	197
5 Year	2004	2008	245		
*All values are in Gallons per Capita per Day (GPCD)					

For this 2015 UWMP, the City has selected Target Method 1, as was used in the 2010 UWMP. The recalculated interim 2015 target of 222 GPCD is 2 GPCD higher than the interim 2015 target included in the 2010 UWMP. The recalculated final 2020 target of 197 GPCD is 2 GPCD higher than the final 2010 target included in the 2010 UWMP. The City understands that the target method and resulting targets may not be changed in any amendments to the 2015 UWMP or in the 2020 UWMP.

5.7 2015 COMPLIANCE DAILY PER CAPITA WATER USE

The City has calculated its actual 2015 water use for the 2015 calendar year in accordance with Methodology 4 of DWR’s *Methodologies* document. As shown in Table 5-3 below, urban per capita water use in 2015 was 141 GPCD (based on the 2015 service area population determined using the DWR Population Tool), which is well below the 2015 interim water use target of 222 GPCD. Therefore, the City has met its interim 2015 water use target. The complete set of SB X7-7 verification tables used to document this compliance is included in Appendix G.

Table 5-3. 2015 Compliance (DWR Table 5-2)

Actual 2015 GPCD*	2015 Interim Target GPCD*	Optional Adjustments to 2015 GPCD <i>From Methodology 8</i>					2015 GPCD* <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2015 GPCD*		
141	222	0	0	0	0	141	141	Yes

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

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 Water Code Section 10608.24 because these exceptions are not needed to demonstrate compliance with SB X7-7 for 2015. Water use in 2015 in the City’s service area was significantly reduced as compared to recent years as a result of increased water conservation efforts by the City and its customers in response to the severe drought conditions statewide.

5.8 REGIONAL ALLIANCE

The City has chosen to comply with the requirements of SB X7-7 on an individual agency basis, not on a regional basis.

CHAPTER 6 System Supplies



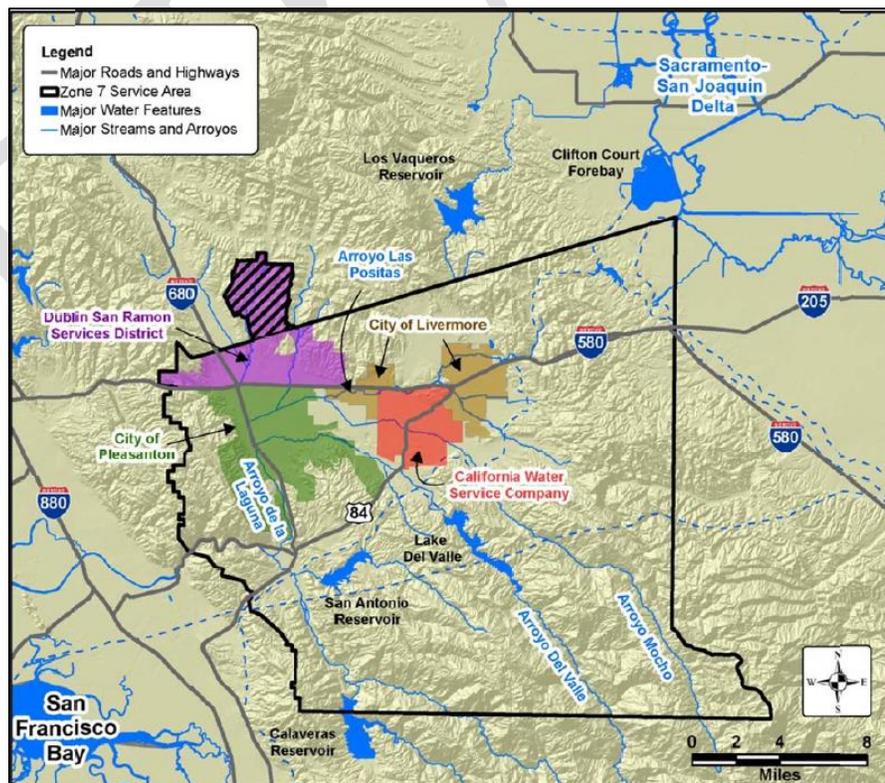
This chapter describes the water supplies currently available to the City, as well as future anticipated water supplies. The City currently utilizes water from the following sources:

- Potable water supplies (including imported and local surface water supplies and local groundwater supplies) purchased from the Zone 7 Water Agency;
- Local groundwater supplies pumped from City wells; and
- Recycled water supplies produced at DSRSD's Recycled Water Treatment Facility (RWTF) and the Livermore Water Reclamation Plant (LWRP).

These sources, along with the other projected future supplies, and the potential for desalinated water, indirect or direct potable reuse, and exchanges or transfers are described in this chapter.

6.1 PURCHASED OR IMPORTED WATER

The City currently receives a majority of its potable water supply from the Zone 7 Water Agency. Zone 7 is a multi-purpose agency that oversees water-related issues in the Livermore-Amador Valley. Zone 7 is a SWP contractor that wholesales treated water to four retail water agencies including DSRSD, City of Livermore, City of Pleasanton, and Cal Water Livermore District. In addition, Zone 7 retails non-potable water supplies for irrigated agricultural use, retails treated water to several direct customers, provides and maintains flood control facilities, and manages groundwater and surface water supplies in its service area. Under its current agreement with Zone 7, the City is limited in developing other water supply sources.



6.1.1 Pleasanton Water Supply Contract with Zone 7

Since the late 1960's the City of Pleasanton has been in contract with Zone 7 to receive the majority of the City's treated water supply. This agreement ensures an equitable, reliable, and high quality water service for Pleasanton customers and is expected to continue indefinitely into the future.

Some of the key provisions of the contract include the following:

- **Water Supply:** The agreement states that the City of Pleasanton shall purchase from Zone 7 all water required by the City for use within Pleasanton's service area. With the exception that the City may extract groundwater per the agreement provisions.
- **Water Quality:** The agreement states that all treated water delivered by Zone 7 shall be of quality that complies with the Requirements for Drinking Water of the California Department of Health Services and the US Environmental Protection Agency or their successor regulatory agencies.
- **Service Area:** The agreement states that Pleasanton's service area also includes any future areas within the boundaries of Zone 7. Pleasanton may include future areas outside of the future area if it is found to be in the best interests of Zone 7.
- **Groundwater Extraction:** Under this agreement the City of Pleasanton shall not extract more than 3,500 AF of groundwater pumping (Groundwater Pumping Quota; GPQ), from the Main Basin in any calendar year. The following exceptions apply: a) the City pays Zone 7 a recharge fee for recharging the Main Basin, b) the groundwater extracted is the City's accumulated carry-over of its GPQ from prior years.
- **Carryover of Pumping Quota:** This agreement provides for a limited carryover of 700 AF of unused pumping quota from one year to another.

The City coordinates with Zone 7 on an on-going basis to track water use and develop future water use projections.

6.1.2 Zone 7 Water Supply Sources

Zone 7 uses a combination of water supplies and water storage facilities to meet its customers' water demands. These include the following:

- Imported surface water from the SWP;
- Imported surface water transferred from the Byron Bethany Irrigation District (BBID);
- Local surface water runoff captured in Del Valle Reservoir;
- Local groundwater extracted from the Livermore Valley Main Groundwater Basin;
- Non-local groundwater storage in the Semitropic Water Storage District (Semitropic) and Cawelo Water District (Cawelo); and
- Future local storage in the Chain of Lakes (COL).

In July 2011, Zone 7 Water Agency completed a Water Supply Evaluation (2011 WSE) of its long-term water supply to provide background for and facilitate preparation of Zone 7's 2010 UWMP. In response to the on-going drought, in 2016, Zone 7 completed an updated Water Supply Evaluation¹ (WSE Update) to reassess its long-term water supply. The WSE Update provided a basis for Zone 7's water supply projections as included in Zone 7's 2015 UWMP².

A description of Zone 7's water supply sources, based on information from Zone 7's WSE Update and 2015 UWMP, is provided below.

6.1.2.1 Imported Surface Water Supply

Imported surface water is by far Zone 7's largest water source, providing approximately 90 percent of the treated water supplied to its customers on an annual basis, either directly or after storage. Zone 7 imports surface water from the SWP and when available, from BBID, but the SWP by itself represents approximately 80 percent of Zone 7's supply.

The current drought has severely impacted delivery of most surface water supplies in California, and the 2014 SWP cutbacks of Table A³ allocations, first to 0 percent and then to 5 percent (but only for delivery late in the year) were the lowest on record. In March 2015, DWR announced that the 2015 allocation would be 20 percent, the second lowest since 1991. These cutbacks also limited Zone 7's access to stored groundwater south of the Sacramento-San Joaquin Delta (Delta). These cutbacks, together with statewide water conservation mandates, prompted the City to restrict the use of potable water starting in 2014.

6.1.2.1.1 *State Water Project*

The SWP is the nation's largest publicly-built water storage and conveyance system and currently serves water to over 25 million people throughout California. It was built and is operated and managed by the DWR. In addition to delivering water, the SWP also generates power, controls floods, provides recreational facilities, and enhances habitat for fish and wildlife.

SWP water primarily originates within the Feather River watershed, is captured in and released from Lake Oroville, and flows through the Delta before it is conveyed by the SBA to Zone 7, Alameda County Water District (ACWD), or Santa Clara Valley Water District, or by the California Aqueduct to other south-of-Delta SWP contractors. Zone 7 entered into a 75-year agreement with DWR to receive water from the SWP in November 1961. Including Zone 7, there are 29 SWP contractors spread across California, serving areas as far north as Plumas County and as far south as San Diego County.

¹ Water Supply Evaluation Update, Zone 7, February 2016.

² Zone 7 2015 Urban Water Management Plan, March 31, 2016.

³ Table A is an exhibit to the SWP's water supply contracts.

Within Zone 7, SWP water is used directly to meet treated water demands from municipal and Industrial (M&I) customers (both wholesale and direct) and untreated water demands from agricultural customers. Water from the SWP can also be stored in Lake Del Valle by DWR for later use. In addition to aboveground storage, SWP water is stored in the local groundwater basin, or stored remotely in Kern County groundwater banks. In the future, local storage will also be available in the Chain of Lakes. Aquifer storage of surface water supplies is a major component of Zone 7's water supply reliability portfolio.

6.1.2.1.1.1 SWP Table A Amount

The primary allocation agreement between DWR and its SWP contractors is recorded in Articles 12(a) and 18(a) of the agreements and is based on each contractor's annual water delivery request. Each contractor is limited to an annual contractual amount as specified in Article 6(c) and Table A (hence, water that falls under this contractual limit is commonly referred to as "Table A" water). As previously noted, Zone 7 first entered into an agreement with DWR in 1961. As the SWP was expanded and as Zone 7 demands increased over the years, Zone 7's Table A amount was increased, reaching the amount of 46,000 AFA in 1997.

Since 1997, Zone 7 has increased its supply from the SWP through a series of five permanent transfers. In December 1999, Zone 7 secured Table A SWP allocations from Lost Hills Water District of 15,000 AFA and Berrenda Mesa Water District of 7,000 AFA. In December 2000, 10,000 AFA of SWP allocation from Belridge Water Storage District was acquired. An additional 2,219 AFA was obtained from the same source in October 2003. Finally, 400 AFA of water was acquired from the Tulare Lake Basin Water Storage District in 2003. Together, these transfers have raised Zone 7's current Table A allocation to 80,619 AFA through 2036 with an option to renew for another 75 years.

Each year, DWR offers its contractors, including Zone 7, a percentage allocation of the maximum Table A amount (80,619 AF for Zone 7) based on hydrologic conditions, water demands from other contractors, SWP facility capacity, amount in storage, and environmental/regulatory requirements.

DWR publishes a delivery reliability/capability report every two years that projects minimum, long-term average, and maximum percentage allocations under existing and future conditions. Typically, the existing conditions scenario evaluated by DWR assumes that not all of the contractors request 100 percent of their Table A amount, and does not account for future regulatory or hydrologic constraints. Consequently, for conservative planning level purposes, Zone 7 has historically used their future scenarios, which do account for full requests and future regulatory or hydrologic conditions, to evaluate water supply reliability.

The long-term average allocations projected in DWR's capability reports from 2002 to 2013 decreased from 76 percent in 2002 to 60 percent in 2009, and stayed at about 60 percent through the 2013 report. In the 2015 Delivery Capability Report, the SWP's projected long-term average yield is 62 percent of Table A.

Minimum allocations in DWR’s capability reports from 2002 to 2015 were equal to or greater than 5 percent, and the last four reports (2009, 2011, 2013 and 2015) were above 10 percent. However, the extraordinarily dry conditions in 2013 and 2014 resulted in the historically lowest 5 percent Table A allocation that was only available starting in the Fall of 2014. The dry hydrologic conditions that led to the low 2014 SWP water supply allocation were extremely unusual, and to date have not been included in the SWP delivery estimates presented in DWR’s 2015 Delivery Capability Report. It is anticipated that the hydrologic record used in the DWR model will be extended to include the period through 2014 during the next update of the model, which is expected to be completed prior to the issuance of the next update to the biennial SWP Delivery Capability Report. To be conservative, Zone 7’s 2015 UWMP assumes that a 5 percent allocation of the SWP Table A amounts represents the worst-case single dry year scenario.

6.1.2.1.1.2 Article 21 Water (Interruptible or Surplus Water)

Under Article 21 of Zone 7’s contract with DWR, Zone 7 also has access to excess water supply from the SWP that is available only if: 1) it does not interfere with SWP operations or Table A allocations, 2) excess water is available in the Delta, and 3) it will not be stored in the SWP system. The amount of Article 21 water available is calculated as the pumping capacity available at Harvey O. Banks Pumping Plant minus the contractor demands. If there is no demand for Article 21 water, this excess water flows out to the ocean. Per the 2015 SWP Delivery Capability Report, the projected yield from Article 21 is very low and represents neither a significant nor a reliable water supply for Zone 7.

6.1.2.1.1.3 Article 56d Water (Turnback Pool Water) and Multi-Year Pool Demonstration Program (Water Pool Program)

Article 56d is a contract provision that allows SWP contractors with unused Table A water to sell that water to other SWP contractors via a “turnback pool” administered by DWR on an annual basis. Historically, only a few SWP contractors have been in a position to make turnback pool water available for purchase, particularly in normal or dry years. Over 2013 and 2014, DWR began pilot-testing a Multi-Year Pool Demonstration Program (Water Pool Program) to evaluate the feasibility of a multi-year water purchase program. The Water Pool Program could conceivably provide an alternative to the Turnback Pool, providing more incentive to prospective sellers and therefore increasing the amount of water available. In 2015, the Water Pool Program was re-introduced through the end of 2016 at a price more in line with the current market. The program remains on pilot status.

6.1.2.1.1.4 Lower Yuba River Accord

In 2008, Zone 7 entered into a contract with DWR to purchase additional water under the Lower Yuba River Accord (Yuba Accord). The contract expires in 2025. There are four different types (Components) of water available; Zone 7 has the option to purchase Components 2 and 3 water during drought conditions, and Component 4 water when the Yuba County Water Agency has determined that it has water supply available to sell.

The annual amount of water supply available to Zone 7 during dry years under the Yuba Accord is relatively small. For long-term planning, Zone 7 estimates an average yield of 250 AFA under the Yuba Accord. This yield was estimated by assuming a maximum yield of 676 AF (Components 2 and 3 only) during critical dry years and zero yield during wet years. Although Component 4 water could increase the yield to 850 AFA, its future yield is still uncertain; consequently, for conservative planning-level purposes, Component 4 water was not included in Zone 7's analysis.

6.1.2.1.2 Byron Bethany Irrigation District

BBID diverts water from the Delta pursuant to a "Notice of Appropriation of Water" dated May 18, 1914. In 1998, Zone 7 entered into a 15-year contract with BBID, renewable every five years up to a total of 30 years, for a minimum yield of 2,000 AFA and up to 5,000 AFA of water supply under this appropriation. Water purchased from BBID is delivered to Zone 7 via the SBA. In August 2010, the contract was extended through 2030, with an option to extend through 2039.

Zone 7 previously used a minimum yield of 2,000 AF; however, recently, BBID, Zone 7, and DWR have been reviewing the potential yield available for Zone 7, and discussing the future of the contract. Furthermore, Zone 7 would expect the available supply under this contract to diminish as BBID's own water demands increase. Consequently, until discussions between BBID, DWR, and Zone 7 conclude, Zone 7 made the conservative assumption that no water is available via this contract for the analysis completed in the WSE Update.

6.1.2.2 Local Surface Water Runoff

Zone 7, along with ACWD, has water right permits to divert flows from Arroyo del Valle (Permit 11319). Runoff from the Arroyo del Valle watershed above Lake Del Valle is stored in the lake, which is managed by DWR. As noted above, Lake Del Valle is also used to store imported surface water deliveries from the SWP. In late summer/early fall, DWR typically lowers lake levels in anticipation of runoff from winter storm events, and to provide flood control capacity. Water supply in Lake Del Valle is made available to Zone 7 via the SBA through operating agreements with DWR. Inflows to Lake Del Valle, after accounting for permit conditions, are equally divided between ACWD and Zone 7.

6.1.2.3 Local Storage

Zone 7 has three options for local storage: storage in Lake Del Valle, storage in the local groundwater basin and, in the future, surface storage in the COL. Each of these is described below.

6.1.2.3.1 Lake Del Valle

Lake Del Valle is a 77,110 AF reservoir with a 235-foot high dam that is located approximately 10 miles southeast of Livermore. It was constructed by DWR in 1968 to provide recreation and fish and wildlife enhancement, flood control for Alameda Creek, and storage for SWP water delivered through the SBA. While the lake has a nominal capacity of 77,000 AF, it normally stores from 25,000 to 40,000 AF, with the remaining capacity left available for flood control. The storage capacity available to Zone 7 ranges from 7,000 to 10,000 AFA depending on lake drawdown and hydrology.

The 1.5-mile Del Valle Branch Pipeline, which branches off the SBA downstream of the Patterson Pass Water Treatment Plant, is used for filling the lake, as well as releasing water from it. The pipeline has a capacity of 120 cubic feet per second (CFS). Water is pumped into the lake and released by gravity flow. Lake Del Valle is used to store runoff from the Arroyo Valle watershed above the lake (the rights to which are shared between Zone 7 and ACWD) and to store imported surface water deliveries from the SWP for the three SBA contractors (Zone 7, ACWD, and Santa Clara Valley Water District). After Labor Day, DWR typically lowers the lake level to 25,000 AF in anticipation of runoff from winter storm events, and to provide flood control capacity.

Water supply in Lake Del Valle is made available to the SBA contractors via the SBA through operating agreements with DWR. As is the case of SWP water taken directly from the SBA, water released from Lake Del Valle is also used by Zone 7 to be treated at DVWTP or recharge the local groundwater basin.

6.1.2.3.2 Livermore Valley Groundwater Basin

Zone 7 overlies the Livermore Valley Main Groundwater Basin, which extends from the Pleasanton Ridge east to the Altamont Hills and from the Livermore Uplands north to the Tassajara Uplands. The portion of the Livermore Valley Groundwater Basin that contains high yielding aquifers and good quality groundwater is called the “Main Basin,” which is composed of Castle, Bernal, Amador, and Mocho II sub-basins.

Zone 7 uses the Main Basin as a storage facility and not a source of long-term water supply because Zone 7 only pumps groundwater it has artificially recharged using its surface water supplies. Natural recharge is allocated to users pre-dating the formation of Zone 7. As the groundwater basin manager, Zone 7’s policy is to maintain groundwater levels above historical lows in the Main Basin through artificial recharge operations. SWP water or runoff from Arroyo Valle (stored in and released from Lake Del Valle) is used to recharge the Main Basin by releasing water from turnouts along the SBA and the Del Valle Branch Pipeline into the Arroyo Mocho, Arroyo Valle, and Arroyo Las Positas for percolation down to the aquifers. The streams’ total recharge capacity varies depending on hydrologic conditions, with higher recharge capacities occurring during dry years.

Zone 7 established historical lows based on the lowest measured groundwater elevations in various wells in the Main Basin; historical lows correspond to a groundwater storage volume of about 128,000 AF. In general, the difference between water surface elevations when the Main Basin is full and water surface elevations when the Main Basin is at historical lows defines Zone 7’s available operational storage. Operational storage is about 126,000 AF based on Zone 7’s experience operating the Main Basin. The remaining 128,000 AF is considered emergency reserve storage.

Zone 7 owns and operates nine municipal supply wells located in four wellfields: the COL, Hopyard, Mocho, and Stoneridge. These wellfields are located on the west side of Zone 7’s service area, and therefore primarily serve retailers on the west side of Zone 7’s system (DSRSD and Pleasanton). Together, the wellfields have a combined peak capacity of 41 million gallons per day (MGD). However, the newest two wells, which are located in the COL wellfield and represent approximately 9 MGD in capacity, are primarily intended for emergency or drought conditions.

Therefore, under normal operating conditions, Zone 7 plans on a peak capacity of 32 MGD from the existing wells assuming the groundwater basin is 80 percent full. Additionally, previous groundwater modeling efforts indicate that the spatial distribution of the existing wells would allow Zone 7 to pump as much as 28,000 AF in one year assuming the groundwater basin was about 80 percent full.

6.1.2.3.3 Chain of Lakes

COL is a series of former or active gravel quarry pits located in the heart of the Livermore-Amador Valley. The COL was envisioned as a large facility to be used for water management and related purposes by Zone 7, including surface storage and recharge of the Livermore Valley Groundwater Basin. The COL will ultimately consist of ten lakes named Lakes A through I and Cope Lake, connected through a series of conduits. Zone 7 currently owns Lake I and Cope Lake, and expects Lake H to be dedicated to Zone 7 within the next few years once reclamation is completed. The remaining lakes (A through G) were formerly expected to be dedicated to Zone 7 by around 2030. This previous timing was used in the 2011 WSE.

However, the gravel mining companies currently mining Lakes A through G have notified Zone 7 that mining may extend well beyond 2030, and may not be completed until as late as 2060; consequently, for the WSE Update, Zone 7's evaluation only included Lake I and Cope Lake, Lake H starting in 2017, and Lake A starting in 2020.

6.1.2.4 Non-Local Storage

In addition to local storage, Zone 7 also participates in the two non-local groundwater-banking programs (Semitropic and Cawelo) located in Kern County. During normal or wet years, Zone 7 can send excess water to Kern County via the California Aqueduct for storage. However, Zone 7 must use exchanges with other SWP contractors located south of Kern County (e.g., Metropolitan Water District) to recover previously stored water supplies during times of need (e.g., drought) because Zone 7's location is upstream of Kern County. There must be sufficient water flowing through the SWP to facilitate exchanges between Zone 7 and SWP contractors located south of Kern County.

All recovered groundwater from these programs must be delivered to Zone 7 via Banks Pumping Plant in the Delta and then the South Bay Pumping Plant to the SBA. Therefore, if Delta conveyance is unavailable (e.g., earthquakes, salinity intrusion, etc.), then Zone 7 would not have access to banked water.

In November 2013, when the initial SWP allocation was 5 percent, Zone 7 requested the maximum recovery amounts from Semitropic (9,100 AF) and Cawelo (10,000 AF), and neither banking program indicated that the delivery requests could not be made. However, when DWR reduced the allocation to 0 percent in January 2014 due to extreme hydrologic conditions, and indicated that pumping in the Delta may cease due to salinity concerns, it became clear that Zone 7 might not be able to recover any previously stored water supplies in Kern County. This view persisted even after DWR increased the final allocation to 5 percent with use limited from September to December.

Ultimately, DWR was able to manage salinity so that pumping in the Delta could continue, and with coordination among Zone 7, other SWP contractors, DWR, and banking partners, DWR prioritized the delivery of banked water to Zone 7 and other SBA contractors. Eventually, even in a 5 percent allocation year Zone 7 was able to successfully recover 14,982 AF, or approximately 78 percent of the maximum recovery requested.

Based on actual recovery in 2014 and potential issues if there is no pumping in the Delta, Zone 7 modified the assumed recovery from its groundwater banking programs. Conversely, the 2011 WSE did not evaluate a SWP allocation less than 9.5 percent and assumed that Zone 7's maximum recovery would be available under all conditions.

6.2 GROUNDWATER

This section describes the Livermore Valley Groundwater Basin and Zone 7's Groundwater Management Plan⁴ that is used to manage the basin. Each year, Zone 7 prepares an Annual Report for the Groundwater Management Program. A copy of the Executive Summary of the 2014 Water Year Annual Report is provided in Appendix H.

The City owns and operates three active groundwater wells in the Main Basin, which is a portion of the Livermore Valley Groundwater Basin. The City's groundwater resource is described below.

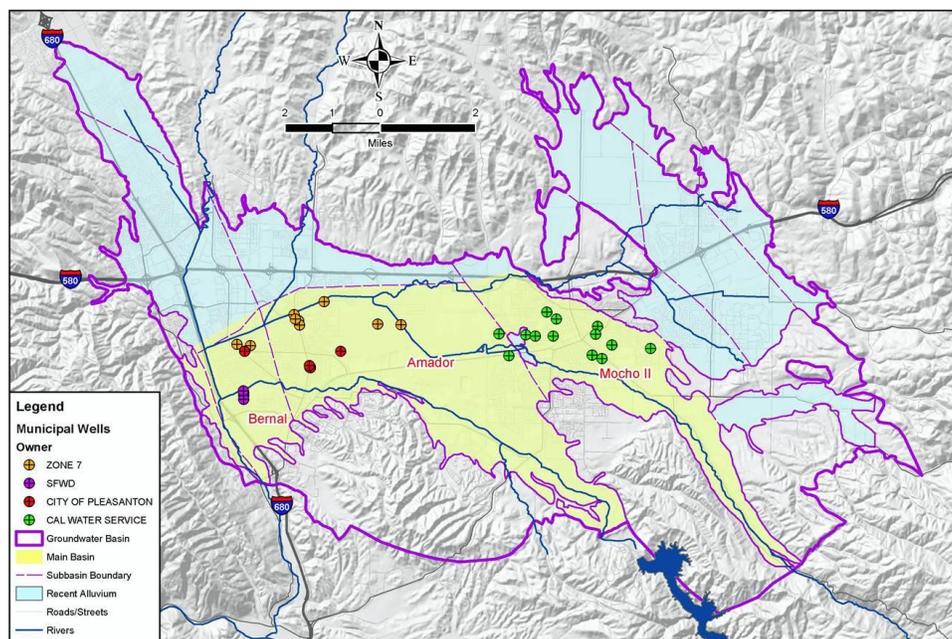
6.2.1 Groundwater Basin Description

Zone 7 administers oversight of one of the San Francisco Bay Hydrologic Region groundwater basins known as the Livermore Valley Basin (DWR Basin Number 2-10), as described in the DWR Bulletin 118. The Livermore Valley Basin covers 69,600 acres (109 square miles) in Alameda and Contra Costa Counties. The Livermore Basin extends 14 miles east of Pleasanton Ridge to the Altamont Hills and 3 miles north from the Livermore Upland to the Orinda Upland. Surface drainage features include Arroyo Valle, Arroyo Mocho, and Arroyo las Positas as the principal streams and Alamo Creek, South San Ramon Creek, and Tassajara Creek as the minor streams. Elevations within the basin range from about 600 feet in the east in the Altamont Hills to 280 feet in the southwest. Some geologic structures restrict the lateral movement of groundwater, but the general groundwater gradient is from east to west, towards Arroyo de la Laguna, and from north to south along South San Ramon Creek and Arroyo de la Laguna. Average annual precipitation ranges from 16 inches on the valley floor to more than 20 inches along the northwest and southeast margins of the basin. ***This groundwater basin is not adjudicated, and DWR has not identified Basin 2-10 as either in overdraft or expected to be in overdraft.***

The Main Basin is the portion of the Livermore Valley Groundwater Basin that has high yields and good quality groundwater. The Main Basin has an estimated storage capacity of 254,000 AF and receives an annual average natural recharge of approximately 13,400 AFA through percolation of rainfall, natural stream flow, and irrigation waters, and inflow of subsurface waters. This natural recharge is considered the long-term natural sustainable yield of the Main Basin, or the amount that can be pumped without lowering the long-term average groundwater volume in storage. The

⁴ Groundwater Management Plan for Livermore-Amador Valley Groundwater Basin, prepared for Zone 7 Water Agency, prepared by Jones & Stokes, September 2005.

long-term natural sustainable yield is based on over a century of hydrologic records and projections of future recharge conditions.



6.2.2 Groundwater Management

The City, DSRSD, the Cal Water Livermore District, and the City of Livermore, through agreements with Zone 7, have mutually agreed to limit their extraction from the Main Basin to a combined quantity of approximately 7,200 AFA, about 54 percent of the long-term sustainable yield of the Main Basin. This agreement, along with Zone 7's other groundwater management activities, keeps the groundwater budget essentially in balance under average hydrologic conditions. Each of these retailers has a groundwater pumping quota (known as their GPQ). The City's GPQ is 3,500 AFA.

6.2.2.1 Groundwater Quantity

Zone 7 routinely monitors groundwater levels within the Main Basin. Two independent methods are used to estimate groundwater storage: 1) Hydrologic Inventory and 2) Nodal Groundwater Elevation. The Main Basin is estimated to have a total storage capacity of 254,000 AF, of which approximately 126,000 AF are available for Zone 7 operational storage. Zone 7's goal is maintain 128,000 AF of groundwater at all times, as discussed below.

6.2.2.1.1 Artificial Recharge

Before the construction of the SWP in the early 1960s, groundwater was the sole water source for the Livermore-Amador Valley. This resource has gone through several periods of extended withdrawal and subsequent recovery. In the 1960s, when approximately 110,000 AF of groundwater was extracted, the Main Basin reached its historic low of 128,000 AF. The Main Basin was allowed to recover from 1962 to 1983. It was during this era that Zone 7 first conducted a program of groundwater replenishment by recharging imported surface water via its streams

(“in-stream recharge”) for storage in the Main Basin, began supplying treated surface water to customers to augment groundwater supplies, and began regulating municipal pumping by contractually establishing GPQ as discussed further below.

Zone 7’s operational policy is to maintain the balance between the combination of natural and artificial recharge and withdrawal. This ensures that groundwater levels do not drop below the historic level of 128,000 AF.

6.2.2.1.2 Current Sustainable Yield and Groundwater Pumping Quotas

Long-term natural sustainable yield is contractually defined as the average amount of groundwater annually replenished by natural recharge in the Main Basin. The percolation of rainfall, natural stream flow, and irrigation waters, and inflow of subsurface water are natural recharge mechanisms that can offset the lowering the long-term average groundwater volume in storage. In contrast, “artificial recharge” is the aquifer replenishment that occurs from artificially induced or enhanced stream flow. With artificial recharge, more groundwater can be sustainably extracted from the Main Basin each year.

The natural sustainable yield of the Main Basin has been determined to be about 13,400 AFA, which is 10 to 11 percent of the total estimated useable groundwater storage. This long-term natural sustainable yield is based on over a century of hydrologic records and projections of future recharge conditions. Based on this sustainable yield value, each retailer established a “GPQ”, formerly referred to as the “Independent Quota” in the original Municipal and Industrial water supply contract between Zone 7 and each retailer. The City and Cal Water pump their own GPQ. Zone 7 pumps DSRSD’s GPQ. Livermore has not had any groundwater pumping capability for many years, and has therefore not been using their GPQ. Cal Water Livermore District, DSRSD, the City of Livermore, and the City of Pleasanton (collectively referred to as the Retailers) are permitted to pump 7,214 AFA. The Main Basin’s GPQ breakdown is 3,069 AFA for Cal Water, 645 AFA for DSRSD, and 3,500 AFA for Pleasanton. The remaining natural sustainable yield is pumped for other municipal, agricultural, and gravel mining purposes. Averages are maintained by allowance of “carryover” (limited to 20 percent of the GPQ) when less than the GPQ is used in a given year. A retailer must pay a “recharge fee” for all groundwater pumped exceeding their GPQ and any carryover. This practice helps avoid a repeat of historical over-drafting of the basin by the larger municipal users. This fee covers the cost of importing and recharging additional water into the Main Basin.

Zone 7’s groundwater extraction for its treated water system does not use the natural sustainable yield from the Main Basin; instead, ***Zone 7 pumps only water that has been recharged as part of its artificial recharge program using its surface water supplies.*** During high demands, groundwater is used to supplement surface water supply delivered via the SBA. Groundwater is also used when the SBA is out of service due to maintenance and improvements or when Zone 7’s surface water treatment plants are operating under reduced capacity due to construction, repairs, etc. Finally, Zone 7 taps into its stored groundwater under emergency or drought conditions, when there may be insufficient surface water supply available. Zone 7 also pumps groundwater out of the Main Basin during normal water years to help reduce the salt loading in the Main Basin. As discussed in Section 6.2.2.2 (Groundwater Quality), to achieve additional salt removal, a demineralization facility has been in operation starting in 2009. Zone 7 plans to recharge

9,200 AFA on average, which means that Zone 7 can pump an equivalent 9,200 AFA on average from the Main Basin.

6.2.2.2 Groundwater Quality

Groundwater quality is generally good in the Main Basin. The main constituents of concern involved with meeting the Regional Water Quality Control Board's (RWQCB's) Basin Plan Objectives are salts (TDS) and nitrate. Boron is another groundwater parameter of interest for the valley's agriculture and golf communities because of its potential for impact on certain irrigated crops and turf. The following are Zone 7's groundwater quality objectives for the three primary constituents of concern:

- TDS:
 - Main Basin: Ambient or 500 milligrams per liter (mg/L), whichever is lower
 - Fringe Basins: Ambient of 1,000 mg/L, whichever is lower
- Nitrate (as NO₃): 45 mg/L
- Boron: 1.0 mg/L (an agricultural supply target)

The calculated basin-wide average TDS concentration at the end of the 2014 WY was approximately 598 mg/L, with the upper aquifer (Fringe Basin) averaging 680 mg/L and the lower aquifer (Main Basin) averaging 509 mg/L. Zone 7's approved Salt Management Plan (SMP) provides a long-term plan for meeting this objective.

There are plume-like nitrate "hot spots" distributed across the Main and fringe basins, however, the aquifer weighted basin-wide average nitrate concentration is 14 mg/L (as NO₃), well below the Basin Plan objective of 45 mg/L. For the 2014 Water Year, the average nitrate concentration was 14 mg/L in both the upper and lower aquifers.

Boron is a natural occurring element typically found at very low concentrations in groundwater from the Livermore Groundwater Basin. While there is no maximum contaminant level (MCL) for boron, it is a problem for some irrigated crops when it exceeds 1 or 2 mg/L, depending on the crop's sensitivity. Boron concentrations in the lower aquifers of the Main Basin are generally below 2 mg/L throughout the lower aquifers, but exists at elevated concentrations (up to 32.9 mg/L) in the upper aquifers mainly in two areas of the groundwater basin: 1) in the eastern fringe basin area, and 2) along the boundary between the Main Basin and the Dublin and Camp fringe basins.

Hydrologic conditions and water operations in the 2014 Water year resulted in a net removal of approximately 2,400 tons of salt from the Main Basin. This includes an estimated 1,050 tons of salt that was concentrated and exported from the Main Basin by Zone 7's Mocho Groundwater Demineralization Plant (MGDP), which was operated only sparingly to maintain membranes during the water year to conserve groundwater that would otherwise be exported as brine concentrate had the MGDP run more. Since the MGDP began operating in 2009, approximately 14,800 tons of salt have been removed from the Main Basin.

In general, there is not a nutrient loading problem in the groundwater basin; however, there are a few areas with high nitrate concentrations that are believed to have been caused mainly by historical agricultural and municipal wastewater practices that are no longer being employed over the groundwater basin. In July 2015, Zone 7 completed a Nutrient Management Plan (NMP), which when combined with Zone 7's SMP, is equivalent to the Salt/NMPs described in the State's 2009 Recycled Water Policy.

Zone 7 manages three other groundwater protection programs for the purpose of groundwater quality sustainability, namely:

- Septic Tank Management;
- Well Ordinance/Well Permitting; and
- Toxic Site Surveillance.

No special authorizations for septic tank use within the Upper Alameda Creek Watershed were made in the 2014 WY. In 2014, the RWQCB issued Waste Discharge Requirements for the onsite wastewater treatment systems in use at the Concannon Winery which expire in 2016.

In 2014, Zone 7 issued 181 drilling permits, 23 more than were issued in 2013. Zone 7 inspected approximately 40 percent of all permitted well work in 2014. The remainder were allowed to self-monitor with required reporting.

Zone 7's Toxic Site Surveillance program tracked the progress of 53 active contamination cases where contamination has been detected in groundwater or is threatening groundwater. Thirteen of the sites are designated as "High Priority" because they have impacted or are an immediate threat to potable water supply wells or surface water. Nine of the high priority sites are fuel leak cases; the other four cases involve solvent contamination (tetrachloroethylene [PCE]). Thirteen contamination cases were closed during the 2014 Water Year after they were determined to no longer pose a threat to drinking water. At the end of the water year, eleven other toxic site cases were being considered for closure, including three of the high priority cases.

6.2.2.3 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 (SWRCB) 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 Implementation Steps and Deadlines

Implementation Step	Implementation Measure	Deadlines
Step One	Local agencies must form local Groundwater Sustainability Agencies (GSAs) within two years	<ul style="list-style-type: none"> • June 30, 2017
Step Two	Agencies in basins deemed high- or medium-priority must adopt Groundwater Sustainability Plans (GSPs) within five to seven years, depending on whether a basin is in critical overdraft	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 subbasins designated by the DWR as high or medium priority basins, based on a statewide ranking that uses criteria including population and extent of irrigated agriculture dependent on groundwater. The final Basin Prioritization findings indicate that 127 of California's 515 groundwater basins and subbasins 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 Livermore Valley groundwater basin is shown in Table 6-2. As shown, the Livermore Valley basin has been ranked as a medium priority basin.

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

Rank ^(a,b)	Basin Number	Basin Name	Overall Basin Ranking Score	Overall Basin Priority
92	2-10	Livermore Valley	17.3	Medium
^(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.				

Although not yet finalized, it is believed that Zone 7 will act as the GSA for the development of a GSP for the Livermore Valley groundwater basin. Several of the activities, including adoption of regulations for GSPs, are not expected to be finalized until June 30, 2016. Therefore, new requirements for groundwater management under SGMA do not apply to this 2015 UWMP, but will be addressed in the 2020 UWMP.

6.2.3 Historical Groundwater Pumping

For the 2014 Water Year, rainfall in the Livermore-Amador Valley was 50 percent of the average and the third water in a row with below-average rainfall. Because of this, the aquifer replenishment from percolating rainfall was estimated to 1,169 AF which is about 37 percent of the normal. In addition, only 1 percent of the historical average runoff was measured at the Valley’s arroyos (Arroyo Mocho near Livermore and Arroyo Valle below Lang Canyon). According to Zone 7’s 2014 Annual Report for the Groundwater Management Program (see Appendix H), the groundwater supplies stored locally in the Main Basin decreased by approximately 10,000 AF during the 2014 Water Year. As a result, the 2014 Water Year ended with an estimated 200,000 AF of groundwater in total storage and 72,000 AF in operational storage. This represents about 57 percent of the Main Basin’s operational storage capacity.

As described above, the City has a GPQ of 3,500 AFA in the Livermore Valley Main Groundwater Basin (Main Basin). Historical groundwater pumpage from 2011 through 2015 is shown in Table 6-3. Average groundwater pumpage during the last five years has been about 3,500 AF, which is equal to the City’s GPQ.

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

Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Livermore Valley Groundwater Basin	3,503	3,459	3,516	3,381	3,629
TOTAL		3,503	3,459	3,516	3,381	3,629

NOTES: Volumes are in AF.

6.3 SURFACE WATER

As described above, the City receives treated surface water supplies from Zone 7. Zone 7’s surface water supplies consist of imported surface water from the SWP and BBID, and local surface water captured in the Del Valle Reservoir. The surface water supplies purchased from the Zone 7 Water Agency are described above in Section 6.1 (Purchased Water).

6.4 STORMWATER

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

6.5 WASTEWATER AND RECYCLED WATER

DSRSD is responsible for treating and discharging treated wastewater for the Cities of Dublin, South San Ramon, and Pleasanton. In addition, DSRSD owns and operates a RWTF at its wastewater treatment plant and participates with EBMUD in a joint powers authority, DERWA, which operates the San Ramon Valley Recycled Water Program (SRVRWP). The SRVRWP provides recycled water that meets Title 22 disinfected tertiary recycled water requirements to landscape irrigation customers of DSRSD and EBMUD (including the City of San Ramon, City of Dublin, Dougherty Valley, Town of Danville, and Town of Blackhawk areas of Alameda and Contra Costa Counties). In 2014, the City of Pleasanton also began using recycled water from DERWA facilities, and will be expanding use in the future.

Wastewater produced from the City of Pleasanton's Ruby Hills housing development is sent to the LWRP. In 2014, the City began to receive recycled water supplies from the City of Livermore's Residential Recycled Water Program.

6.5.1 Recycled Water Coordination

In June of 2015, the SWRCB approved financing through the Clean Water State Revolving Fund (CWSRF) and Proposition 1 Program Grant to support the City's Recycled Water Project.

The San Francisco Bay RWQCB authorized the City's Recycled Water Distribution and Use Program under Order 96-011, and approved the City's Notice of Intent for coverage under Order 96-011 on July 9, 2015. The City entered into recycled water supply agreements with DERWA in November of 2013, and with the City of Livermore in May of 2013. These agreements allowed for the supply of recycled water to Pleasanton customers under the authority of the respective recycled water supplier's Order 96-011 until Pleasanton obtained its own Order 96-011. Recycled water obtained from DERWA services Val Vista Park in the western portion of Pleasanton, and recycled water obtained from the City of Livermore services new development in the eastern portion of Pleasanton.

6.5.2 Wastewater Collection, Treatment, and Disposal

As stated previously, DSRSD's RWTF and Livermore's WRP both provide wastewater collection and treatment services for the City's service area. Treated wastewater from DSRSD's RWTF and the Livermore's WRP are sent through the Livermore-Amador Valley Water Management Agency (LAVWMA) pipeline for ultimate disposal by the East Bay Dischargers Authority (EBDA) in San Francisco Bay.

The wastewater collection and treatment systems at DSRSD's RWTF and Livermore's WRP are described below.

6.5.2.1 DSRSD's RWTF Description

DSRSD owns and operates a regional wastewater treatment plant (WWTP), which treats wastewater from Dublin, South San Ramon, and Pleasanton. The wastewater treatment plant includes conventional secondary treatment facilities, as well as tertiary and advanced recycled water treatment facilities. Conventional secondary wastewater treatment facilities include primary sedimentation, activated sludge secondary treatment, secondary sedimentation, chlorine disinfection, and effluent pumping. The secondary treatment facilities currently have an ADWF capacity of 17.0 MGD. At projected buildout, the secondary facilities will have an ADWF capacity of 20.7 MGD; 10.4 MGD of this influent is projected to originate from the DSRSD service area. The remaining 10.3 MGD of influent is projected to originate from Pleasanton. DSRSD treats City of Pleasanton influent by contract.

At DSRSD's RWTF, a portion of the secondary effluent from the WWTP is treated further to produce Title 22 disinfected tertiary recycled water. During the dry season when recycled water demands are high, recycled water is produced using sand filtration and ultraviolet disinfection facilities (SFUV). The SFUV facilities have a treatment capacity of 9.7 MGD.

DSRSD's RWTF also includes microfiltration and ultraviolet disinfection facilities (MFUV) with a treatment capacity of 3.0 MGD. These facilities currently act as backup facilities for the SFUV facilities and are used during times of low and high demands. The SFUV facilities have less flexible startup and shutdown requirements, whereas the MFUV facilities have a wide turndown range; therefore, they are used during low flow periods. During high demand periods, the MFUV and SFUV facilities may be operated in parallel to meet demand. The MFUV facilities also provide redundancy, increasing reliability when units in the SFUV facilities are undergoing maintenance, repair, or replacement.

DSRSD's MFUV facilities were designed to produce recycled water suitable for both non-potable reuse and groundwater recharge, a potential future use that would replenish and improve local groundwater quality. MFUV construction was completed in 1999. The MFUV project is currently producing recycled water that meets California Title 22 requirements for unrestricted reuse and has received approval for groundwater recharge from the Department of Public Health (DPH) and RWQCB. As described further in Section 6.8, the on-going drought has prompted the Tri-Valley water retailers and Zone 7 to reconsider a potable reuse project for reliability. The City, the other retailers and Zone 7 will be studying this option collaboratively.

Wastewater that is not recycled is discharged into the San Francisco Bay through a pipeline owned by LAVWMA, a joint powers agency created in 1974 by DSRSD and the cities of Livermore and Pleasanton. Operations began in September 1979, with an expansion in 2005, for a current design capacity of 41.2 MGD. The wastewater is conveyed via a 16-mile pipeline from Pleasanton to San Leandro and enters the EBDA system for dechlorination and discharge through a deepwater outfall to the San Francisco Bay.

6.5.2.2 Livermore WRP Description

The City of Livermore owns and operates the LWRP, which treats wastewater collected from the City of Livermore, Lawrence Livermore National Laboratory, and the City of Pleasanton's Ruby Hills housing development. The LWRP receives an average daily dry weather flow of approximately 7.0 MGD. Wastewater is treated using conventional primary and secondary wastewater treatment processes, as well as tertiary treatment to produce recycled water.

The conventional wastewater treatment processes at the LWRP consist of the following:

- Primary sedimentation where heavy organic solids are removed from the raw sewage and sent to the solids stabilization and dewatering facilities;
- Secondary treatment utilizing the activated sludge process which removes 85 to 95 percent of the remaining organic material after primary sedimentation;
- Disinfection using sodium hypochlorite to reduce the bacteria levels in the secondary effluent prior to disposal;
- Disposal of secondary effluent through the LAVWMA pipeline; and
- Solids stabilization using anaerobic digestion followed by belt pressing for dewatering prior to beneficial reuse as alternate daily cover or land application.

Tertiary treatment for water reclamation consists of the following:

- Mono-media filters where 95 to 99 percent of suspended material is removed from secondary effluent; and
- Disinfection using ultraviolet light (UV) prior to disposal.

The tertiary treated effluent that satisfies California Title 22 requirements for unrestricted water reuse is recycled through landscape irrigation. An average 2.0 MGD, with peak summer flows approaching 3.0 MGD, is recycled. The tertiary filtration capacity of the LWRP was upgraded to approximately 10 MGD; however, the UV disinfection capacity is currently limited to 6 MGD.

6.5.2.3 Wastewater Generated Within City's Service Area

Table 6-4 summarizes the information on the collection of wastewater generated within the City's service area in 2015. This includes wastewater sent to the DSRSD WWTP and the LWRP.

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? (optional)
City of Pleasanton	Metered	5,102	DSRSD	DSRSD WWTP	Yes	No
City of Pleasanton (Ruby Hills Development)	Estimated	280	City of Livermore	LWRP	No	No
Total Wastewater Collected from Service Area in 2015:		5,382				

NOTES: Volumes are in AF.

DSRSD’s WWTP is located in the City of Pleasanton’s water service area. Therefore, Table 6-5 identifies the wastewater treated within the City’s service area in 2015 (which includes wastewater that originated from the City of Dublin, South San Ramon and the City of Pleasanton) and the recycled water received by the City of Pleasanton from the DSRSD RWTF. The LWRP is not located within the City’s service area and is therefore not included in Table 6-5. However, the City received approximately 59 AF of recycled water supplies from the LWRP in 2015.

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

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
DSRSD RWTP	LAVWMA and EBDA	Deepwater outfall to San Francisco Bay		Bay or estuary outfall	Yes	Tertiary	10,649	7,494	54	3,101
Total							10,649	7,494	54	3,101

NOTES: Volumes are in AF. DSRSD wastewater treated equals the total WWTP influent minus the WWTP reclaimed effluent. The Livermore Water Reclamation Plant is not located within the City’s service area, and therefore not included in this table. However, approximately 59 AF of the City’s 2015 recycled water supplies came from the LWRP.

6.5.3 Recycled Water System

In the early 1990’s, DSRSD, the City of Livermore, and Zone 7 undertook a Tri-Valley recycled water study and conducted a series of public workshops as a part of that process. As a result of that effort, the SWRCB issued a Master Water Recycling Permit (Order No. 93-159) to DSRSD, Livermore, and Zone 7 in December 1993. The permit established the requirements for recycled water irrigation, groundwater recharge, and other Title 22 approved projects.

Recycled water is tertiary-treated wastewater and is a very reliable supply; however, the use of recycled water was discouraged in the past due to the potential of salt buildup in the Main Basin. Zone 7’s SMP, developed in 2004, now provides tools and strategies for preventing salt buildup in the Main Basin. Zone 7 reviews DSRSD’s recycled water plans from two perspectives—water supply management and groundwater protection. At this time, Zone 7 is preparing to update its Groundwater Management Plan, which will also include an update of the SMP.

The City does not produce recycled water. It purchases tertiary, disinfected recycled water produced from DSRSD's RWTF, as well as from the Livermore WRP. These two recycled water sources are described below.

6.5.3.1 DSRSD/EBMUD Recycled Water Authority (DERWA) Source

Currently, wastewater from Dublin, Pleasanton and the southern portion of San Ramon are treated at DSRSD's wastewater treatment plant. A portion of the secondary effluent is routed to DSRSD's RWTF for tertiary treatment and distribution through the DERWA facilities. DSRSD coordinates with the planning departments in the cities of Dublin and San Ramon, Alameda and Contra Costa counties, and the U.S. Army Reserve to ensure that recycled water is used where it is available. DSRSD and EBMUD work together to manage recycled water supply demands.

Pleasanton and DSRSD each own 8.5 MGD of secondary treatment capacity at the DSRSD WWTP. Pleasanton maintains the first right to use the secondary effluent produced from wastewater emanating from the City's wastewater collection system for recycling. DSRSD maintains the first right to use secondary effluent produced from the DSRSD collection system for recycling. According to the 2003 DERWA Water Sales Agreement, all recycled water produced by DSRSD is delivered to DERWA for subsequent wheeling to the EBMUD and DSRSD water service areas. DSRSD tertiary treatment capacity is 9.7 MGD, while the anticipated maximum day DSRSD treatment capacity to service the DERWA program is 16.5 MGD. Recycled water is delivered by DERWA on a first come first-serve basis.

DSRSD monitors recycled water uses and files reports with regulatory agencies: the DPH and the San Francisco Bay RWQCB, in conformance with DSRSD's General Water Reuse Order No. 96-011 (General Order).

The DERWA recycled water system has three components owned by three different agencies:

- DERWA owns the Pump Stations R1 (at the WWTP), R200B, and R200A, as well as reservoirs R100 and R200.
- EBMUD owns and operates the recycled water distribution pipeline system contained within its service area, and will have two pump stations and a reservoir (future facilities).
- DSRSD owns and operates the recycled water treatment facilities at its wastewater treatment plant that treat wastewater from Dublin, South San Ramon and Pleasanton, and the recycled water distribution pipeline system within its service area, along with three pump stations, R300A, R300B, and R20, and two reservoirs, R20 and R300.

The City of Pleasanton connects to the DERWA system near the corner of the DSRSD Dedicated Land Disposal site adjacent to Stoneridge Drive near the DSRSD WWTP.

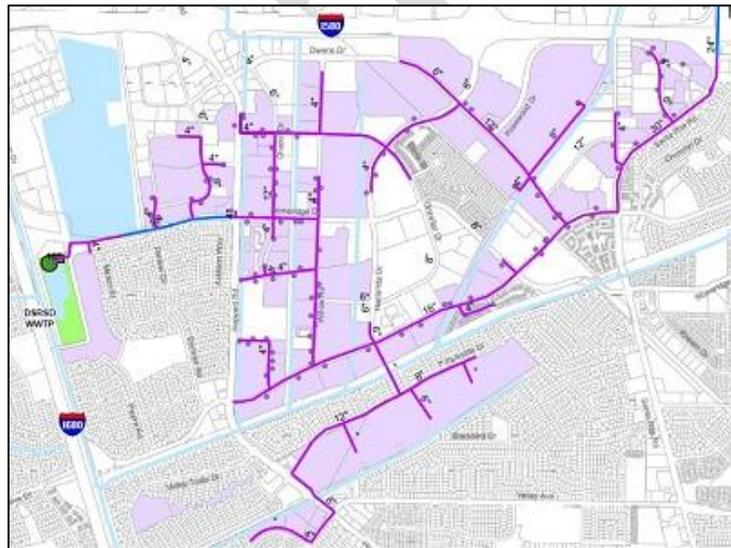
6.5.3.2 Livermore Water Reclamation Plant Source

The Livermore WRP can produce up to 6.0 MGD, which is approximately 18 AF per day of recycled water. In 2015, the LWRP produced 2,400 AF of recycled water with 2,300 AF used within the Livermore Municipal Service Area. In 2014, the City of Livermore implemented the Residential Recycled Water Program at no charge to the City of Livermore permittees to make it more convenient for Livermore and Cal Water customers to obtain up to 300 gallons of recycled water per visit. In 2014, Livermore provided 73 permittees approximately 1 AF of recycled water. In 2015, interest in the Residential Recycled Water Program increased more than 1,200 percent from the previous year resulting in Livermore providing 15 AF of recycled water to 898 permittees.

6.5.3.3 City's Recycled Water Project

In June of 2015, the SWRCB approved financing through the CWSRF and Proposition 1 Program Grant to support the City's Project.

Subsequent to the financing approval, Pleasanton began construction on the Project. The Project includes the construction of approximately 51,570 LF of new recycled water pipeline, ranging in diameter from 6-inches to 20-inches, and approximately 22,400 LF of existing potable pipeline being repurposed into the recycled water system. This recycled water infrastructure will



connect from the recycled water supplier, DSRSD's existing RWTF, to the City's existing 8 million gallon (MG) potable water reservoir; which, as part of this Project, will be converted into the recycled water storage facility. This Project will supply an estimated 1,800 AFA of recycled water to current and future irrigation customers, which include: City parks, schools, commercial property landscaping, streetscapes, and multi-family residential areas. This supply will offset potable water purchased from the City's potable water wholesaler, Zone 7 Water Agency (supplied mainly by SWP deliveries), and local groundwater supplies. Construction completion of the Project is established as October 31, 2016. The Project is projected to service a total of 94 permitted recycled water irrigation use sites (135 metered connections) once all customers have been connected to the system.

By the end of 2015, approximately 20 percent of the construction was completed. Additional customers have yet to be serviced along the new infrastructure. The City's certified cross-connection specialist is actively working with the future customers along this new infrastructure in preparation for conversion to the recycled water system. A copy of the City's 2015 Irrigation Season Recycled Water Use Annual Report is provided in Appendix I.

6.5.4 Recycled Water Beneficial Uses

There have been an increasing number of agencies that have moved to expand recycled water use within their service area to accomplish the following:

- Improve Water Supply Reliability;
- Preserve Potable Water Supplies; and
- Reduce Wastewater Discharges.

Currently (2015), the City permits use of recycled water for the following uses:

- Landscape irrigation to designated irrigation meters;
- Construction water, dust control, and surface washing; and
- Impoundments (fountains and other decorative water features).

In 2015, the City had a total of six permitted recycled water irrigation sites. No permits have been issued that include impoundments or surface washing. One new development project began utilizing recycled water for on-site construction dust control and soil compaction purposes.

The City's current recycled water users were originally serviced under the authority of DSRSD or Livermore's Order 96-011. In 2015, these customers used 104.5 AF of recycled water. In 2015, approximately 93 percent of the City's total recycled water use was for landscape irrigation, while the remaining 7 percent was used for dust control or soil compaction.

Table 6-6 summarizes the amount of recycled water being used in 2015 for each direct beneficial use, as well as projected future volumes and uses. Approximately 1,300 AF of the projected recycled water demands are estimated to place current potable landscape demands. The actual and projected recycled water uses do not include recycled water system losses.

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:		DSRSD & City of Livermore							
Name of Agency Operating the Recycled Water Distribution System:		City of Pleasanton							
Supplemental Water Added in 2015									
Source of 2015 Supplemental Water									
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)		Tertiary	97	1,679	1,679	1,679	1,679	1,679	
Golf course irrigation									
Commercial use									
Industrial use									
Geothermal and other energy production									
Seawater intrusion barrier									
Recreational impoundment									
Wetlands or wildlife habitat									
Groundwater recharge (IPR)*									
Surface water augmentation (IPR)*									
Direct potable reuse									
Other (Provide General Description)	Construction	Tertiary	7	121	121	121	121	121	
Total:			104	1,800	1,800	1,800	1,800	1,800	
<i>*IPR - Indirect Potable Reuse</i>									
NOTES: Volumes are in AF and recycled water system losses are not included. Projected demand totals were provided by the City and beneficial use breakdowns are based on 2015 ratio.									

The 2015 projected estimates of recycled water use from the City’s 2010 UWMP is compared to the actual 2015 recycled water use in Table 6-7.

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)	140	97
Golf course irrigation	0	0
Commercial use	0	0
Industrial use	0	0
Geothermal and other energy production	0	0
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	Construction	7
Total		140
Total		104
NOTES: Volumes are in AF.		

6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

Optimizing the use of recycled water is an important part of a reliable long-term irrigation supply for the City of Pleasanton. The City has the political support from City Council and City Management for implementing a robust recycled water program.

The major obstacle for existing customers is the cost of the connection fee and the cost to convert the existing system. This issue is of primary importance since the program’s success relies on existing customers converting to recycled water. The City has worked with Zone 7 and the other Tri-Valley Retailers to consider incentives for converting existing potable water connections to recycled water.

The City has set its recycled water rate at 90 percent of its potable water rate (see *Chapter 9 Demand Management Measures*). This financial incentive will likely provide adequate stimulus to encourage the use of recycled water over potable water to all irrigation customers within the recycled water service area. Additionally, the connection fee to service new irrigation accounts will be set considerably lower for recycled water than potable water. All City irrigation meters (services strictly landscape irrigation) within the recycled water distribution area will be converted to recycled water.

The final obstacle is operations and training of City staff to operate the recycled water system. The City currently has sufficient staff to develop and operate a recycled system. Furthermore, the City intends to convert as many of the 42 City parks to recycled water as feasible to jump-start the program.

The City’s on-going actions to encourage the use of recycled water are summarized in Table 6-8.

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

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Financial incentives	Price recycled water at reduced potable rates; Reduced connection fees for new recycled water meters	2015	1,679
Building code modification	All City landscape irrigation meters will be converted to recycled water	2015	0
Total			1,679
NOTES: Volumes are in AF. The expected increase in recycled water for all actions is included in the "Financial incentives" total.			

6.6 DESALINATED WATER OPPORTUNITIES

Independently, the City of Pleasanton does not consider the development of a desalinated water system as a source of water within the planning horizon due to feasibility; this includes ocean water, brackish water, and groundwater desalination (as specified in Section 4.3, Zone 7 manages the groundwater basin).

However, desalination has been identified as a potentially viable additional source of water for several Bay Area water suppliers including the Zone 7 Water Agency. The Contra Costa Water District, EBMUD, SFPUC, Santa Clara Valley Water District, and Zone 7 Water Agency have studied the feasibility of constructing a seawater/brackish water desalination plant, known as the Bay Area Regional Desalination Project (BARDP).

The concept of the BARDP is locate a 10 to 20 MGD desalination treatment facility in eastern Contra Costa County to turn brackish water into a reliable, drought-proof drinking water supply. As is currently envisioned, the desalination facility would operate in all year types, serving the needs of the SFPUC and Zone 7 and banking the excess production for the agencies' dry year needs. Brine discharged from the plant would be blended with effluent from one or more nearby wastewater treatment plants to stay within ambient water quality, mimicking the current water conditions as closely as possible.

The project concept relies on available capacity in an extensive network of existing pipelines and interties that already connect the agencies, as well as existing wastewater outfalls and pump stations in the region. The only new infrastructure envisioned for the project would be a treatment plant and connections to the network of interconnections that would already be in place. Once treated, water could be delivered through either EBMUD or CCWD's conveyance systems via transfers to other partner agencies. Storage at Los Vaqueros Reservoir may also be available to project partners to better serve the needs of the participating agencies, particularly during dry years.

Among other benefits, desalinated water could provide a drought-resistant supply to Zone 7 and increases system reliability by diversifying Zone 7's water supply portfolio. The most likely scenario is that water would be wheeled through EBMUD's distribution system; Zone 7 would receive treated water at a proposed intertie in the western part of its service area. Additional discussion on the BARDP is provided below in Section 6.8.2.

6.7 EXCHANGES OR TRANSFERS

The City currently does not have any potable water transfer agreements, nor does the City anticipate participating directly in any such transfer opportunities in the future.

Zone 7's existing water transfer supply sources and non-local storage options are discussed in detail in Chapter 6 of Zone 7's 2015 UWMP. Zone 7's transferred water supply is based on the BBID long-term water transfer contract and is described in Zone 7's 2015 UWMP.

In its 2011 WSE, Zone 7 considered water transfer opportunities as part of its potential water supply options. One opportunity is a long-term or permanent transfer of non-SWP water. Zone 7 is investigating possible opportunities for permanent water transfers or long-term leases from a non-SWP contractor. This transaction would be similar to the contract Zone 7 holds with the BBID, which is a 20-year contract, renewable every five years up to a total of 30 years. However, unlike the water from the BBID contract, which is delivered through the SBA, Zone 7 would seek water that can be delivered via a new intertie with another major water agency. This would have the added benefit of diversifying Zone 7's portfolio.

Zone 7 is working with other water agencies in the San Francisco Bay Area to review the potential for purchasing long-term water transfers that could be wheeled to Zone 7 without using the Delta. Such water transfers would not only increase Zone 7’s water supply but also diversify its water supply portfolio, thereby increasing overall system reliability.

The BARDP (discussed in Section 6.6 above) could also potentially involve a long-term water transfer to Zone 7 of as much as 5,600 AFA, available under all hydrologic conditions, or only during normal/wet years. This water transfer would also likely involve wheeling through EBMUD’s system via a new intertie. Additional information on this potential project is provided in Section 6.8.2 below.

6.8 FUTURE WATER PROJECTS

The City itself does not have any plans for new potable water supply projects, as shown in Table 6-9. However, Zone 7 has identified potential programs and projects to increase Zone 7’s water supply. Zone 7’s potential future program and projects are described in Zone 7’s WSE Update and 2015 UWMP and are summarized below.

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

<input checked="" type="checkbox"/>	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.				
<input type="checkbox"/>	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.				
	Provide page location of narrative in the UWMP				
Name of Future Projects or Programs	Joint Project with other agencies?	Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
NOTES: By contract with Zone 7, the City may not pursue opportunities for development of future water supply projects.					

As described in Section 6.1.2.1, Zone 7’s imported water supplies have decreased in reliability over the years as SWP reliability has declined. Furthermore, Zone 7 expects continued growth in population. Zone 7’s WSE Update evaluated water supply alternatives or potential future water supply projects that could be used to make up for the decreased reliability from existing supplies and meet demands from growth. These alternatives are described below. Zone 7 expects that a portfolio of these alternatives will be needed to meet future supply shortfalls. The projects that had at least 1,000 AF of supply, did not require end user compliance and enforcement, had active partnerships (e.g., Bay Area Regional Desalination), or helped address changed conditions (e.g., Los Vaqueros Storage) included the following:

- California WaterFix (i.e., formerly Bay Delta Conservation Plan (BDCP)/Delta Fix);
- Potable Reuse Options; and
- Desalination.

Each of these water supply options are described further below.

Zone 7's WSE Update identifies a list of new facilities or projects that would help reduce the risk of water supply shortages during droughts, Delta outages due to earthquakes or salinity, and emergency conditions (e.g., temporary loss of the SBA or unplanned water treatment plant shutdowns). These potential risk reduction facilities include the following:

- Reliability intertie with another major water agency (e.g. EBMUD or San Francisco Public Utilities Company (SFPUC));
- COL pipeline (from Cope Lake to the Del Valle Water Treatment Plant);
- Los Vaqueros Emergency/Drought Storage; and
- Well Master Plan Wells.

These facilities and projects do not change water supply, but help provide flexibility and leverage existing and/or planned water supplies to improve reliability in certain scenarios.

6.8.1 California WaterFix

The California WaterFix is a project proposed by DWR and the United States Bureau of Reclamation (USBR) that would create a dual conveyance system in the Delta, including new intakes in the northern Delta. The California WaterFix would be one of the most complex projects ever undertaken by the State of California, and much work remains before it can be fully defined and implemented. A public review and comment period on the updated draft environmental documents for California WaterFix began on July 10, 2015 and ended on October 30, 2015. DWR and USBR are proceeding with the finalization of the environmental documents, coordination with fish agencies, work with the SWRCB on a petition for a new point of diversion, and preliminary design. The most recent estimate for completion of the California WaterFix is 2028. The latest modeling indicates that the project can restore SWP reliability from the current average allocation of 62 percent to an average allocation of 72 percent resulting in restoration of an average of 8,000 AFA of SWP supply for Zone 7 once the project is in place. More details on the California WaterFix and updates on the current status can be accessed at: <http://www.californiawaterfix.com>.

6.8.2 Desalination

In addition to the groundwater desalination or demineralization already being practiced by Zone 7, the potential for desalination of brackish water from Suisun Bay is also being considered by Zone 7. As discussed in Section 6.6 above, the BARDP is a joint venture among Zone 7 and four other Bay Area water Agencies (CCWD, EBMUD, SFPUC, and Santa Clara Valley Water District). BARDP could provide participating agencies with a combined yield of 22,400 AFA (20 MGD) of new water supply and Zone 7 could potentially receive 5,600 AFA (5 MGD). There are two alternatives for the conveyance of this new water supply to Zone 7: via a new intertie with EBMUD or through the SBA via an exchange of Central Valley Project Water with CCWD. If agencies decide to pursue the BARDP, the next steps would include environmental review and permitting, and preliminary design. Zone 7 estimates that the earliest in-service year for the BARDP is 2022 under an expedited schedule. More information on the BARDP and updates on the current status can be accessed at: <http://www.regionaldesal.com/index.php>.

6.8.3 Potable Reuse Options

Recycled water has been used within the Livermore-Amador Valley as a source of irrigation water for parks, schools, medians, and other types of landscapes for many years. The supply is generated through tertiary treatment of local wastewater and conveyed through a separate “purple pipe” system that delivers it to each customer. These purple pipe systems, however, do not leverage existing infrastructure because they are entirely separate from existing potable water systems. Furthermore, these systems must be designed to meet irrigation needs, which typically peak in the summer and are near zero in winter months, which increases operation and maintenance costs.

Advanced Treatment Recycled Water (i.e., potable reuse) avoids many of the pitfalls associated with purple pipe systems because it leverages existing infrastructure, can be implemented in much shorter time frames, and can meet a larger portion of water demands (e.g., winter indoor water use). The use of purified recycled water as a future potable water supply (“potable reuse”) is currently under consideration by Zone 7. Three potential Indirect Potable Reuse projects for the Tri-Valley area were identified in Zone 7’s WSE Update and may provide 4,800 to 7,120 AFA. These include the following:

- Pond percolation via Lake I recharge using purified water from Livermore;
- Groundwater injection with purified water from Livermore; and
- Pond percolation and groundwater injection using purified water from a regional wastewater plant located at DSRSD’s existing reclamation plant.

The five potential Direct Potable Reuse (DPR) projects for the Tri-Valley area were identified in the WSE Update and may provide 5,370 to 7,770 AFA. These include the following:

- Sending purified water from Livermore to the Patterson Pass Water Treatment Plant raw water reservoir;
- Sending purified water from Livermore to Del Valle Water Treatment Plant via Cope Lake;
- Sending purified water from a regional plant located at DSRSD’s existing reclamation plant to Del Valle Water Treatment Plant via Cope Lake;
- Sending purified water from Livermore directly to Zone 7’s transmission system; and
- Sending purified water from a regional plant located at DSRSD’s existing reclamation plant to Zone 7’s transmission system.

In 2016, the Tri-Valley water retailers and Zone 7 will be conducting a regional potable reuse feasibility study to further evaluate potable reuse options. This study was a recommendation of the Tri-Valley Water Reliability Policy Roundtable, made up of policy makers from each of the Tri-Valley agencies.

6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

Table 6-10 summarizes the actual water supplies for the City.

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)
Purchased or Imported Water	Zone 7	7,726	Drinking Water	
Groundwater	Livermore Valley Basin	3,629	Drinking Water	
Recycled Water	DSRSD RWTF and City of Livermore WRP	104	Recycled Water	
Total		11,459		0

NOTES: Volumes are in AF.

Table 6-11 summarizes the future projected water supplies for the City.

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

Water Supply	Additional Detail on Water Supply	Projected Water Supply <i>Report To the Extent Practicable</i>									
		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)
Purchased or Imported Water	Zone 7	12,442		13,200		14,005		14,867		15,764	
Groundwater	Livermore Valley Basin	3,500		3,500		3,500		3,500		3,500	
Recycled Water	DSRSD RWTF and City of Livermore WRP	1,800		1,800		1,800		1,800		1,800	
Total		17,742	0	18,500	0	19,305	0	20,167	0	21,064	0

NOTES: Volumes are in AF.

6.10 CLIMATE CHANGE IMPACTS TO SUPPLY

There are concerns that a warming trend that occurred during the latter part of the 20th century will likely continue through the 21st century. These changes may have a direct effect on water resources in California. Numerous studies have been conducted in an attempt to determine the potential impacts to water resources. Based on these studies, climate change could result in the following types of water resource impacts to California:

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

As described above, the SWP has been and will continue to be the largest source of Zone 7's, and hence the City's, water supplies. In 2020, for example, the supplies derived from the SWP (existing SWP supplies, groundwater (stored SWP supplies), and SWP carryover) are projected to represent nearly 90 percent of Zone 7's supplies.

The following provides a summary of the potential impacts of climate change to water supply operations in the Delta, as they relate to water supply reliability, water quality and flood control:

- **Water Supply Reliability**
 - The operation of storage reservoirs could be impacted by shifting runoff and snowmelt patterns, requiring a greater volume of flood control storage, and making it more difficult to refill reservoir flood control storage during late spring or early summer, and potentially reducing the volume of surface water available for use during the summer/fall season.
 - Levee breaks, either as a result of the impacts of rising sea levels, lack of maintenance, earthquake, or some combination, could have adverse effects on Delta water quality (due to the intrusion of salt water into these potable water supplies) and water system operations. Major levee breaks could take months or years to repair, and will impact the availability of water supplies from the Delta.

- Water Quality
 - More intense storms and increased runoff could impact Delta water quality in two ways: 1) Increased sediment load, and 2) Increased contaminants from increased urban and agricultural runoff.
 - Sea level rise could push salt water from the Bay into the Delta, impacting overall water quality and potentially impacting Delta operations.
 - Levee breaks, either as a result of the impacts of climate change or an earthquake, could cause large amounts of salt water from the Bay to enter the Delta and would have adverse effects on Delta water quality and water system operations. The saltwater intrusion could take months to dissipate depending on the severity of the levee break and the amount of saltwater intrusion which occurs.
- Flood Control
 - Reservoir operations, including the need for more flood storage reservoir space, could be impacted by snowpack changes, shifts in snowmelt patterns and changes in rainfall intensity.
 - Deteriorating levees could fail as a result of increased runoff, more intense storms, sea level rise, or lack of maintenance. Failure of the levees would have catastrophic impacts on the Delta, including its islands and have huge impacts on water supply operations.

Climate change may also impact Zone 7's other operations. Specifically, with respect to groundwater management, the SMP, groundwater recharge operations and COL operations may be impacted by changes in precipitation patterns and intensities. Similarly, operation of Lake Del Valle could be impacted by the need to maintain more flood control storage capacity to deal with more intense rainfall events. Lastly, flood control operations in general may be impacted by more intense and more frequent flooding events.

The scenarios in the 2015 SWP Delivery Capability Report that were used for the Zone 7 2015 UWMP account for climate change impacts based on 2025 emissions levels and 15 centimeter sea level rise, therefore, these impacts have been incorporated into Zone 7's water supply planning efforts. Zone 7 has also evaluated the impacts of climate change to local water supplies and documented those evaluations in the WSE Update.

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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 implemented, or planned to be implemented, water management tools for increasing the reliability of water supplies are also addressed.

The reliability of the City's potable water supply is subject to its water supply contract with Zone 7 and Zone 7's water supply reliability policy. On October 17, 2012, the Zone 7 Board of Directors approved a revised Water Supply Reliability Policy (Resolution No. 13-4230, included as Appendix J), which adopts the following level of service goals to guide the management of Zone 7's treated water supplies as well as its Capital Improvement Program (CIP):

- **Goal 1:** Zone 7 will meet its treated water customers' water supply needs, in accordance with Zone 7's most current Contracts for M&I Water Supply, including existing and projected demands as specified in Zone 7's most recent UWMP, during normal, average, and drought conditions, as follows:
 - At least 85 percent of M&I water demands 99 percent of the time
 - 100 percent of M&I water demands 90 percent of the time
- **Goal 2:** Provide sufficient treated water production capacity and infrastructure to meet at least 80 percent of the maximum month M&I contractual demands should any one of Zone 7's major supply, production, or transmission facilities experience an extended unplanned outage of at least one week.

The City's potable water supply reliability and vulnerability is directly related to seasonal and climatic shortage that impact Zone 7's water supplies. Approximately 85 percent of Zone 7's water supply comes from surface water, which is subject to legal and environmental issues surrounding the San Francisco Bay Delta. Water deliveries from the SWP have been reduced.

7.1 WATER QUALITY CONSTRAINTS

All of the City's water sources receive full treatment in accordance with Federal and State standards. Each year the City reports water quality test results to its customers through its Annual Water Quality Report. The report includes source water assessments from the imported surface water from the SWP, local rain runoff stored in the Del Valle Reservoir, and groundwater from the City's groundwater wells.

Approximately 80 percent of the City's water is purchased from Zone 7 and is comprised of treated surface water blended with some local groundwater. The remaining 20 percent comes from local groundwater pumped from wells owned and operated by the City. SWP water supplies originate as Sierra Nevada snowmelt and is conveyed from the Lake Oroville through the Feather River, Sacramento River, and into the Bay-Delta. Water quality is a big issue for surface water supplies that travel through the Sacramento and San Joaquin watersheds and Delta. Wastewater plant discharges, urban runoff, recreational activities, and conversions of agricultural Delta islands to wetlands were found to be key vulnerabilities and sources of contaminants for these watersheds. When SWP allocations are restricted, such as during the current drought, a greater proportion of the City's water comes from local sources, including local surface water supplies and groundwater.

The groundwater supply from the Livermore-Amador Valley Main Basin is generally consistent in mineral quality, whereas the surface water supply can see large deviations in quality due to factors such as high and low surface water runoff and algae blooms.

Overall, the City's water supply reliability is not significantly impacted by water quality issues. However, the City is interested in potable water quality parameters related to aesthetic issues, such as taste, odor and hardness. Taste and odor can come from minerals in the water, but is generally associated with algae blooms in surface water supplies. Hardness and a salty or bitter taste are generally associated with minerals in the groundwater.

Water quality issues in the City's service area are described in further detail below.

7.1.1 Potable Water Supply from Zone 7

The treated potable water that the City receives from Zone 7 is blended from various sources. It meets all Federal and State drinking water requirements. The quality of water delivered to the City depends on the blend of supplies available to Zone 7. This section discusses the constraints on water supply sources that affect water reliability and Zone 7's strategies for managing the risks associated with each supply.

7.1.1.1 Imported Water: State Water Project

Imported surface water from the SWP is by far Zone 7's largest water source, providing over 80 percent of the treated water supplied to retail customers. Much of this imported surface water is derived from the Feather River watershed, in the northern part of California, and ultimately flows through the Delta before it is conveyed by the California Aqueduct and the SBA to Zone 7's water facilities. Zone 7's other imported surface water supply, BBID, is also linked to the Delta: BBID diverts water from the Delta and provides water to Zone 7 via the SBA.

The instability of the aging levees in the Delta (including their vulnerability to seismic events and climate change), regulatory uncertainty, water quality issues including saltwater intrusion, and the declining health of the Delta ecosystem all challenge the long-term reliability of the SWP and, more generally, the water conveyance capability of the Delta.

There are some important water quality considerations associated with the water that is conveyed through the Delta. In 1982, DWR formed the Interagency Delta Health Aspects Monitoring Program to monitor water quality in the Delta for human health protection. The program was renamed the Municipal Water Quality Investigations Program (MWQI Program) in 1990. From a municipal water supply perspective, water quality issues in the Delta are associated with salinity from seawater intrusion; wastewater effluent discharges; agricultural drainages from the islands; and recreational activities. Water quality issues of specific concern to Zone 7 include the following:

- *Algal byproducts* – Parameters of concern include components that cause taste-and-odor (T&O) and algal toxins. T&O is primarily a problem in the warmer months, when algal blooms may be present. It can affect supplies from the Delta and from Lake Del Valle. Algae produce geosmin and 2-methylisoborneol (MIB), which are key taste and odor-causing compounds in surface water supply. Zone 7 currently

treats T&O using powdered activated carbon (PAC), which is of limited effectiveness under high levels of algal byproducts. Adding ozonation, which is a more effective treatment process, is in Zone 7's CIP, see below. A switch to groundwater supplies may be necessary under high levels of algal byproducts in surface water.

- *Total and Dissolved Organic Carbon (TOC/DOC)* – Levels of organic carbon affect the amounts of coagulant and disinfectant chemicals used at Zone 7's water treatment plants (WTPs), and therefore result in higher costs. In addition, the formation of disinfectant byproducts is dependent upon the amount of TOC/DOC. High levels of TOC/DOC affect the production capacities of Zone 7's WTPs, requiring increased groundwater production under high demands and high TOC/DOC.
- *Turbidity* – Like TOC/DOC, turbidity affects the amounts of chemicals used at the WTPs and Zone 7's ability to meet drinking water standards. It also can affect the production capacities of Zone 7's WTPs, requiring increased groundwater production under high demands. Planned ozone facilities can help address this issue and reduce impacts on WTP production.
- *Salinity or Total Dissolved Solids (TDS)* – Salinity is a water quality parameter that has significant impacts on SWP operations and the availability of water. To meet the salinity objectives in the Delta, water exports from the Delta may be restricted, reducing the amount of water supply available during certain times of the year.
- *Algal Blooms* – In addition to T&O and the threat of algal toxins, algal blooms can significantly impact the performance of the filters through clogging, reducing plant production capacities, and requiring additional groundwater use.

Zone 7 plans to install ozonation facilities at DVWTP in 2019 and at PPWTP in 2030. These facilities will provide improved treatment of T&O, TOC/DOC, turbidity, and algal blooms. The facilities are expected to result in more reliable production capacities from the surface water treatment plants.

To protect water quality once the water from the Delta reaches the SBA, recipients of water from the SBA (ACWD, Santa Clara Valley Water District, and Zone 7, known collectively as the SBA Contractors) developed the SBA Watershed Protection Program Plan in 2008. The SBA Watershed Protection Program Plan is designed to protect the SBA system, including Lake Del Valle and Bethany Reservoir, from identified potential contaminant sources (e.g., septic tanks) for urban water supply purposes, as well as agricultural, recreational, and environmental uses.

7.1.1.2 [Local Storage](#)

Zone 7 has three options for local storage: storage in Lake Del Valle, storage in the Main Basin and, in the future, surface storage in the COL. The COL will also be used for groundwater recharge.

The Main Basin is characterized by relatively good quality groundwater that meets all state and federal drinking water standards. Groundwater is chloraminated to maintain consistent disinfectant residual in the distribution system and to preserve delivered water quality. However, there has been a slow degradation of groundwater quality as evidenced by rising TDS and hardness levels over the last few decades. To address this problem, Zone 7 developed a SMP, which was approved

by the RWQCB in 2004. As part of this SMP, Zone 7 completed construction of a wellhead demineralization facility in 2009.

The key constraint on the use of the COL for storage is the duration of the mining activities, which affects when the remainder of the COL will be transferred to Zone 7 ownership and how much storage is available over time. According to Zone 7's WSE Update, Lake H is anticipated to be available in the next few years; however, the availability of Lakes A through G may extend well beyond 2030, and may be as late as 2060. Zone 7 continues to work closely with mining companies and quarry operators so planning efforts can be coordinated.

7.1.1.3 Non-Local Storage

In addition to local storage, Zone 7 also has storage contracts with two non-local groundwater-banking districts in Kern County: Semitropic and Cawelo. There must be sufficient water flowing through the Delta to facilitate these exchanges, which could be a challenging condition to meet during a drought.

During the recent drought, access to banked water became uncertain because of the historically low Table A allocation, leading to minimal amounts of water moving through the SWP, and the potential cessation of pumping in the Delta to control salinity intrusion. Ultimately, DWR was able to manage salinity so that pumping in the Delta could continue, and with coordination among Zone 7, other SWP contractors, DWR, and banking partners, DWR prioritized the delivery of banked water to Zone 7 and other SBA contractors. Even during the serious drought conditions of 2014 and the minimal 5 percent SWP allocation, Zone 7 was able to successfully recover almost 15,000 AF, or approximately 78 percent of the maximum recovery requested by Zone 7. In 2015, Zone 7 anticipates recovering approximately 18,500 AF from storage. Zone 7 will continue to coordinate closely with DWR, other SWP contractors, Semitropic, and Cawelo to ensure the future reliability of the banked water supplies.

Some of Semitropic's wells are affected by arsenic. This is currently being managed through treatment before the affected groundwater water is pumped into the California Aqueduct. Arsenic criteria have been established for this "pump-in" by the DWR Facilitation Group to mitigate any impacts to the downstream SWP contractors. Semitropic and the banking partners have developed a coordination process for discussing arsenic treatment. While the presence of arsenic in the Semitropic groundwater bank is likely to increase the cost of this water storage option, it is not likely to affect its overall reliability.

7.1.2 Groundwater Supply

The Main Basin is characterized by relatively good quality groundwater that meets all state and federal drinking water standards. Groundwater is chloraminated to maintain consistent disinfectant residual in the distribution system and to preserve delivered water quality. However, there has been a slow degradation of groundwater quality as evidenced by rising TDS and hardness levels over the last few decades. To address this problem, Zone 7 developed a SMP, which was approved by the RWQCB in 2004.

As described in Section 6.2.2 (Groundwater Management), the City has a GPQ of 3,500 AFA from the Main Basin, which comprises approximately 20 percent of its water supply. The City may also carry over any unused portion of its annual GPQ up to a total of 700 AF. GPQ's for the Main Basin were determined based on the natural sustainable yield of the Main Basin. As such, the City's groundwater supply from its GPQ is considered reliable under all hydrologic conditions.

7.1.3 Recycled Water

The recycled water that the City receives comes from DSRSD's RWTF and Livermore's WRP, which are described in Section 6.5 (Wastewater and Recycled Water). Wastewater effluent from DSRSD's regional wastewater treatment plant is treated to produce Title 22 disinfected tertiary recycled water. The City anticipates no significant changes to the land uses in DSRSD's wastewater service area; therefore, it does not anticipate any changes to the quality of the wastewater effluent that it treats to recycled water quality. Therefore, the City does not expect recycled water quality issues to impact its ability to reliably deliver recycled water to its customers.

7.2 SUPPLY RELIABILITY BY TYPE OF YEAR

In this section, the various supplies of water available to the City through Zone 7 and DSRSD's RWTF are addressed, along with their respective reliability in a normal water year, a single dry year, and multiple dry years. The base years vary for each Zone 7 source, depending on its watershed. Since the City's potable water supply reliability is directly related to Zone 7, much of the information below has been excerpted from Zone 7's 2015 UWMP.

7.2.1 Zone 7 Water Supply Evaluation

In early January 2014, Zone 7's Board of Directors learned that all pumping from the Delta could be stopped due to severe, persistent, and record drought conditions. California Governor, Jerry Brown, declared a Drought State of Emergency on January 17, 2014, and requested voluntary conservation of 20 percent. For the first time in its history, Zone 7 was facing a potential water supply crisis. Consequently, Zone 7's Board of Directors declared a local drought state of emergency on January 29, 2014, and requested that the local water supply retailers and untreated customers reduce their water use by 25 percent under Stage 2 Actions defined in its 2010 UWMP. Governor Brown subsequently mandated water use reductions in April 2015. Through an amazing effort by the entire Livermore-Amador Valley, Zone 7 saw a 28.6 percent reduction in total water demand (treated and untreated) in 2014, and a 40 percent reduction in total water demand through November 2015.

As described in *Chapter 6 System Supplies*, Zone 7's imported water supplies have decreased in reliability over the years as SWP reliability has declined. Furthermore, Zone 7 expects continued growth in population. Zone 7's WSE Update includes updated and more conservative assumptions for SWP allocations, revised key assumptions for existing supplies from BBID and capacity of its Kern County groundwater banking programs, and evaluated a complete loss of the Delta due to earthquake or water quality. This evaluation also incorporated potential delays in transferring ownership of the COL to Zone 7 and for the first time, included an analysis of local climate change.

As described in *Chapter 6 System Supplies*, Zone 7 currently relies on incoming surface water supplies from contracts and local water rights, previously stored surface water in the local groundwater basin, and two non-local groundwater banking programs to meet its demands. Zone 7's WSE Update evaluated water supply alternatives or potential future water supply projects that could be used to make up for the decreased reliability from existing supplies and meet demands from growth (see Section 6.8). Zone 7 expects that a portfolio of these future alternatives will be needed to meet future supply shortfalls.

Using the WSE Update, Zone 7 staff compared projected water supplies during normal, single dry, and multiple dry water years with its customers' demand scenarios. With existing and planned future water supplies, Zone 7 does not anticipate any difficulty in meeting projected water demands under normal conditions, single dry years, and multiple-dry years. The results of the Zone 7 projected water supply analysis are in Chapter 7 of Zone 7's 2015 UWMP.

7.2.2 Basis of Water Year

The quantity of supply available from different water supply sources can vary from one year to the next depending on hydrologic conditions. Historical data, where available, were therefore used to develop a projected yield for each water supply source under three conditions: (1) normal water year, (2) single dry year, and (3) multiple dry years. In accordance with DWR's 2015 UWMP Guidebook, each condition was defined as follows:

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

The City's potable water supply reliability and vulnerability is directly related to seasonal and climatic shortage that impact Zone 7's water supplies. Therefore, Zone 7's water supply reliability is used to represent the City's available supplies during the historic average, single driest year, and driest multi-year period. The projected yield of Zone 7's water sources under these three scenarios, as reported in Zone 7's 2015 UWMP, are discussed below.

DWR Table 7-1 is not compatible with Zone 7's bases of water year data because different water sources have different base years and volumes. As referred to in Table 7-1, Zone 7's bases of water year data are shown in Tables 7-2 and 7-3.

Table 7-1. Retail: Basis of Water Year Data (DWR Table 7-1)

Year Type	Base Year <i>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</i>	Available Supplies if Year Type Repeats	
		<input checked="" type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location: <u>Table 7-2, Table 7-3</u>
		<input type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year			100%

Table 7-2 lists the years that Zone 7 identifies as their historical average, single driest year, and driest multi-year period, also known as the “Base Years.” Table 7-3 summarizes the volume of water supply expected by source and the total percentage of water supply expected if there were to be a repeat of the hydrology of that type of year. The water year basis varies depending on the water source; explanatory details are included in Section 7.2 of Zone 7’s 2015 UWMP, along with historical percentages of normal delivery.

Table 7-2. Basis of Water Year Data for Various Zone 7 Water Supplies

Water Source	Average Year	Single Dry Year	Multiple-Dry Year		
			Year 1	Year 2	Year 3
Arroyo del Valle	1919	1977	1988	1989	1990
SWP - Table A	1964	2014	1990	1991	1992
SWP - Carryover	1964	2014	1990	1991	1992
SWP - Yuba Accord	1964	2014	1990	1991	1992
BBID	1964	2015	1990	1991	1992
From Storage					
Main Basin	1964	2014	1990	1991	1992
Semitropic	1964	2014	1990	1991	1992
Cawelo	1964	2014	1990	1991	1992

Source: Zone 7 2015 UWMP, Tables 7-1 through 7-8

Table 7-3. Zone 7's Water Supply Reliability, AFA

Water Source	Average Year	Single Dry Year	Multiple-Dry Year		
			Year 1	Year 2	Year 3
Arroyo del Valle	7,300-10,300	0	350	520	150
SWP - Table A	50,000	4,000	21,800	12,900	19,300
SWP - Carryover	10,000	10,000	10,000	10,000	10,000
SWP - Yuba Accord	145	676	676	676	676
BBID	2,000	0	2,000	2,000	2,000
From Storage					
Main Basin	9,200	28,000-34,400	12,400	16,100	13,500
Semitropic	0	7,200	10,400	9,100	9,100
Cawelo	0	7,800	10,000	10,000	10,000
Total	78,645	57,676	67,626	61,296	64,726
Percent of Average Supply		73.3%	86.0%	77.9%	82.3%

Source: Zone 7 2015 UWMP, Table 7-11

7.3 SUPPLY AND DEMAND ASSESSMENT

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

7.3.1 Normal Year

As described in *Chapter 6 System Supplies*, the City's Normal Year supplies are anticipated to be as follows:

- Purchased supplies from Zone 7 are assumed to provide 100 percent of the City's potable water demand;
- About 3,500 AFA of local groundwater from the Livermore Valley Basin; and
- About 1,800 AFA of recycled water.

As described in Chapter 4, the City's Normal Year demands have been projected based on the City's revised SB X7-7 per capita water use target of 197 GPCD for 2020 and subsequent years.

As shown in Table 7-4, the City’s Normal Year supplies are adequate to meet projected Normal Year demands.

Table 7-4. Retail: Normal Year Supply and Demand Comparison (DWR Table 7-2)

	2020	2025	2030	2035	2040 (Opt)
Supply totals (autofill from Table 6-9)	17,742	18,500	19,305	20,167	21,064
Demand totals (autofill from Table 4-3)	17,742	18,500	19,305	20,167	21,064
Difference	0	0	0	0	0

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

7.3.2 Single Dry Year

Purchased supplies from Zone 7 in Single Dry Years are assumed to be 75 percent of Normal Year supplies. The City’s Single Dry Year local groundwater and recycled water supplies are assumed to be the same as Normal Year supplies. The City’s Single Dry Year supplies are summarized in Table 7-5.

Table 7-5. Single Dry Year Supplies, AFA

	2020	2025	2030	2035	2040
Zone 7 Supplies	9,332	9,900	10,504	11,150	11,823
Groundwater Supplies	3,500	3,500	3,500	3,500	3,500
Recycled Water Supplies	1,800	1,800	1,800	1,800	1,800
Total Supply	14,632	15,200	15,804	16,450	17,123

The City’s Single Dry Year potable water demands are assumed to be approximately 80 percent of Normal Year demands (20 percent reduction in water use). It is assumed that the City would implement demand reduction measures as appropriate to reduce demands as necessary. Recycled water demands are assumed to be the same as Normal Year demands. The City’s Single Dry Year demands are summarized in Table 7-6.

Table 7-6. Single Dry Year Demands, AFA

	2020	2025	2030	2035	2040
Potable Demands	12,832	13,400	14,004	14,650	15,323
Recycled Water Demands	1,800	1,800	1,800	1,800	1,800
Total Demand	14,632	15,200	15,804	16,450	17,123

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

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

	2020	2025	2030	2035	2040 (Opt)
Supply totals	14,632	15,200	15,804	16,450	17,123
Demand totals	14,632	15,200	15,804	16,450	17,123
Difference	0	0	0	0	0

NOTES: Volumes are in AF.

7.3.3 Multiple Dry Year

Purchased supplies from Zone 7 in Multiple Dry Years are assumed to be 85 percent of Normal Year supplies. The City’s Multiple Dry Year local groundwater and recycled water supplies for the first, second, and third years are assumed to be the same as Normal Year supplies. The City’s Multiple Dry Year supplies are summarized in Table 7-8.

Table 7-8. Multiple Dry Year Supplies, AFA

	2020	2025	2030	2035	2040
Zone 7 Supplies	10,576	11,220	11,904	12,637	13,399
Groundwater Supplies	3,500	3,500	3,500	3,500	3,500
Recycled Water Supplies	1,800	1,800	1,800	1,800	1,800
Total Supply	15,876	16,520	17,204	17,937	18,699

The City’s Multiple Dry Year potable water demands are assumed to be approximately 88 percent of Normal Year demands (12 percent reduction in water use). It is assumed that the City would implement demand reduction measures as appropriate to reduce demands as necessary. Recycled water demands are assumed to be the same as Normal Year demands. The City’s Multiple Dry Year demands are summarized in Table 7-9.

Table 7-9. Multiple Dry Year Demands, AFA

	2020	2025	2030	2035	2040
Potable Demands	14,076	14,720	15,404	16,137	16,899
Recycled Water Demands	1,800	1,800	1,800	1,800	1,800
Total Demand	15,876	16,520	17,204	17,937	18,699

As shown in Table 7-10, the City’s Multiple Dry Year supplies are adequate to meet projected Multiple Dry Year demands.

Table 7-10. Retail: Multiple Dry Years Supply and Demand Comparison (DWR Table 7-4)

		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	15,876	16,520	17,204	17,937	18,699
	Demand totals	15,876	16,520	17,204	17,937	18,699
	Difference	0	0	0	0	0
Second year	Supply totals	15,876	16,520	17,204	17,937	18,699
	Demand totals	15,876	16,520	17,204	17,937	18,699
	Difference	0	0	0	0	0
Third year	Supply totals	15,876	16,520	17,204	17,937	18,699
	Demand totals	15,876	16,520	17,204	17,937	18,699
	Difference	0	0	0	0	0

NOTES: Volumes are in AF.

7.4 REGIONAL SUPPLY RELIABILITY

The City’s potable water supply is from Zone 7, which contracts with a number of agencies for its water supplies and storage. The City’s recycled water supply is treated at DSRSD’s RWTF and the City of Livermore’s WRP. The City’s supply sources are affected by limitations related to legal, environmental, water quality, and/or climatic issues. The City’s recycled water supply is also limited by water rights issues, treatment facilities capacity, and storage capacity.

Maximizing water supply resources and minimizing dependence on imported water is an on-going priority for the City. Zone 7’s primary water source is imported surface water (over 80 percent). To minimize demand placed on Zone 7 sources, the City has prioritized the development of a recycled water program, implemented the demand management measures discussed in Chapter 9, and plans to maintain its efforts to ensure that water resources are used wisely and to meet the requirements of the SB X7-7.

Because Zone 7 is the City’s primary water supplier, its efforts to maximize resources and minimize imports is relevant to the City’s water supply reliability. Zone 7 evaluates and pursues new water supply options, including potable reuse, which would maximize reuse of locally-generated wastewater irrigation. Additional supplies from reuse would reduce the percentage of Zone 7’s water supply derived from imported water supplies. Optimization and expansion of local storage options allow Zone 7 to minimize use of imported water supplies, when necessary, during droughts, sensitive fish periods, and other events. In addition, Zone 7 is a member of the Bay Area Regional Reliability partnership, which brings together nine Bay Area water agencies aiming to improve regional supply reliability.

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CHAPTER 8

Water Shortage Contingency Planning



The City's Water Shortage Contingency Plan addresses situations when catastrophic water supply interruptions occur due to regional power outage, earthquake, or other disasters; and when drought occurs due to environmental, climatic, or legal issues.

The City of Pleasanton developed its first Water Shortage Ordinance in 1991. In May of 2009, Pleasanton City Council approved the Tri-Valley Water Retailers Water Shortage Contingency Plan, which was a cooperative plan adopted together with the Retailers. In response to the current multi-year drought, both of these documents were replaced by the adoption of Pleasanton Municipal Code Chapter 9.30 (currently referred to as the Water Management Plan) in March 2014. The Water Management Plan defines stages and levels of water rationing, expected water conservation measures under each stage, and penalties assigned when mandatory reductions are unmet (revised in June 2016). A separate document, the Pleasanton's Water Emergency Response Plan (revised in April 2016), addresses catastrophic interruptions in supply (sudden supply interruptions). Together, the Water Management Plan and the Water Emergency Response Plan act as the City's Water Shortage Contingency Plan (see Appendix K). Declaration of a water shortage under the Water Management Plan goes into effect upon resolution of the City Council. Whereas, a proclamation of a water emergency goes into effect upon direction from City Council, the Director of Emergency Services (City Manager), or the Director of Operations Services.

8.1 STAGES OF ACTION

The Water Shortage Contingency Plan uses a staged scheme to plan for water shortages of increasing severity. Stage 4 would be declared in the event a water use reduction of up to 50 percent were required. The following provides a description of the stages of action which may be triggered by a shortage in one or more of the City's water supply sources, depending on the severity of the shortage and its anticipated duration:

- Stage 1 Shortage:
 - Stage 1 is considered appropriate for declaration under conditions where there is sufficient uncertainty concerning water supplies for the year or the next few years and that it would be prudent for water customers to conserve local water supplies so the supplies may be used to meet future year water demand.
 - During this stage, the City will implement a voluntary reduction goal of up to 20 percent.
- Stage 2 Shortage:
 - Stage 2 is considered appropriate for declaration under conditions where there are definable events that lead to a reasonable conclusion that in the current and/or upcoming water years, water supplies may not be adequate to meet all customer water demands.
 - During this stage, the City will implement a mandatory reduction goal of up to 20 percent.

- Stage 3 Shortage:
 - Stage 3 is considered appropriate for declaration under conditions where there are definable events that lead to a firm conclusion that in the current water year, water supplies will not be adequate to meet customers’ water demand.
 - During this stage, the City will implement a mandatory reduction goal of up to 35 percent.
- Stage 4 Shortage:
 - Stage 4 is considered appropriate for declaration under conditions where a Stage 3 shortage had been in effect and the reduction goal is not being met or new definable events require increasing the reduction goal.
 - During this stage, the City will implement a mandatory reduction goal greater than 35 percent and up to 50 percent.

The water supply conditions associated with each stage of action are shown in Table 8-1.

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

Stage	Complete Both	
	Percent Supply Reduction ¹	Water Supply Condition
1	20%	Minimal Reduction
2	20%	Moderate Reduction
3	35%	Severe Reduction
4	50%	Critical Reduction

¹ One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.

8.2 PROHIBITIONS ON END USES

CWC Section 10632(a)(4) requires mandatory prohibitions against specific water use practices that may be considered excessive during water shortages.

To protect and preserve the community water supply, the elimination of wasteful water uses is essential at all times, regardless of the water supply level. The City’s customers shall always observe the following regulations to eliminate wasteful water uses:

1. Use potable water for irrigation of landscapes in a manner that does not result in runoff such that water flows onto adjacent property, non-irrigated areas, driveways, private and public walkways, roadways, parking lots, or structures.

2. Schedule regular irrigation of lawn and landscape between the hours of 6:00 p.m. and 9:00 a.m. the following day. Watering is permitted at any hour if a hand-held nozzle or drip irrigation is used. Special landscapes are exempted.
3. The use of potable water to wash down sidewalks, walkways, driveways, parking lots, open ground or other hard surfaced areas by the direct application of water is prohibited.
4. No wastewater from vehicle washing may enter the storm drain system. The use of water for motor vehicle washing or machinery washing, from a hose equipped with a shutoff nozzle, shall not result in runoff or illicit discharge.
5. Repair potable water leaks from breaks within the customer's plumbing system within eight hours after customer is notified or discovers the break.
6. Reduce other interior or exterior uses of water to minimize or eliminate excessive runoff or waste.
7. Restaurants shall serve water to their customers only when specifically requested.
8. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.
9. The use of water for construction activities and commercial power washing should utilize recycled water, rather than potable water. Such use shall occur in a manner that does not result in runoff or illicit discharge into the storm drain system.

During the times any water shortage stage is in effect, the following water uses are considered unlawful for any potable City of Pleasanton water customer, as defined by the City's Water Shortage Ordinance:

1. Use of potable water between 9:00 a.m. and 6:00 p.m. to irrigate grass, lawns, ground-cover, shrubbery, crops, vegetation, and trees, with the exception of hand watering and drip irrigation.
2. The application of potable water to outdoor landscaping in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures.
3. Use of potable water to irrigate outdoor landscaping during and within 48 hours after measurable rainfall.
4. Use of potable water to wash down sidewalks, walkways, driveways, parking lots, open ground or other hard surface areas by the direct application of water thereto.
5. Allowing potable water to escape from breaks within the customer's plumbing system for more than eight hours after the customer is notified or discovers the break.
6. Use of water in non-recirculating decorative ponds, fountains, and other water features; with the exception of child water-play features.

Chapter 8

Water Shortage Contingency Planning



7. The serving of drinking water other than upon request in eating or drinking establishments, including, but not limited to, restaurants, hotels, cafés, cafeterias, bars, or other public places where food or drink are served and/or purchased.
8. Use of potable water for any purpose in excess of the customer's allowed usage.

The consumption reduction measures and their associated stage according to the City's WSCP are shown in Table 8-2. If a measure is declared mandatory for a lower level stage, it is also mandatory for higher stage levels.

The prohibitions that the City places on end uses in each stage according to DWR's prohibition categories are shown in Table 8-3.

The measures shown in Tables 8-2 and 8-3 are subject to City Council approval in June 2016.

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Table 8-2. City of Pleasanton's Water Shortage Contingency Plan

Consumption Reduction Measures	Stage When Method Takes Effect			
	1	2	3	4
Landscape Irrigation (SFR, MFR, CII)				
Perform educational outreach on water conservation irrigation systems and dry climate plants	X			
Require shut off nozzles	X			
Prohibit runoff, overspray of saturation of landscape	X			
Time: Irrigate only between 9 pm to 6 am	X			
Require sprinklers to be turned off when raining and after 48 hours of rainfall	X	X		
Weekly Frequency: Limited to 3 non-consecutive days/week			X	
Weekly Frequency: Limited to 2 non-consecutive days/week				X
Limit hand watering of non-turf landscaping to 1 day/week				X
Prohibit turf irrigation				X
Swimming Pools & Spas (SFR, MFR, CII)				
Must be leak proof	X			
Require covers when not in use		X		
Must be equipped with recirculating pump			X	
Allow drain and refill of existing pools and spas only for health or structural needs				X
Prohibit initial filling of new swimming pools and spas				X
Water Theme Parks (CII)				
Require reclaimed and recirculated water			X	
Prohibit any use of water				X
Ornamental Water Features (SFR, MFR, CII)				
Must be leak proof	X			
Must be equipped with recirculating pump			X	
Prohibit potable water use			X	
Allow drain and refill only for health or structural needs			X	
Washing of Pavement (SFR, MFR, CII)				
Require broom and bucket	X			
Prohibit use of potable water, unless required for health and safety			X	
Exterior Washing of Autos, Boats, Buildings (SFR, MFR, CII)				
Require hose with shut off nozzle	X			
Require bucket		X		
Limit washing to no more than once a month		X		
Encourage use of commercial wash services that recycle water		X		
Require broom to be used to wash buildings			X	
Only wash vehicles at commercial establishments that use recycled or recirculating water			X	
Prohibit washing with potable water			X	
Water for Construction (CII)				
No potable water for construction use when reasonable			X	
Restaurants (CII)				
Post water conservation messages on bathroom mirrors	X			
Restaurants may only serve water on request	X			
Require kitchens to use low flow rinse nozzles		X		
Laundromats (CII)				
Prohibit use of non-efficient washing machines				X
Other (SFR, MRF, CII)				
Customers must repair leaks, breaks or malfunctions in a timely manner	X			
Restrict distribution system flushing		X		

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Chapter 8

Water Shortage Contingency Planning



Table 8-3. Retail Only: Restrictions and Prohibitions on End Uses (DWR Table 8-2)

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement?
All	Landscape - Restrict or prohibit runoff from landscape irrigation		Yes
All	Landscape - Limit landscape irrigation to specific times	Watering is allowed only between 9 pm and 6 am	Yes
1	Landscape - Limit landscape irrigation to specific days	Limited to 1 day per week October through March	Yes
2	Landscape - Limit landscape irrigation to specific days	Limited to 3 nonconsecutive days per week April through September	Yes
3	Landscape - Limit landscape irrigation to specific days	Limited to 2 nonconsecutive days per week April through September	Yes
4	Landscape - Prohibit certain types of landscape irrigation	No turf irrigation	Yes
1	Landscape - Other landscape restriction or prohibition	Sprinklers are to be turned off during and 48 hours following measurable precipitation	Yes
4	Landscape - Other landscape restriction or prohibition	Hand water non-turf landscaping Saturday or Sunday only	Yes
All	CII - Restaurants may only serve water upon request		Yes
All	CII - Lodging establishment must offer opt out of linen service		Yes
2	CII - Commercial kitchens required to use pre-rinse spray valves		Yes
1	CII - Other CII restriction or prohibition	Post water conservation messages on bathroom mirrors	No
4	CII - Other CII restriction or prohibition	Prohibit use of non-efficient washing machines	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	Decorative water features must be equipped with a recirculating pump; Prohibit potable water use; Allow drain and refill only for health or structural needs	Yes
1	Pools and Spas - Require covers for pools and spas		No
3	Other water feature or swimming pool restriction	Must be equipped with a recirculating pump	Yes
3	Other water feature or swimming pool restriction	Allow drain and refill of pools and spas only for health or structural needs; Prohibit initial filling	Yes
4	Other water feature or swimming pool restriction	No person shall drain and refill swimming pools and spas	Yes
All	Other - Prohibit use of potable water for construction and dust control	Use of water for construction activities and commercial power washing should utilize recycled water, rather than potable water	No
2	Other - Prohibit use of potable water for construction and dust control	No potable water for construction use when reasonable	Yes
1	Other - Require automatic shut of hoses	For vehicle or machinery washing	Yes
All	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Must be within 8 hours after customer is notified or discovers break	Yes
All	Other - Prohibit use of potable water for washing hard surfaces	Use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground, or other hard surfaces by direct application	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water		Yes
All	Other	No wastewater from vehicle washing may enter storm drain system	Yes
1	Other	Use broom and bucket to wash hard surfaces	No

NOTES: All Stage 1 restrictions become enforced in Stage 2. Restrictions not associated with a specific stage are in effect at all times.

8.3 PENALTIES, CHARGES, OTHER ENFORCEMENT OF PROHIBITIONS

Section 10632(a)(6) of the CWC requires a water supplier to penalize or charge for excessive water use, where applicable.

To encourage compliance under mandatory rationing, the City’s Water Shortage Ordinance specifies levels of financial penalties to be set by City Council for violations of the ordinance. This action would be implemented if a water emergency were declared requiring mandatory rationing. Penalties for water usage in excess of a customer’s mandatory conservation amount is summarized in Table 8-4.

Table 8-4. Excess Use Penalties

Stage	Exceed 1 Time	Exceed 2 Times	Exceed 3 Times	Exceed 4 or More Times
1	No penalty	No penalty	No penalty	No penalty
2	\$2.50 additional for all units	\$5 additional for all units + \$25	\$7.50 additional for all units + \$50	\$10 additional for all units + \$100
3	\$4 additional for all units + \$50	\$8 additional for all units + \$100	\$12 additional for all units + \$250	\$16 additional for all units + \$500
4	\$6 additional for all units + \$100	\$12 additional for all units + \$250	\$18 additional for all units + \$500	\$24 additional for all units + \$750

These penalties may be added to a water bill or billed separately, at the discretion of the Director. Additional penalties for multiple times exceeding water use amount take into account the number of times within 12 months.

8.4 CONSUMPTION REDUCTION METHODS

CWC Section 10632 (a)(5) requires the water supplier to provide consumption reduction methods in the most restrictive stages of a water shortage.

Water conservation measures to be implemented at each stage of water shortage declaration are outlined within the Water Shortage Contingency Plan. The water conservation measures for each stage are shown in Table 8-5. The conservation measures are additive in that each stage includes all of the conservation measures of the previous stages.

Table 8-5. 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 <i>(optional)</i>
All	Offer Water Use Surveys	Controller Assistance Program; Large Landscape Audit Support Services Program
All	Provide Rebates for Landscape Irrigation Efficiency	Water Efficient Irrigation Rebate Program
All	Provide Rebates for Turf Replacement	
All	Reduce System Water Loss	
All	Implement or Modify Drought Rate Structure or Surcharge	
1	Expand Public Information Campaign	
1	Provide Rebates on Plumbing Fixtures and Devices	Offer rebates on low flow rinse nozzles, high efficiency washing machines, high-efficiency toilet replacement program
1	Reduce System Water Loss	Obligation to fix leaks, breaks, or other malfunctions
2	Implement or Modify Drought Rate Structure or Surcharge	
2	Decrease Line Flushing	

NOTES: Consumption reduction methods not associated with a stage are on-going DMMs

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.

Meters at each Zone 7 turnout are read daily to provide the City with water consumption information. If stages of the Water Shortage Ordinance were declared during a drought, actual reductions in water use can be estimated by comparing water use totals during the drought with their corresponding totals from previous years. This would allow for the monitoring of the water reduction progress and help determine if further reduction action are necessary.

When a water shortage is declared with mandatory reductions in water use, the Director shall impose the applicable stage of mandatory reduction by calculating customers’ average usage for the same billing period from one to four prior years, as data is available. If sufficient historic usage information is not available, the Director may base water use allocations on a combination of the

limited historic usage data available, per-capita water use targets, water usage from similar customer types, and other activity-specific water usage data. Usage of water in excess of a customer's mandatory conservation amount is subject to excess use penalties.

8.6 REVENUE AND EXPENDITURE IMPACTS

Section 10632 (a)(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.

During periods of water shortage and reduced customer consumption, revenue is expected to decrease due to decreased demand for water. Some expenditures are also expected to decrease due to the decreased demand for water; however, expenditures for customer service activities are anticipated to increase as a result of implementing water conservation measures. To compensate for lost revenue and possible increase in expenditures, the City may need to raise water rates temporarily with the addition of a drought surcharge.

The City's financial policies provide for long-term financial stability with the water utility. During the development of this UWMP, the water utility is sound financially for funding both the operation of the utility, and the repair and replacement of the water infrastructure. The City's policy is to maintain adequate reserves in each fund. The City's Water Operating Fund currently has available reserves of approximately \$26 million. This balance provides sufficient reserves to deal with any unforeseen catastrophic event.

The City also has two additional funding sources that can be used in time of need by the Water Enterprise Fund. The first is the Reserve for Economic Uncertainties Fund which currently has an available balance of \$11 million and can be used in cases of emergency situations. The second is the General Fund Undesignated Reserve which currently has an available balance of \$9 million. If necessary, the City's General Fund would loan the Water Fund the necessary money needed and the Water Fund would pay that back over time.

The City's water rates include annual funding by ratepayers for the repair and replacement of the water system infrastructure. Currently, there is an annual transfer from the Water Operations and Maintenance Fund to the Capital Improvement Program (CIP) Fund of \$1.6 million.

These reserves, CIP allocations, and Pleasanton's financial policies will provide the water system the needed funding both long term and in a catastrophic event, well into the future.

8.7 RESOLUTION OR ORDINANCE

Currently the City's Water Management Plan acts as the City's Drought Contingency Plan. The stages of action to be undertaken in response to water supply shortages and the water supply conditions applicable to each stage are described in this chapter. A revised Water Management Plan was adopted by City Council in June 2016 and is included in Appendix K.

After the City Council adopts a water shortage contingency plan stage, customers will be notified by publication in the newspaper and/or by mail. The failure of any customer to receive actual notice shall not invalidate any action taken by the city council as to a particular customer nor reduce the amount of the penalties provided herein.

8.8 CATASTROPHIC SUPPLY INTERRUPTION

The Water Code Section 10632 requires actions to be undertaken by the water supplier to prepare for and implement during a catastrophic interruption of water supplies.

The City's Water Emergency Response Plan (revised in April 2016) specifies that the City Council, the Director of Emergency Services (City Manager), or the Director of Operations Services has the power to proclaim a Local Water Emergency. As defined in the City's Water Management Plan, if there were a major failure of supply, storage or facility distribution, a declaration of mandatory water use restrictions would be necessary in designated affected areas (expected reduction would vary in response to the specific situation).

The City will also follow the lead of Zone 7, or the State of California, during a major catastrophe or drought period. When Zone 7 announces a curtailment in water deliveries, the City will assess the impact on the City supplies and decide which of the above stages is called for. The City will monitor the situation closely, both from a supply and demand perspective, and carefully select the right stage to achieve the desired result, and move from one stage to the next if the situation worsens, and lessen rationing when it subsides. The City has two emergency interties with DSRSD and one emergency intertie with the City of Livermore to provide supplies during an emergency.

8.8.1 Unavailable SWP Water

There could be an emergency situation where no water was available from the SWP. This could occur if the SBA was inoperable due to maintenance or was damaged during an earthquake. Water supplies from the SWP could also be limited or unavailable during a future drought. If no water were available from the SWP, Zone 7 would need to meet customer demand with groundwater and available local water stored in Lake Del Valle. The worst disruption to SWP deliveries would likely result from a moderate to a large earthquake, causing multiple Delta islands levee failures and cessation of exports from the Delta of up to a year. Under this scenario and under current conditions, Zone 7 estimates that it would be able to make full deliveries to the retailers during non-summer months using a combination of groundwater and Arroyo del Valle runoff stored in Lake Del Valle. During the peak demand of the summer months, however, Zone 7 will need to reduce deliveries to the retailers, including the City of Pleasanton. Zone 7 analysis shows that Zone 7 has sufficient groundwater supply and pumping ability to serve the indoor water use needs of the service area over a one-year period; the availability of water supply for outdoor water use during the summer months will depend on the amount of water available in Lake Del Valle. Depending on timing and degree of recovery, the City might enact any of the stages of water shortage conditions discussed in Section 8.1.

8.8.2 Unavailable Zone 7 Water

The City receives Zone 7 supplies at seven different turnout locations. Depending on the nature of the emergency, if Zone 7 supplies cannot be obtained from one or more of the turnout locations, Zone 7 supplies may be available at the other turnout locations. The City may also be able to obtain emergency supplies from its emergency interties with DSRSD, if the City's wells are not sufficient to meet demands. Depending on the availability of water from these sources, the City may need to enact various water shortage stages discussed in Section 8.1 to deal with a supply shortfall.

8.8.3 Area-Wide Electrical Power Failure

If electrical power were not available for a prolonged period of time, the City of Pleasanton would continue to receive water from a number of sources. Zone 7 has emergency generators (both portable and dedicated) at strategic locations in preparation for any regional power outage. These generators would allow both the Del Valle Water Treatment Plant and the Patterson Pass Water Treatment Plant to continue operating even under a power outage. If warranted by demand, Zone 7 would also operate their wells, which have either a dedicated generator in place (Mocho I) or have the necessary hook-ups installed for connection to a portable generator. Pleasanton could receive treated water by gravity flow. The water turnouts are designed to flow by gravity from the treatment plant clearwells. Additionally, water from emergency interties with DSRSD and the City of Livermore could also supply water into the service area when necessary.

The City also has the capability to operate its own wells during a power outage through the use of emergency generators located at its well sites.

8.8.4 Earthquake

Water system infrastructure, including pump stations, storage tanks, and pipelines, can be damaged during a strong earthquake. Pleasanton's facilities, as well as Zone 7's facilities, have been constructed in accordance with the applicable building codes to minimize potential damage during an earthquake. Additionally, approximately 85 percent of Pleasanton's water infrastructure has been earthquake reinforced and no area within the service area is solely dependent on non-earthquake reinforced infrastructure. If damage occurred as the result of a strong earthquake, there are multiple turnouts from Zone 7 supply system to ensure Pleasanton can continue to receive water supply from Zone 7 if damage occurred along a specific section affecting a turnout. Furthermore, the pipelines were built in a looped arterial design, to ensure there is more than one route for water flow.

8.9 MINIMUM SUPPLY NEXT THREE YEARS

The minimum potable water supply available during each of the next three years is estimated based on the driest three-year historic sequence for the City's water supply (see *Chapter 7 Water Supply Reliability Assessment*) is shown in Table 8-6. The estimated minimum water supply available is equivalent to the City's average water supply multiplied by percentage of average supply available during the multiple-dry year scenarios. The City's estimated average water supply is approximately 16,331 AF and is based on year 2011.

The City’s recycled water supply is not subject to climatic limitations and therefore, is unaffected by the historic driest three-year water supply. Recycled water supplies are not included in Table 8-6.

Table 8-6. Retail: Minimum Supply Next Three Years (DWR Table 8-4)

	2016	2017	2018
Available Water Supply	14,045	12,722	13,441
NOTES: Volumes are in AF and are for potable water system only.			

8.10 2015/2016 DROUGHT RESPONSE

On April 1, 2015 Governor Brown issued Executive Order B-29-15 which prescribed a 25 percent reduction across the State of California with reductions proportional to relative per capita 2013 water usage. Additionally, urban water suppliers were also required to develop rate structures including fees and penalties to maximize water conservation consistent with statewide water restrictions. In addition, the SWRCB issued Emergency Regulations for Drought Emergency Water Conservation (effective May 12, 2015) which required large urban water suppliers serving more than 3,000 connections to do the following:

- Impose restrictions on outdoor irrigation;
- Notify customers of leaks within the customers control;
- Report on water use monthly; and
- Report on compliance and enforcement.

In May 2014, the City implemented Stage 3 of its Water Shortage Contingency Plan with a 25 percent mandatory water reduction (as compared to 2013). Specific water restrictions were required by all customers, and additional water conservation measures were required of businesses. These restrictions and measures are described in Appendix K. The City’s customers have responded positively to these programs, resulting in savings exceeding water use reduction goals. From June 2015 through January 2016, the City’s cumulative water savings was 39.4 percent as compared to 2013 water use, exceeding the City’s conservation standard of 24 percent by 15.4 percent¹.

¹ January 2016 Supplier Conservation Compliance, SWRCB Water Conservation webpage (http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml), data as of February 22, 2016.

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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. 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, AB 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). A narrative description of the nature and extent of the DMMs and how the DMMs will help the water supplier achieve its SB X7-7 water use targets is required. Detailed data are not required.

9.1 WATER CONSERVATION PROGRAM OVERVIEW

The City has long been committed to reducing the demand for potable water through conservation and has recently implemented a recycled water program to offset potable water demands. The City’s customers have responded positively to these programs, resulting in savings exceeding the mandated State Water Resources Control Board (SWRCB) water use reduction goals. From June 2015 through January 2016, the City’s cumulative water savings was 39.4 percent as compared to 2013 water use, exceeding the City’s conservation standard of 24 percent by 15.4 percent¹. The City is committed to continuing its water conservation efforts to meet the City’s conservation standard and SB X7-7 targets, and ensure adequate water supplies to meet the future needs of City’s water customers.

¹ January 2016 Supplier Conservation Compliance, SWRCB Water Conservation webpage (http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml), data as of February 22, 2016.

The following sections describe the primary elements of the City's water conservation program.

9.2 DEMAND MANAGEMENT MEASURES

The six DMMs required to be discussed in 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.

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

9.2.1 Water Waste Prevention Ordinances

In 1991, the City approved Ordinance No. 1508 which added Chapter 9.30 of the Pleasanton Municipal Code and established water conservation stages and prohibitions to prevent water waste. In March of 2014, Pleasanton City Council approved a significant update to PMC Chapter 9.30, which updated the definitions of water shortage stages and levels of water rationing, along with expected water conservation measures under each stage. Additionally, prohibitions on wasteful water use were also defined. The latest update to the City's water conservation provisions included in PMC Chapter 9.30 Water Management Plan occurred in May of 2016 and is included in Appendix K.

To protect and preserve the community water supply, the elimination of wasteful water uses is essential at all times, regardless of the water supply level. The City's customers shall always observe the following regulations to eliminate wasteful water uses:

1. Use potable water for irrigation of landscapes in a manner that does not result in runoff such that water flows onto adjacent property, non-irrigated areas, driveways, private and public walkways, roadways, parking lots, or structures.
2. Schedule regular irrigation of lawn and landscape between the hours of 6:00 p.m. and 9:00 a.m. the following day. Watering is permitted at any hour if a hand-held nozzle or drip irrigation is used. Special landscapes are exempted.
3. The use of potable water to wash down sidewalks, walkways, driveways, parking lots, open ground or other hard surface areas by the direct application of water is prohibited.
4. No wastewater from vehicle washing may enter the storm drain system. The use of water for motor vehicle washing or machinery washing, from a hose equipped with a shutoff nozzle, shall not result in runoff or illicit discharge.

5. Repair potable water leaks from breaks within the customer's plumbing system within eight hours after customer is notified or discovers the break.
6. Reduce other interior or exterior uses of water to minimize or eliminate excessive runoff or waste.
7. Restaurants shall serve water to their customers only when specifically requested.
8. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.
9. The use of water for construction activities and commercial power washing should utilize recycled water, rather than potable water. Such use shall occur in a manner that does not result in runoff or illicit discharge into the storm drain system.

As described in *Chapter 8 Water Shortage Contingency Planning*, the City's water use restrictions are expanded with the various stages of the City's Water Management Plan.

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

9.2.2 Metering

All water connections within the City's service area are metered and all customer sectors are billed by volume of use. The City uses an inclining block rate structure with four tiers for single-family residential customers. Commercial, industrial, institutional, water use sectors, multi-family, and irrigation customers are charged equally per unit of water use.

Water meters are checked for accuracy as they are flagged for unusual consumption in the billing software. Meters that are stuck or do not meet accuracy specifications are immediately replaced. Billing accounts with meter failures are assessed an estimated consumption rate that reflects their average usage during the period. Also, as funding allows, meters are replaced within the system based on their service length with the oldest meters receiving replacement priority.

Implementation of this DMM is expected 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

9.2.3.1 Potable Water Rates

The City's potable water rates include a fixed meter charge based on the size of the water meter and a consumption charge based on the quantity of water used. The City has billed single-family residential customers based on an inclining block rate structure since 1980. The City's water rates were last revised in October 2015. The water rates include the following components: Zone 7 water

costs, distribution costs, a recycled water surcharge and capacity expansion costs. The City's current water rates are shown in Table 9-1.

Table 9-1. City of Pleasanton Water Rates^(a)

Customer Sector		Zone 7 Water Cost per CCF	Distribution Charge per CCF	Recycled Water Surcharge per CCF	Capacity Expansion Surcharge per CCF	Total per CCF
Single Family Accounts	0 – 20 CCF	\$2.40				\$2.40
	21 - 40 CCF	\$2.40	\$0.2581	\$0.10		\$2.7581
	41 – 60 CCF	\$2.40	\$0.4825	\$0.10		\$2.9825
	Over 60 CCF	\$2.40	\$1.1220	\$0.10	\$0.13	\$3.7520
Commercial Business & Multi-Family Accounts		\$2.40	\$0.2693	\$0.10		\$2.7693
Irrigation Accounts		\$2.40	\$0.4152	\$0.10		\$2.9152

^(a) Rates effective October 15, 2015; consumption rates are in addition to the appropriate fixed meter charge based on meter size.

The Zone 7 water rate is provided to the City and is a direct pass through to the City's customers. The setting of this rate is not within the control of the City of Pleasanton and is subject to change at least each January 1. The total cost of Zone 7 purchased water to the City is currently \$2.40 and is based on the current rate charged by Zone 7 (effective January 1, 2015) plus the cost of water losses on the system and total purchases from Zone 7. The fixed meter charge and the distribution charges are subject to annual consumer price index changes effective January 1, starting in January 1, 2016, and the Zone 7 rate is subject to changes by the Zone 7 Board.

9.2.3.2 Drought Rates

As part of the City's 2015 Water Rate Study, drought rates were developed. The goal of drought rates is to maintain sufficient revenues for the utility to operate while a decline in consumption occurs due to drought conditions and mandated conservation. Although the drought rates are available once the Council has adopted them, they are not implemented until the Council directs City staff to activate the drought rates. This ensures that rates are not automatically increased as a result of going into Stage 1, or increasing a drought stage, but when the Council determines they are necessary to maintain system revenues due to drought induced consumption declines. The proposed drought rates showing the additional rate component are shown in Table 9-2.

Table 9-2. City of Pleasanton Proposed Drought Rates^(a)

Customer		Stage 1	Stage 2	Stage 3	Stage 4
Single Family	0-20 CCF	\$0.1619	\$0.5689	\$1.2266	\$2.5611
	21-40 CCF	\$0.1619	\$0.5689	\$1.2266	\$2.5611
	41-60 CCF	\$0.1619	\$0.5689	\$1.2266	\$2.5611
	60+ CCF	\$0.1619	\$0.5689	\$1.2266	\$2.5611
Commercial/Multi-Family		\$0.1385	\$0.5400	\$1.1631	\$2.5145
Irrigation		\$0.1458	\$0.5655	\$1.2244	\$2.6470

^(a) Drought rates are in \$/CCF and are an additional component to the existing potable consumption rates.

9.2.3.3 Rates for Recycled Water Service

As described in previous chapters of this 2015 UWMP, the City purchases and delivers recycled irrigation water to commercial customers in various areas within its service area. The recycled water system is being expanded to provide irrigation service to additional areas within the City. Table 9-3 shows the recycled water rates (effective October 15, 2015) based on the development of the costs associated with providing recycled water service, purchases from DSRSD and the City of Livermore, and delivering water through its distribution system.

Table 9-3. City of Pleasanton Recycled Water Rate

	Recycled Water Rate (effective October 15, 2015)
Rate Per CCF	\$2.6237

The City’s recycled water rate is based on 90 percent of the potable irrigation rate. As potable water rates are adjusted based on the change in the annual CPI and changes in the Zone 7 water wholesale rates, the recycled water rate will adjust to remain at 90 percent of the potable irrigation water rate. Customers will be notified of the rate change in the December billing for the rate that will be effective January 1 of 2016 through 2020.

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

9.2.4 Public Education and Outreach

The City has been actively involved in providing the community with information and education on the value of water and water conservation for many years. This involvement is taken in the forms of participating at local events, such as green fairs, corporate fairs, school events and farmers markets, hosting and co-hosting water-wise workshops, and meeting with business leaders and corporate green councils to discuss and answer questions on water efficiency. Brochures, handouts, model displays, and general discussion are offered during events to the general public. The City

also has a quarterly newsletter which provides updates on water conservation efforts and updates on the recently implemented recycled water program. Copies of recent newsletter articles are provided in Appendix L.

The Tri-Valley Water Conservation Task Force, of which the City is a part of, supports promoting the WaterSense program's "Fix a Leak Week" campaign each year to raise awareness of water leaks inside the home and the amount of water wasted from such leaks each year. During Fix a Leak Week, Zone 7 and the local water retailers encourage customers to fix common leaks (faucets, toilets and showerheads) and educate the public on the value of water efficiency and the meaning of the WaterSense label.



Pleasanton's Water Conservation Division has also taken the initiative to provide water conservation training to internal staff in the effort to ensure City staff that directly work with the public have the skills necessary to inform the public on matters of water conservation, and provide information on City programs that are available to the public to increase water-efficiency.

The City's Customer Service Center upgraded its utility billing software at the end of 2011. The system provides customers with a web portal to access their account information and consumption history electronically. Currently, the City is embarking on a new utility billing software update that is compatible with the City's Advanced Metering Infrastructure (AMI). This technology will allow customers to receive real time information on their water use, monitor leaks, and benchmark against trends. The project will commence in August of 2016 and the full installation of the AMI project is estimated to be completed by January of 2017.

The water savings generated through public information and student education water conservation programs is difficult to accurately assess. The City provides water-efficiency information to all interested public participants, regardless of where they reside; therefore it is not known which residents are being impacted by the program efforts. Additionally, it is difficult to assess if attendees subsequently implement the actions and/or suggestions discussed during programs. In addition, students exposed to water conservation education are likely to reduce their water use through behavioral changes, such as turning off running faucets while brushing teeth or taking shorter showers. Regardless of the lack of quantitative water-saving estimates, the City views these efforts as an important part of the City's overall water conservation program, and will continue to provide public information programs to help reduce future water demands within the region.

Implementation of this DMM is expected 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

All metered water service connections are read bi-monthly and analyzed by the City's billing software for abnormal consumption rates. This helps to identify leaks and meter failures at the earliest stage to minimize loss. Water station pressure and tank levels are monitored at all times

on a computerized SCADA system to indicate any unusual activity that could indicate water loss. Finally, identified system leaks are immediately repaired by staff trained for all repair situations, available 24 hours a day.

As described in Chapter 4, the City conducts an annual audit of production versus consumption to determine water losses (see Appendix F). The City's water losses in Fiscal Year 2014/2015 were approximately 8.8 percent of the volume of water that entered the distribution system. Additionally, as mentioned in Section 9.2.4, conversion to AMI will allow the City to identify and respond to leaks, breaks, or meter failures more rapidly. This technology is expected to reduce the City's annual water loss significantly.

The City will continue to perform water system audits, the accounting of water losses vs. system input, and leak detection programs. The water system audits and leak detection activities are performed on an on-going, year-round basis. The City tracks the effectiveness of this program based on reductions in water loss throughout the system.

Implementation of this DMM is expected 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

Since the 1990s, the City has staffed one to two temporary, 1,000-hour, water conservation interns. This position devotes 100 percent of their time to water conservation. In 2011, the City hired a half-time Water Conservation Manager. Duties performed by the Water Conservation Manager are as follows:

- Coordination and oversight of conservation programs;
- Coordination of joint programs with Zone 7, the Retailers, and outside agencies;
- Communication of water conservation issues to management;
- Preparation and submittal of reports to various parties; and
- Preparation and updates of water conservation plan.

In 2015, a full-time Water Conservation Technician was added to the division to assist with the above activities, as well as provide irrigation surveys to customers. The Water Conservation Technician is also a certified cross-connection specialist and provides coverage testing and cross connection testing assistance to irrigation customers converting to recycled water.

Due to the increased water conservation assistance requested from customers during the drought in 2014, additional City staff from other divisions were brought into the water conservation/drought response. The additional City staff assist with controller assistance program surveys, answering calls coming into the drought response center, and providing follow up on reports of water use violations. This increased staffing assistance was repeated in the summer and fall of 2015, and is anticipated to continue into the City's 2016 summer drought response.

Additional City staff are also responsible for participation of DMM program implementation. Customer Service Center staff participate in providing general water conservation program

information to customers requesting information, assistance in implementation of the High-Efficiency Toilet Rebate Program, as well as help distribute water-efficient devices under the Free Indoor Device Program. The Utility Superintendent is responsible for coordination and implementation of the following: system water audits, leak detection, and repair; metering with commodity rates for all new connections and retrofit of existing connections; and participates in conservation pricing.

Implementation of this DMM is on-going and is expected to help the City achieve its water use targets by making water conservation and implementation of the City's water conservation program a priority among its City and Zone 7 employees.

9.3 OTHER DEMAND MANAGEMENT MEASURES

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

- Water-efficient landscape program;
- Controller assistance program;
- Free indoor water-efficient device program;
- Free water conservation lavatory signs;
- Rebate programs; and
- Recycled water program

These programs are described below.

9.3.1 Water-Efficient Landscape Program

The City of Pleasanton is offering \$0.25 per square foot to Residential Customers and \$.50 per square foot to Irrigation Customers who replace existing front lawns or sidewalk-visible lawns with water-efficient, drought tolerant landscaping. This rebate program can be combined with Zone 7's Water-Efficient Lawn Conversion Rebate, such that customers can get up to \$1.00 (Residential) or \$1.25 (Commercial/Irrigation) per square foot of converted landscape.

Irrigation meter customers participating in the City of Pleasanton's Water-Efficient Landscape Program are eligible for rebates towards qualifying water-efficient irrigation equipment utilized on the converted landscape area. Qualifying equipment include rain sensors, pressure regulating devices and rotary nozzles.



9.3.2 Controller Assistance Program

The City offers free controller assistance visits to residential and non-residential water customers. This service includes a walk-through site/irrigation system evaluation of your property and irrigation controller programming assistance. The Controller Assistance Program is open to all water customers with landscaping that are responsible for the property water bill.

9.3.3 Free Indoor Water-Efficient Device Program

Homes built prior to 1992 may not have water-efficient indoor plumbing, such as low flow showerheads, low flush toilets or faucet aerators. The U.S. Energy Policy Act of 1992 required 1.6 gallons per flush toilets, 2.5 GPM showerheads, and 2.5 GPM faucets to be used after January 1994. In 2002, to promote indoor water conservation, the City piloted a free water efficient showerhead program to residential customers; however, the showerheads were not well received, likely due to poor esthetic appeal, and the program was discontinued.



In 2008, the City began running the current Free Indoor Device Program, with more esthetically appealing equipment, to help residents meet their water conservation goals. This program offers all City water customers low flow showerheads (limit 3 per water account), kitchen aerators (limit 1 per water account), and bathroom aerators (limit 3 per water account). Additionally, the City has been providing free toilet dye strips for toilet leak detection for over the past ten years. These items are provided by request and offered by water staff to customers. A display at the City's Customer Service Center counter displays the offer of this program. The program is also advertised during local events where a City water conservation table is presented.

9.3.4 Free Water Conservation Lavatory Signs

The City provides commercial customers with easy to use water conservation clings that can be posted on lavatory mirrors. These signs remind customers and employees to be mindful of water waste.



9.3.5 Rebate Programs

In 1994 Zone 7, and the Retailers, started the Ultra-Low Flush Toilet (ULFT) Rebate Program. The initial program offered a \$75 rebate per toilet to residential customers that replaced old toilets which used 3.5 gallons per flush or higher, with new low-flush toilets (1.6 gallon per flush). In July 2008, with the consideration of market saturation of ULFTs, the retailers changed the rebate program to rebate qualifying high-efficiency toilets, 1.28 gallons per flush or less toilets, now called the High-Efficiency Toilet and Urinal Rebate Program (HET Program). The rebate program has been expanded to include rebates for urinals and include eligibility to commercial and multi-family residential customers. Rebates of up to \$100 per toilet are offered for replacing a 3.5 gallon per flush toilet or a faulty toilet with an approved high-efficiency toilet. Each HET Program is estimated to save an average of 36 gallons per day per household (ULFTs are estimated to save 30 gallons per day per household). The toilet rebate program has been quite successful in the City's service area. The City plans on continuing to support this program through Zone 7 as an effective

regional approach to further reducing water demand within the City's service area. The program is marketed on the City's and Zone 7's water conservation websites, and was highlighted during local events and marketing in 2008 when the program transitioned into the HET Program.

Since 1998, Zone 7 has had a Residential Clothes Washer Rebate Program available to Livermore-Amador Valley water customers. The rebate is for the purchase of qualifying high-efficiency clothes washing machines. In 2008, Zone 7 partnered with Pacific Gas and Electric (PG&E) and other San Francisco Bay Area water agencies on a regional strategy to increase water and energy efficiency. The current program offers a combined rebate of up to \$150 for "Energy Star Most Efficient 2015 Model" clothes washers, and \$50 for qualifying Tier 3 high-efficient washers.

High-efficiency washing machines use about 50 percent less water than conventional, top-loading models; using only 20 to 30 gallons of water per load compared to 40 to 45 gallons. The estimated annual savings for a typical household is about 5,100 gallons per year. The HEW program has been very successful in the City's service area, with customer participation increasing as financial incentive increased. The rebate amount is dependent upon the washer efficiency tier purchased. The City plans to continue to support this program through Zone 7 as an effective regional program to further reduce future water demand in the City's service area.

The City also partners with Zone 7 to provide a Weather-Based Irrigation Controller Rebate Program. The program is available to irrigation customers (including CII and multi-family customers). Eligible Smart Controllers can receive up to 50 percent or \$3,000 of the cost of the new controller.

9.3.6 Recycled Water Program

As described in *Chapter 6 System Supplies*, the City has recently implemented a recycled water program to provide recycled water for landscape irrigation and offset potable water demand. The program has reduced both existing and projected potable water demands within the City's service area.



9.4 PLANNED IMPLEMENTATION TO ACHIEVE WATER USE TARGETS

Water conservation measures are a vital part of the City's overall plan to achieve, reliable, high quality, and cost-effective water supply for its customers. As described in this chapter, the City has and continues to implement a number of water conservation measures. Development of the AMI project and expansion of the City's Recycled Water Project will significantly contribute to the reduction of wasteful or unnecessary potable water use in the City. Additional information regarding the City's conservation activities is provided in Appendix L.

9.5 MEMBERS OF THE CALIFORNIA URBAN WATER CONSERVATION COUNCIL

In 1991 (amended September 16, 1999), an Memorandum of Understanding (MOU) regarding urban water conservation in California was made that formalizes an agreement between DWR, water utilities, 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 California Urban Water Conservation Council (CUWCC). The Act (Water Code 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.

However, the City is not a signatory of the CUWCC's MOU.

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CHAPTER 10

Plan Adoption, Submittal, and Implementation



This chapter provides information regarding the notification, public hearing and adoption of the City’s 2015 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 a water supplier bases its accounting on a fiscal year (July through June) the data must be through the end of the 2015 fiscal year (June 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 1, 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 listed in Table 10-1.

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

City Name	60 Day Notice	Notice of Public Hearing
City of Pleasanton	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
County Name	60 Day Notice	Notice of Public Hearing
Alameda County	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
NOTES: This table lists only the cities and counties that the City is required to notify. See text for list of other cities, agencies and stakeholders notified.		

Other agencies notified included the following:

- Pleasanton Chamber of Commerce
- Pleasanton Downtown Association
- Pleasanton Unified School District
- Hacienda Business Owners Association
- Sunol Citizen's Advisory Council
- Zone 7 Water Agency
- Dublin San Ramon Services District
- California Water Service Company
- City of Livermore
- San Francisco Public Utilities Commission

Public hearing notifications for adopting the Plan were published the local newspaper (Valley Times). 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.

A public hearing to discuss the Draft 2015 UWMP was held on June 7, 2016. The public hearing provided an opportunity for the City's customers 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 per capita water use targets (described in *Chapter 5 SBX7-7 Baselines and Targets*) was also discussed. Copies of the Draft 2015 UWMP were made available at the Office of the City Clerk, the Pleasanton Public Library and an electronic version was placed on the City's website (www.cityofpleasantonca.gov).

This 2015 UWMP was adopted by the Pleasanton City Council on ____, 2016. A copy of the adoption resolution is provided in Appendix M.

10.4 PLAN SUBMITTAL

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

Chapter 10

Plan Adoption, Submittal, and Implementation



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 city (City of Pleasanton) and county (Alameda County) to which the City provides water.

10.5 PUBLIC AVAILABILITY

No later than 30 days after submittal to DWR, copies of this 2015 UWMP will be available for public review during normal business hours at the following location:

- Pleasanton Public Library (Reference Desk), 400 Old Bernal Avenue, Pleasanton

An electronic copy of this 2015 UWMP will also be available for review and download on the City's website (www.cityofpleasantonca.gov).

10.6 PLAN IMPLEMENTATION

This 2015 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 the California Environmental Quality Act and would demand an amount of water equivalent or greater than the amount of water required by a 500 dwelling unit project. This 2015 UWMP will also provide guidance and direction on development of new water local supplies and implementation of water conservation programs and recycled water expansion to meet the requirements of SB X7-7.

10.7 AMENDING AN ADOPTED UWMP

If the City amends its 2015 UWMP, copies of amendments or changes will be submitted to DWR, the California State Library, and any city or county within which the supplier 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 §10608-10608.8**
- Chapter 2. Definitions §10608.12**
- Chapter 3. Urban Retail Water Suppliers §10608.16-10608.44**
- Chapter 4. Agricultural Water Suppliers §10608.48**
- Chapter 5. Sustainable Water Management §10608.50**
- Chapter 6 Standardized Data Collection §10608.52**
- Chapter 7 Funding Provisions §10608.56-10608.60**
- Chapter 8 Quantifying Agricultural Water Use Efficiency §10608.64**

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 2015 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
CA0110008	City of Pleasanton	22,004	11,355
TOTAL		22,004	11,355
NOTES: Volumes are in acre-feet (AF); number of connections and volume of water supplied is for potable water system only.			

Table 2-2: Plan Identification		
Select Only One	Type of Plan	Name of RUWMP or Regional Alliance <i>if applicable</i>
<input checked="" type="checkbox"/>	Individual UWMP	
<input type="checkbox"/>	Regional Urban Water Management Plan (RUWMP)	
NOTES:		

Table 2-3: Agency Identification	
Type of Agency (select one or both)	
<input type="checkbox"/>	Agency is a wholesaler
<input checked="" type="checkbox"/>	Agency is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables Are in Calendar Years
<input type="checkbox"/>	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP	
Unit	AF
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.

Wholesale Water Supplier Name

Zone 7 Water Agency (Zone 7)

NOTES:

Table 3-1 Retail: Population - Current and Projected

Population Served	2015	2020	2025	2030	2035	2040(opt)
	71,776	78,137	81,569	85,217	89,126	93,188

NOTES: 2015 population is calculated from the DWR Population Tool. Population projections are according to ABAG's Plan Bay Area 2013.

Table 4-1 Retail: Demands for Potable and Raw Water - Actual

Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	5,264
Multi-Family		Drinking Water	943
Industrial		Drinking Water	40
Landscape		Drinking Water	2,357
Other	Commercial and Institutional	Drinking Water	1,392
Other	Unbilled Unmetered	Drinking Water	141
Losses		Drinking Water	1,218
TOTAL			11,355

NOTES: Volumes are in AF; unbilled unmetered is estimated to be 1.25 percent of total supply per AWWA Water Audit assumptions.

Table 4-2 Retail: Demands for Potable and Raw Water - Projected

Use Type	Additional Description <i>(as needed)</i>	Projected Water Use				
		2020	2025	2030	2035	2040-opt
Single Family		7,993	8,344	8,717	9,117	9,533
Multi-Family		1,432	1,494	1,562	1,633	1,708
Industrial		61	64	67	70	73
Landscape		2,279	2,436	2,603	2,782	2,968
Other	Commercial and Institutional	2,114	2,207	2,306	2,411	2,521
Other	Unbilled Unmetered	214	224	233	244	255
Losses		1,849	1,931	2,017	2,110	2,206
TOTAL		15,942	16,700	17,505	18,367	19,264

NOTES: Volumes are in AF; approximately 1,300 AF of projected landscape demands are assumed to use recycled water and are therefore not included in the projected potable water landscape demands.

Table 4-3 Retail: Total Water Demands						
	2015	2020	2025	2030	2035	2040 <i>(opt)</i>
Potable and Raw Water <i>From</i> <i>Tables 4-1 and 4-2</i>	11,355	15,942	16,700	17,505	18,367	19,264
Recycled Water Demand* <i>From</i> <i>Table 6-4</i>	104	1,800	1,800	1,800	1,800	1,800
TOTAL WATER DEMAND	11,459	17,742	18,500	19,305	20,167	21,064
NOTES: Volumes are in AF; table references refer to DWR table numbers.						

Table 4-4 Retail: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date	Volume of Water Loss*
07/2014	1,068
* Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.	
NOTES: Volumes are in AF; a copy of the City's 2014/2015 Fiscal Year Water Audit is provided in Appendix F.	

Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook)	No
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	1996	2005	246	222	197
5 Year	2004	2008	245		

*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 <i>From Methodology 8</i>					Adjusted 2015 GPCD*	2015 GPCD* <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*				
141	222	0	0	0	0	141	141	Yes	

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

NOTES: The City has elected not to make the allowable optional adjustments.

Table 6-1 Retail: Groundwater Volume Pumped

<input type="checkbox"/>	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	Livermore Valley Groundwater Basin	3,503	3,459	3,516	3,381	3,629
TOTAL		3,503	3,459	3,516	3,381	3,629
NOTES: Volumes are in AF.						

Table 6-2 Retail: Wastewater Collected Within Service Area in 2015

<input type="checkbox"/>	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2015 service area covered by wastewater collection system <i>(optional)</i>					
	Percentage of 2015 service area population covered by wastewater collection system <i>(optional)</i>					
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? <i>(optional)</i>
City of Pleasanton	Metered	5,102	DSRSD	DSRSD WWTP	Yes	No
City of Pleasanton (Ruby Hills Development)	Estimated	280	City of Livermore	LWRP	No	No
Total Wastewater Collected from Service Area in 2015:		5,382				
NOTES: Volumes are in AF.						

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

<input type="checkbox"/>	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 <i>(optional)</i>	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
DSRSD RWTP	LAVWMA and EBDA	Deepwater outfall to San Francisco Bay		Bay or estuary outfall	Yes	Tertiary	10,649	7,494	54	3,101
Total							10,649	7,494	54	3,101

NOTES: Volumes are in AF. DSRSD wastewater treated equals the total WWTP influent minus the WWTP reclaimed effluent.
The Livermore Water Reclamation Plant is not located within the City's service area, and therefore not included in this table. However, approximately 59 AF of the City's 2015 recycled water supplies came from the LWRP.

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

<input type="checkbox"/> 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:			DSRSD & City of Livermore					
Name of Agency Operating the Recycled Water Distribution System:			City of Pleasanton					
Supplemental Water Added in 2015								
Source of 2015 Supplemental Water								
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)		Tertiary	97	1,679	1,679	1,679	1,679	1,679
Golf course irrigation								
Commercial use								
Industrial use								
Geothermal and other energy production								
Seawater intrusion barrier								
Recreational impoundment								
Wetlands or wildlife habitat								
Groundwater recharge (IPR)*								
Surface water augmentation (IPR)*								
Direct potable reuse								
Other (Provide General Description)	Construction	Tertiary	7	121	121	121	121	121
Total:			104	1,800	1,800	1,800	1,800	1,800

*IPR - Indirect Potable Reuse

NOTES: Volumes are in AF and recycled water system losses are not included. Projected demand totals were provided by the City and beneficial use breakdowns are based on 2015 ratio.

Table 6-5 Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual

<input type="checkbox"/> 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)		140	97
Golf course irrigation		0	0
Commercial use		0	0
Industrial use		0	0
Geothermal and other energy production		0	0
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	<i>Construction</i>	0	7
Total		140	104

NOTES: Volumes are in AF.

Table 6-6 Retail: Methods to Expand Future Recycled Water Use

☐	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Financial incentives	Price recycled water at reduced potable rates; Reduced connection fees for new recycled water meters	2015	1,679
Building code modification	All City landscape irrigation meters will be converted to recycled water	2015	0
Total			1,679
NOTES: Volumes are in AF. The expected increase in recycled water for all actions is included in the "Financial incentives" total.			

Table 6-7 Retail: Expected Future Water Supply Projects or Programs

<input checked="" type="checkbox"/>	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.
-------------------------------------	---

<input type="checkbox"/>	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.
--------------------------	--

	Provide page location of narrative in the UWMP
--	--

Name of Future Projects or Programs	Joint Project with other agencies?	Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency

NOTES: By contract with Zone 7, the City may not pursue opportunities for development of future water supply projects.

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)
Purchased or Imported Water	Zone 7	7,726	Drinking Water	
Groundwater	Livermore Valley Basin	3,629	Drinking Water	
Recycled Water	DSRSD RWTF and City of Livermore WRP	104	Recycled Water	
Total		11,459		0
NOTES: Volumes are in AF.				

Table 6-9 Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply <i>Report To the Extent Practicable</i>									
		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)
Purchased or Imported Water	Zone 7	12,442		13,200		14,005		14,867		15,764	
Groundwater	Livermore Valley Basin	3,500		3,500		3,500		3,500		3,500	
Recycled Water	DSRSD RWTF and City of Livermore WRP	1,800		1,800		1,800		1,800		1,800	
Total		17,742	0	18,500	0	19,305	0	20,167	0	21,064	0

NOTES: Volumes are in AF.

Table 7-1 Retail: Basis of Water Year Data

Year Type	Base Year <i>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</i>	Available Supplies if Year Type Repeats	
		<input checked="" type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location: <u>Table 7-2, Table 7-3</u>
		<input type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year			100%
<p>Agency may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If an agency uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.</p>			

Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals (autofill from Table 6-9)	17,742	18,500	19,305	20,167	21,064
Demand totals (autofill from Table 4-3)	17,742	18,500	19,305	20,167	21,064
Difference	0	0	0	0	0
NOTES: Volumes are in AF; table references refer to DWR table numbers.					

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2020	2025	2030	2035	2040 (Opt)
Supply totals	14,632	15,200	15,804	16,450	17,123
Demand totals	14,632	15,200	15,804	16,450	17,123
Difference	0	0	0	0	0
NOTES: Volumes are in AF.					

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	15,876	16,520	17,204	17,937	18,699
	Demand totals	15,876	16,520	17,204	17,937	18,699
	Difference	0	0	0	0	0
Second year	Supply totals	15,876	16,520	17,204	17,937	18,699
	Demand totals	15,876	16,520	17,204	17,937	18,699
	Difference	0	0	0	0	0
Third year	Supply totals	15,876	16,520	17,204	17,937	18,699
	Demand totals	15,876	16,520	17,204	17,937	18,699
	Difference	0	0	0	0	0
NOTES: Volumes are in AF.						

Table 8-1 Retail Stages of Water Shortage Contingency Plan		
Stage	Complete Both	
	Percent Supply Reduction ¹	Water Supply Condition
1	20%	Minimal Reduction
2	20%	Moderate Reduction
3	35%	Severe Reduction
4	50%	Critical Reduction
<i>¹ One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.</i>		
NOTES:		

Table 8-2 Retail Only: Restrictions and Prohibitions on End Uses

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference <i>(optional)</i>	Penalty, Charge, or Other Enforcement?
All	Landscape - Restrict or prohibit runoff from landscape irrigation		Yes
All	Landscape - Limit landscape irrigation to specific times	Watering is allowed only between 9 pm and 6 am	Yes
1	Landscape - Limit landscape irrigation to specific days	Limited to 1 day per week October through March	Yes
2	Landscape - Limit landscape irrigation to specific days	Limited to 3 nonconsecutive days per week April through September	Yes
3	Landscape - Limit landscape irrigation to specific days	Limited to 2 nonconsecutive days per week April through September	Yes
4	Landscape - Prohibit certain types of landscape irrigation	No turf irrigation	Yes
1	Landscape - Other landscape restriction or prohibition	Sprinklers are to be turned off during and 48 hours following measurable precipitation	Yes
4	Landscape - Other landscape restriction or prohibition	Hand water non-turf landscaping Saturday or Sunday only	Yes
All	CII - Restaurants may only serve water upon request		Yes
All	CII - Lodging establishment must offer opt out of linen service		Yes
2	CII - Commercial kitchens required to use pre-rinse spray valves		Yes
1	CII - Other CII restriction or prohibition	Post water conservation messages on bathroom mirrors	No
4	CII - Other CII restriction or prohibition	Prohibit use of non-efficient washing machines	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	Decorative water features must be equipped with a recirculating pump; Prohibit potable water use; Allow drain and refill only for health or structural needs	Yes
1	Pools and Spas - Require covers for pools and spas		No
3	Other water feature or swimming pool restriction	Must be equipped with a recirculating pump	Yes
3	Other water feature or swimming pool restriction	Allow drain and refill of pools and spas only for health or structural needs; Prohibit initial filling	Yes
4	Other water feature or swimming pool restriction	No person shall drain and refill swimming pools and spas	Yes
All	Other - Prohibit use of potable water for construction and dust control	Use of water for construction activities and commercial power washing should utilize recycled water, rather than potable water	No
2	Other - Prohibit use of potable water for construction and dust control	No potable water for construction use when reasonable	Yes
1	Other - Require automatic shut of hoses	For vehicle or machinery washing	Yes
All	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Must be within 8 hours after customer is notified or discovers break	Yes
All	Other - Prohibit use of potable water for washing hard surfaces	Use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground, or other hard surfaces by direct application	Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water		Yes
All	Other	No wastewater from vehicle washing may enter storm drain system	Yes
1	Other	Use broom and bucket to wash hard surfaces	No

NOTES: All Stage 1 restrictions become enforced in Stage 2. Restrictions not associated with a specific stage are in effect at all times.

**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 <i>(optional)</i>
All	Offer Water Use Surveys	Controller Assistance Program; Large Landscape Audit Support Services Program
All	Provide Rebates for Landscape Irrigation Efficiency	Water Efficient Irrigation Rebate Program
All	Provide Rebates for Turf Replacement	
All	Reduce System Water Loss	
All	Implement or Modify Drought Rate Structure or Surcharge	
1	Expand Public Information Campaign	
1	Provide Rebates on Plumbing Fixtures and Devices	Offer rebates on low flow rinse nozzles, high efficiency washing machines, high-efficiency toilet replacement program
1	Reduce System Water Loss	Obligation to fix leaks, breaks, or other malfunctions
2	Implement or Modify Drought Rate Structure or Surcharge	
2	Decrease Line Flushing	
NOTES: Consumption reduction methods not associated with a stage are on-going DMMs		

Table 8-4 Retail: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	14,045	12,722	13,441
NOTES: Volumes are in AF and are for potable water system only.			

Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
City of Pleasanton	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
County Name	60 Day Notice	Notice of Public Hearing
Alameda County	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<p>NOTES: This table lists only the cities and counties that the City is required to notify. See text for list of other cities, agencies and stakeholders notified.</p>		

APPENDIX C

DWR 2015 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 2.5.2 (page 2-4)
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 2.5.2.2 (page 2-4); Appendix D
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 3.5 (page 3-4)
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	Section 3.6.1 (page 3-5)
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	Section 3.6.2 (page 3-5)
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	Section 3.6.1 (page 3-5)
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 4-1)
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 4-5)
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 5-5); Appendix G
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	Sections 5.5, 5.6, and 5.7 (page 5-4); Appendix G
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 to the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	Section 5.6 (page 5-5); Appendix G
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 5-6); Appendix G
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	Section 5.7 (page 5-6); Appendix G
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 5-6); Appendix G
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	Chapter 6; Section 6.9 (page 6-29)
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 6-9)
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 6-9); Appendix H
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	Section 6.2.1 (page 6-9)
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 6.2.1 (page 6-9)
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	Section 6.2.1 (page 6-9)

**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 6.2.3 (page 6-15)
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	Section 6.9 (page 6-29)
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 6-25)
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 6-26)
10631(i)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	Section 6.6 (page 6-24)
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 6-16)
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 6-16)
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 6-16)
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 6-19)
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 6-22)
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 6-22)
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 6-24)
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 6-24)
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 7-11)
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 (page 7-1); Section 7.4 (page 7-11)
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 7-8)
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)
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 8-11)
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 8-10)

**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 8-2)
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	Section 8.4 (page 8-7)
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	Section 8.3 (page 8-7)
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 8-9)
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	Section 8.7 (page 8-9)
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 8-8)
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 9.5 (page 9-11)
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 10-2)
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); Appendix D
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 (page 10-2); Appendix M
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 and 10-3)
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 10-3)

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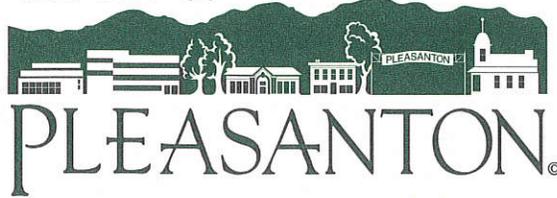
APPENDIX D

Required Notices

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THE CITY OF



February 18, 2016

Sent Via Email to scott@pleasanton.org

Scott Raty
Pleasanton Chamber of Commerce
777 Peters Avenue
Pleasanton, CA 94566

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Raty,

The City of Pleasanton (City) would like to inform the Pleasanton Chamber of Commerce that the 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 2010 UWMP and will make amendments and updates, as appropriate.

If you wish to contact the City about its review process, you may contact Rita Di Candia, Water Conservation Manager, in writing or by email at rdicandia@cityofpleasantonca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "K. Yurchak", is written over a light blue horizontal line.

Kathleen Yurchak
Director of Operations Services

OPERATIONS SERVICES DEPARTMENT

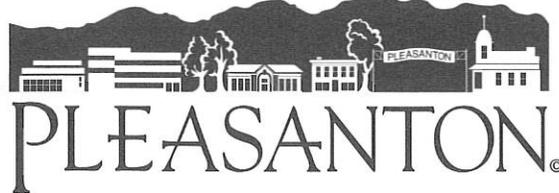
3333 Busch Road
(925) 931-5500
(925) 931-5595 Fax

P.O. Box 520, Pleasanton, CA 94566-0802

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THE CITY OF



February 17, 2016

Sent Via Email to director@pleasantondowntown.net

Laura Olson
Executive Director
Pleasanton Downtown Association
4725 First Street Suite 200
Pleasanton, CA 94566

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Ms. Olson,

The City of Pleasanton (City) would like to inform the Pleasanton Downtown Association that the 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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Kathleen Yurchak
Director of Operations Services

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PLEASANTON®

February 17, 2016

Jim Hansen
Interim Superintendent
Pleasanton Unified School District
4665 Bernal Ave.
Pleasanton, CA 94566

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Hansen,

The City of Pleasanton (City) would like to inform the Pleasanton Unified School District that the 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,

Kathleen Yurchak
Director of Operations Services

OPERATIONS SERVICES DEPARTMENT

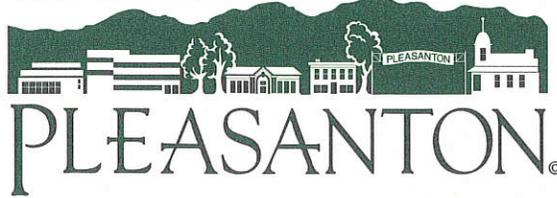
3333 Busch Road
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P.O. Box 520, Pleasanton, CA 94566-0802

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THE CITY OF



February 17, 2016

Sent Via Email to james@hacienda.org

James Paxson
Hacienda Business Owners Association
4473 Willow Rd #105
Pleasanton, CA 94588

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Paxson,

The City of Pleasanton (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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Kathleen Yurchak
Director of Operations Services

OPERATIONS SERVICES DEPARTMENT

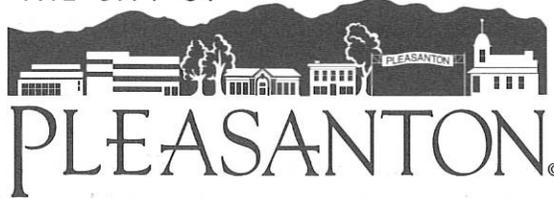
3333 Busch Road
(925) 931-5500
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P.O. Box 520, Pleasanton, CA 94566-0802

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THE CITY OF



February 22, 2016

Richard Valle
District 2 Supervisor
Sunol Citizen's Advisory Council
24301 Southland Drive, Suite 101
Hayward, CA 94545

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Valle,

The City of Pleasanton (City) would like to inform the Sunol Citizen's Advisory Council that the 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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Kathleen Yurchak
Director of Operations Services

OPERATIONS SERVICES DEPARTMENT

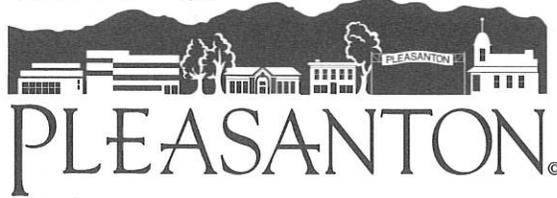
3333 Busch Road
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P.O. Box 520, Pleasanton, CA 94566-0802

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THE CITY OF



February 16, 2016

Frank Vallejo
District Manager
California Water Service
195 South N Street
Livermore, CA 94550

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Vallejo,

The City of Pleasanton (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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Kathleen Yurchak
Director of Operations Services

OPERATIONS SERVICES DEPARTMENT

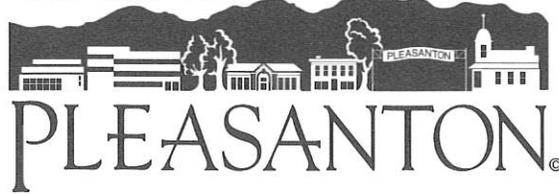
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February 16, 2016

David Briggs
Local and Regional Water System Manager
San Francisco PUC, Water Supply & Treatment Division
1000 El Camino Real
Millbrae, CA 94030

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Briggs,

The City of Pleasanton (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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Kathleen Yurchak
Director of Operations Services

OPERATIONS SERVICES DEPARTMENT

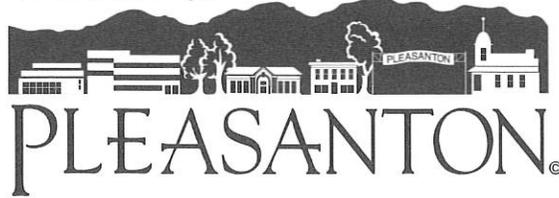
3333 Busch Road
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Parks
Water

THE CITY OF



February 16, 2016

Darren Greenwood
Public Works Director
City of Livermore
1052 S. Livermore Ave
Livermore, CA 94550

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Greenwood,

The City of Pleasanton (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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Kathleen Yurchak
Director of Operations Services

OPERATIONS SERVICES DEPARTMENT

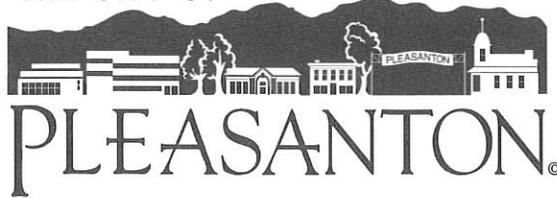
3333 Busch Road
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P.O. Box 520, Pleasanton, CA 94566-0802

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Parks
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THE CITY OF



February 16, 2016

John Archer
Interim General Manager
Dublin San Ramon Services District
7051 Dublin Blvd.
Dublin, CA 94568

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Archer,

The City of Pleasanton (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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Director of Operations Services

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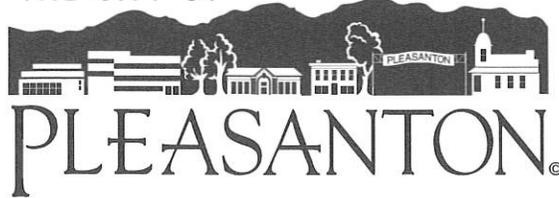
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February 16, 2016

Albert Lopez
Planning Director
Alameda County Planning Department
224 W. Winton, Room 111
Hayward, CA 94544

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mr. Lopez,

The City of Pleasanton (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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Kathleen Yurchak
Director of Operations Services

OPERATIONS SERVICES DEPARTMENT

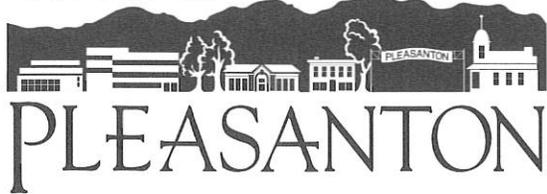
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P.O. Box 520, Pleasanton, CA 94566-0802

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THE CITY OF



February 16, 2016

Jill Duerig
General Manager
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

SUBJECT: City of Pleasanton 2015 Urban Water Management Plan Update

Dear Mrs. Duerig,

The City of Pleasanton (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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Kathleen Yurchak
Director of Operations Services

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APPENDIX E

DWR Population Tool

DRAFT

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Please print this page to a PDF and include as part of your UWMP submittal.

Confirmation Information

Generated By Shelly Dean	Water Supplier Name Pleasanton City Of	Confirmation # 9445295035	Generated On 1/14/2016 1:35:10 PM
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Boundary Information

Census Year	Boundary Filename	Internal Boundary ID
1990	Service Boundary 1990.kml	436
2000	Service Boundary 2000.kml	437
2010	Service Boundary 2010.kml	438

Baseline Period Ranges

10 to 15-year baseline period

2008 total water deliveries ¹ :	18813	Acre Feet (AF) ▼
2008 total volume of delivered recycled water ¹ :	0	Acre Feet (AF)
2008 recycled water as a percent of total deliveries:	0.00%	
Number of years in baseline period ² :	10	
Year beginning baseline period range:	1996 ▼	
Year ending baseline period range ³ :	2005	

5-year baseline period

Year beginning baseline period range:	2004 ▼
Year ending baseline period range ⁴ :	2008

¹ The selected units of measure must apply to both the 2008 total water deliveries and the 2008 total volume of delivered recycled water. If the water supplier records use different units of measure for these volumes, the user must make a conversion so that both volumes are in the same units of measure.

² 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.

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.

Persons per Connection

Year	Census Block Level	Number of Connections *	Persons per Connection
	Total Population		
1990	48,609	14723	3.30
1991	-	-	3.32
1992	-	-	3.33
1993	-	-	3.35
1994	-	-	3.37
1995	-	-	3.38
1996	-	-	3.40
1997	-	-	3.42
1998	-	-	3.44
1999	-	-	3.45
2000	62,457	17986	3.47
2001	-	-	3.48
2002	-	-	3.49
2003	-	-	3.50
2004	-	-	3.51
2005	-	-	3.52
2006	-	-	3.52
2007	-	-	3.53
2008	-	-	3.54
2009	-	-	3.55
2010	69,244	19451	3.56
2015	-	-	3.60

* Number of Connections may be either All Residential Connections (Single Family and Multi-Family combined) or All Service Connections. This will depend on the data available from the water supplier's records, but must remain consistent throughout the table.

Population Using Persons-Per-Connection

Year		Number of Connections *	Persons per Connection	Total Population
10 to 15 Year Baseline Population Calculations				
Year 1	1996	16327	3.40	55,544
Year 2	1997	16935	3.42	57,901
Year 3	1998	17416	3.44	59,841
Year 4	1999	17752	3.45	61,298
Year 5	2000	17986	3.47	62,457
Year 6	2001	18185	3.48	63,266
Year 7	2002	18426	3.49	64,270
Year 8	2003	18779	3.50	65,670
Year 9	2004	18987	3.51	66,568
Year 10	2005	19193	3.52	67,463
5 Year Baseline Population Calculations				
Year 1	2004	18987	3.51	66,568
Year 2	2005	19193	3.52	67,463
Year 3	2006	19319	3.52	68,080
Year 4	2007	19393	3.53	68,515
Year 5	2008	19421	3.54	68,789
2015 Compliance Year Population Calculations				
	2015	19911	3.60	71,776

** Number of Connections may be either All Residential Connections (Single Family and Multi-Family combined) or All Service Connections. This will depend on the data available from the water supplier's records, but must remain consistent throughout the table.*

Hide Print Confirmation

QUESTIONS / ISSUES? CONTACT THE WUE DATA HELP DESK

APPENDIX F

City of Pleasanton 2015 Water Audit

DRAFT

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AWWA Free Water Audit Software v5.0

American Water Works Association Copyright © 2014. All Rights Reserved.

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format, and is not meant to take the place of a full-scale, comprehensive water audit format.

Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targetting loss reduction levels

The spreadsheet contains several separate worksheets. Sheets can be accessed using the tabs towards the bottom of the screen, or by clicking the buttons below.

Please begin by providing the following information

Name of Contact Person:

Email Address:

Telephone (incl Ext.):

Name of City / Utility:

City/Town/Municipality:

State / Province:

Country:

Year:

Start Date: Enter MM/YYYY numeric format

End Date: Enter MM/YYYY numeric format

Audit Preparation Date:

Volume Reporting Units:

PWSID / Other ID:

The following guidance will help you complete the Audit

All audit data are entered on the [Reporting Worksheet](#)

- Value can be entered by user
- Value calculated based on input data
- These cells contain recommended default values

Use of Option (Radio) Buttons: Pcnt: Value:

Select the default percentage by choosing the option button on the left

To enter a value, choose this button and enter a value in the cell to the right

The following worksheets are available by clicking the buttons below or selecting the tabs along the bottom of the page

<p><u>Instructions</u></p> <p>The current sheet. Enter contact information and basic audit details (year, units etc)</p>	<p><u>Reporting Worksheet</u></p> <p>Enter the required data on this worksheet to calculate the water balance and data grading</p>	<p><u>Comments</u></p> <p>Enter comments to explain how values were calculated or to document data sources</p>	<p><u>Performance Indicators</u></p> <p>Review the performance indicators to evaluate the results of the audit</p>	<p><u>Water Balance</u></p> <p>The values entered in the Reporting Worksheet are used to populate the Water Balance</p>	<p><u>Dashboard</u></p> <p>A graphical summary of the water balance and Non-Revenue Water components</p>
<p><u>Grading Matrix</u></p> <p>Presents the possible grading options for each input component of the audit</p>	<p><u>Service Connection Diagram</u></p> <p>Diagrams depicting possible customer service connection line configurations</p>	<p><u>Definitions</u></p> <p>Use this sheet to understand the terms used in the audit process</p>	<p><u>Loss Control Planning</u></p> <p>Use this sheet to interpret the results of the audit validity score and performance indicators</p>	<p><u>Example Audits</u></p> <p>Reporting Worksheet and Performance Indicators examples are shown for two validated audits</p>	<p><u>Acknowledgements</u></p> <p>Acknowledgements for the AWWA Free Water Audit Software v5.0</p>

If you have questions or comments regarding the software please contact us via email at: wlc@awwa.org



AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0
American Water Works Association.
Copyright © 2014, All Rights Reserved.

? Click to access definition
+ Click to add a comment

Water Audit Report for: **City of Pleasanton (CA0110008)**
Reporting Year: **FY 2014/15** **7/2014 - 6/2015**

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

All volumes to be entered as: ACRE-FEET PER YEAR

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

Master Meter and Supply Error Adjustments

WATER SUPPLIED

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

Volume from own sources:	+ ?	9	3,113.181	acre-ft/yr
Water imported:	+ ?	9	8,959.816	acre-ft/yr
Water exported:	+ ?	n/a	0.000	acre-ft/yr

Pcnt:	+ ?	7	<input type="radio"/>	<input type="radio"/>	Value:		acre-ft/yr
	+ ?	7	<input checked="" type="radio"/>	<input type="radio"/>			acre-ft/yr
	+ ?		<input type="radio"/>	<input type="radio"/>			acre-ft/yr

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

WATER SUPPLIED: **12,072.997** acre-ft/yr

AUTHORIZED CONSUMPTION

Billed metered:	+ ?	9	10,853.740	acre-ft/yr
Billed unmetered:	+ ?	n/a	0.000	acre-ft/yr
Unbilled metered:	+ ?	n/a	0.000	acre-ft/yr
Unbilled unmetered:	+ ?	7	150.912	acre-ft/yr

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

AUTHORIZED CONSUMPTION: **11,004.652** acre-ft/yr

Click here: ?
for help using option buttons below

Pcnt:	1.25%	<input checked="" type="radio"/>	<input type="radio"/>	Value:		acre-ft/yr
-------	-------	----------------------------------	-----------------------	--------	--	------------

Use buttons to select percentage of water supplied OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

1,068.344 acre-ft/yr

Apparent Losses

Unauthorized consumption: + ? **30.182** acre-ft/yr

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

Customer metering inaccuracies:	+ ?	7	0.000	acre-ft/yr
Systematic data handling errors:	+ ?	7	27.134	acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: **57.317** acre-ft/yr

Pcnt:	0.25%	<input checked="" type="radio"/>	<input type="radio"/>	Value:		acre-ft/yr
-------	-------	----------------------------------	-----------------------	--------	--	------------

	0.25%	<input checked="" type="radio"/>	<input type="radio"/>			acre-ft/yr
--	-------	----------------------------------	-----------------------	--	--	------------

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **1,011.028** acre-ft/yr

WATER LOSSES: **1,068.344** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: **1,219.257** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	9	330.0	miles
Number of <u>active AND inactive</u> service connections:	+ ?	8	22,004	
Service connection density:	?		67	conn./mile main

Are customer meters typically located at the curbside or property line? Yes

Average length of customer service line: + ?

(length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 8 **72.0** psi

COST DATA

Total annual cost of operating water system:	+ ?	7	\$14,767,706	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	7	\$2.29	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+ ?	7	\$792.10	\$/acre-ft

Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 78 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: Unauthorized consumption
- 2: Systematic data handling errors
- 3: Customer metering inaccuracies

APPENDIX G

SB X7-7 Verification Tables

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SB X7-7 Table 0: Units of Measure Used in UWMP*
(select one from the drop down list)

Acre Feet

**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	18,813	Acre Feet
	2008 total volume of delivered recycled water	0	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period ^{1,2}	10	Years
	Year beginning baseline period range	1996	
	Year ending baseline period range ³	2005	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2004	
	Year ending baseline period range ⁴	2008	

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)	
<input type="checkbox"/>	1. Department of Finance (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input type="checkbox"/>	2. Persons-per-Connection Method
<input checked="" type="checkbox"/>	3. DWR Population Tool
<input type="checkbox"/>	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	1996	55,544
Year 2	1997	57,901
Year 3	1998	59,841
Year 4	1999	61,298
Year 5	2000	62,457
Year 6	2001	63,266
Year 7	2002	64,270
Year 8	2003	65,670
Year 9	2004	66,568
Year 10	2005	67,463
<i>Year 11</i>		
<i>Year 12</i>		
<i>Year 13</i>		
<i>Year 14</i>		
<i>Year 15</i>		
5 Year Baseline Population		
Year 1	2004	66,568
Year 2	2005	67,463
Year 3	2006	68,080
Year 4	2007	68,515
Year 5	2008	68,789
2015 Compliance Year Population		
	2015	71,776
NOTES:		

SB X7-7 Table 4: Annual Gross Water Use *

Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Distribution System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use	
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Agricultural Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>		
10 to 15 Year Baseline - Gross Water Use								
Year 1	1996	15,328			-		-	15,328
Year 2	1997	16,924			-		-	16,924
Year 3	1998	15,332			-		-	15,332
Year 4	1999	16,656			-		-	16,656
Year 5	2000	16,952			-		-	16,952
Year 6	2001	18,155			-		-	18,155
Year 7	2002	18,214			-		-	18,214
Year 8	2003	17,699			-		-	17,699
Year 9	2004	18,854			-		-	18,854
Year 10	2005	18,061			-		-	18,061
<i>Year 11</i>	0	-			-		-	-
<i>Year 12</i>	0	-			-		-	-
<i>Year 13</i>	0	-			-		-	-
<i>Year 14</i>	0	-			-		-	-
<i>Year 15</i>	0	-			-		-	-
10 - 15 year baseline average gross water use							17,217	
5 Year Baseline - Gross Water Use								
Year 1	2004	18,854			-		-	18,854
Year 2	2005	18,061			-		-	18,061
Year 3	2006	18,303			-		-	18,303
Year 4	2007	19,118			-		-	19,118
Year 5	2008	18,752			-		-	18,752
5 year baseline average gross water use							18,618	
2015 Compliance Year - Gross Water Use								
2015		11,355	-		-		-	11,355

* 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		Local GW and Purchased Zone 7 Supplies		
s				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment* <i>Optional (+/-)</i>	Corrected Volume Entering Distribution System	
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1996	15,328		15,328
Year 2	1997	16,924		16,924
Year 3	1998	15,332		15,332
Year 4	1999	16,656		16,656
Year 5	2000	16,952		16,952
Year 6	2001	18,155		18,155
Year 7	2002	18,214		18,214
Year 8	2003	17,699		17,699
Year 9	2004	18,854		18,854
Year 10	2005	18,061		18,061
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2004	18,854		18,854
Year 2	2005	18,061		18,061
Year 3	2006	18,303		18,303
Year 4	2007	19,118		19,118
Year 5	2008	18,752		18,752
2015 Compliance Year - Water into Distribution System				
2015	11,355			11,355
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				
NOTES:				

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

Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Annual Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1996	55,544	15,328	246
Year 2	1997	57,901	16,924	261
Year 3	1998	59,841	15,332	229
Year 4	1999	61,298	16,656	243
Year 5	2000	62,457	16,952	242
Year 6	2001	63,266	18,155	256
Year 7	2002	64,270	18,214	253
Year 8	2003	65,670	17,699	241
Year 9	2004	66,568	18,854	253
Year 10	2005	67,463	18,061	239
<i>Year 11</i>	0	-	-	
<i>Year 12</i>	0	-	-	
<i>Year 13</i>	0	-	-	
<i>Year 14</i>	0	-	-	
<i>Year 15</i>	0	-	-	
10-15 Year Average Baseline GPCD				246
5 Year Baseline GPCD				
Baseline Year <i>Fm SB X7-7 Table 3</i>		Service Area Population <i>Fm SB X7-7 Table 3</i>	Gross Water Use <i>Fm SB X7-7 Table 4</i>	Daily Per Capita Water Use
Year 1	2004	66,568	18,854	253
Year 2	2005	67,463	18,061	239
Year 3	2006	68,080	18,303	240
Year 4	2007	68,515	19,118	249
Year 5	2008	68,789	18,752	243
5 Year Average Baseline GPCD				245
2015 Compliance Year GPCD				
2015		71,776	11,355	141
NOTES:				

SB X7-7 Table 6: Gallons per Capita per Day
Summary From Table SB X7-7 Table 5

10-15 Year Baseline GPCD	246
5 Year Baseline GPCD	245
2015 Compliance Year GPCD	141
NOTES:	

SB X7-7 Table 7: 2020 Target Method*Select Only One*

Target Method		Supporting Documentation
<input checked="" type="checkbox"/>	Method 1	SB X7-7 Table 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D <i>Contact DWR for these tables</i>
<input type="checkbox"/>	Method 3	SB X7-7 Table 7-E
<input type="checkbox"/>	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
246	197

NOTES:

SB X7-7 Table 7-E: Target Method 3

Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
<input type="checkbox"/>		North Coast	137	130
<input type="checkbox"/>		North Lahontan	173	164
<input type="checkbox"/>		Sacramento River	176	167
<input checked="" type="checkbox"/>	100%	San Francisco Bay	131	124
<input type="checkbox"/>		San Joaquin River	174	165
<input type="checkbox"/>		Central Coast	123	117
<input type="checkbox"/>		Tulare Lake	188	179
<input type="checkbox"/>		South Lahontan	170	162
<input type="checkbox"/>		South Coast	149	142
<input type="checkbox"/>		Colorado River	211	200
Target <i>(If more than one region is selected, this value is calculated.)</i>				124
NOTES:				

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD <i>From SB X7-7 Table 5</i>	Maximum 2020 Target ¹	Calculated 2020 Target ²	Confirmed 2020 Target
245	233	197	197

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 <i>Fm SB X7-7 Table 7-F</i>	10-15 year Baseline GPCD <i>Fm SB X7-7 Table 5</i>	2015 Interim Target GPCD
197	246	222

NOTES:

SB X7-7 Table 9: 2015 Compliance

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments <i>(in GPCD)</i>					Adjusted 2015 GPCD	2015 GPCD <i>(Adjusted if applicable)</i>	Did Supplier Achieve Targeted Reduction for 2015?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD			
		Extraordinary Events	Weather Normalization	Economic Adjustment					
141	222	-	-	-	-	141	141	YES	

NOTES: The City has elected not to make the allowable optional adjustments.

APPENDIX H

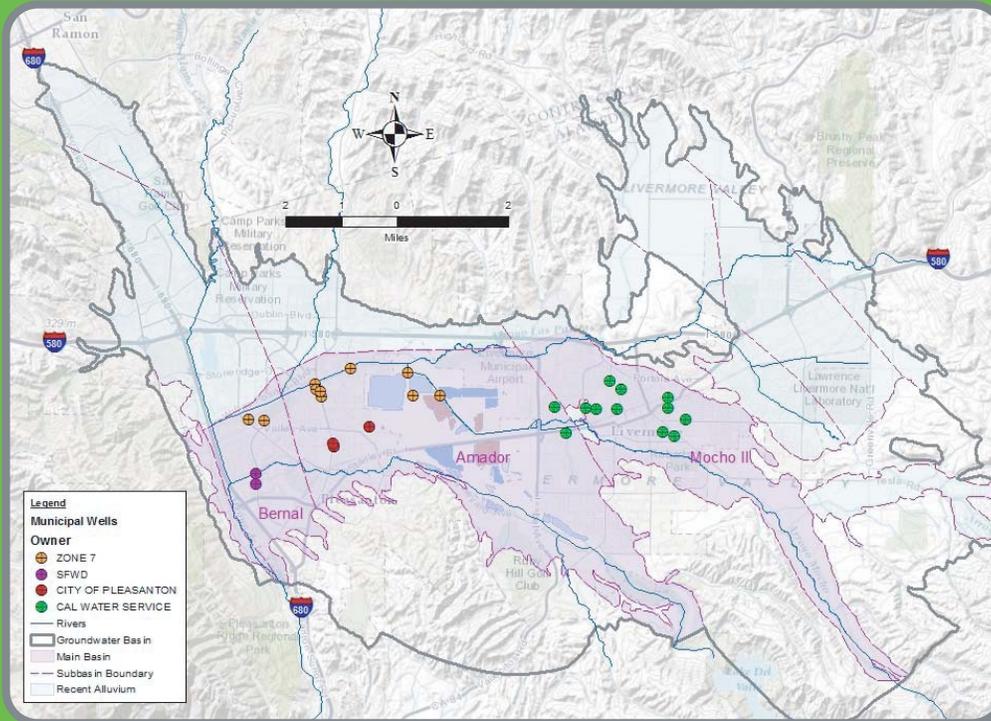
Zone 7 Groundwater Management Plan 2014 Annual Report

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ANNUAL REPORT FOR THE GROUNDWATER MANAGEMENT PROGRAM 2014 WATER YEAR

LIVERMORE VALLEY GROUNDWATER BASIN



JULY 2015



Zone 7 Water Agency

**Annual Report for the
Groundwater Management Program
2014 Water Year (October 2013 – September 2014)
Livermore Valley Groundwater Basin**

ZONE 7 WATER AGENCY

100 North Canyons Parkway

Livermore, CA 94551

(925) 454-5000

PREPARED BY:

ZONE 7 WATER AGENCY STAFF

Contributors:

Kurt Arends, P.E. – *Assistant General Manager-Engineering*

Jarnail Chahal, P.E. – *Engineering Manager*

Jill Duerig, P.E. – *General Manager*

Mike Garguilo – *Water Resources Technician*

Ryan Gromer – *Water Resources Technician*

Wyman Hong – *Water Resources Technician*

Matt Katen, P.G., H.G. – *Principal Geologist*

Tom Rooze, P.G., E.G. – *Associate Geologist*

Sal Segura, P.E. – *Associate Engineer*

Colleen Winey, P.G. – *Assistant Geologist*

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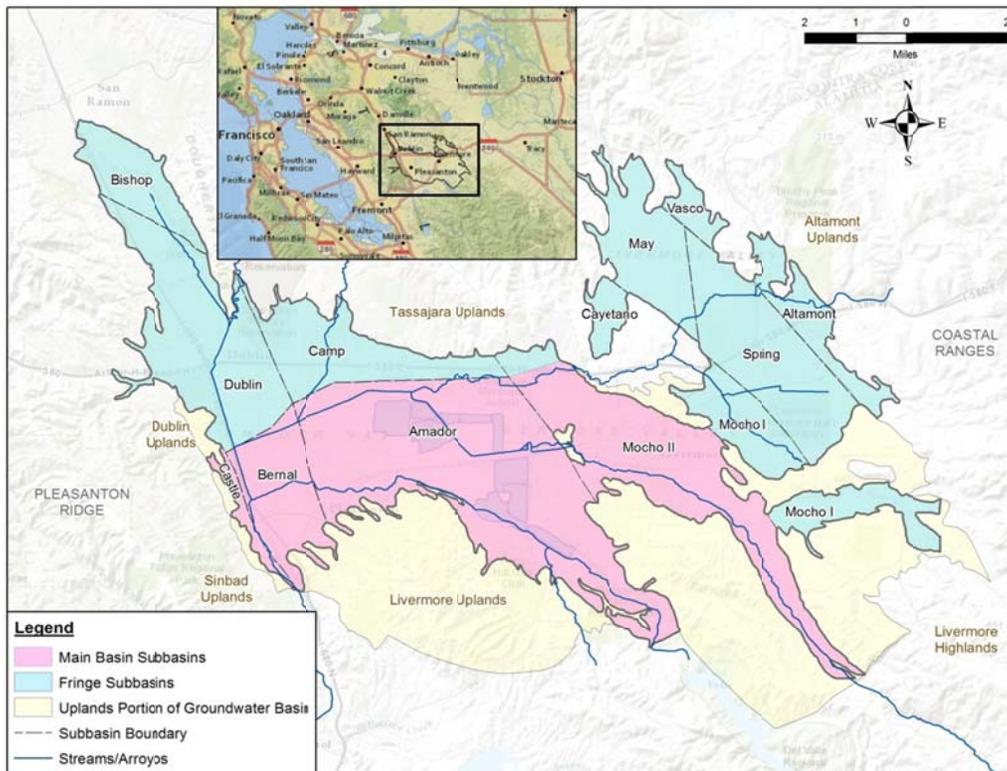
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Executive Summary

Introduction

The Annual Report for the Groundwater Management Program for the 2014 Water Year (October 1, 2013 through September 30, 2014), the format of which has changed from previous years, summarizes this year’s groundwater monitoring, evaluation, and management efforts in the Livermore Valley Groundwater Basin.

Figure ES-1: Livermore Valley Groundwater Basin



Results for each of the monitoring, evaluation, and management programs are summarized in this Executive Summary, while the details are provided in the sections that follow:

INTRODUCTION:

- Section 1: Background

GROUNDWATER MONITORING PROGRAMS:

- Section 2: Climatological
- Section 3: Surface Water
- Section 4: Chain of Lakes
- Section 5: Groundwater Elevations

- Section 6: Groundwater Quality
- Section 7: Land Surface Elevation
- Section 8: Wastewater and Recycled Water
- Section 9: Land Use

GROUNDWATER MANAGEMENT PROGRAMS:

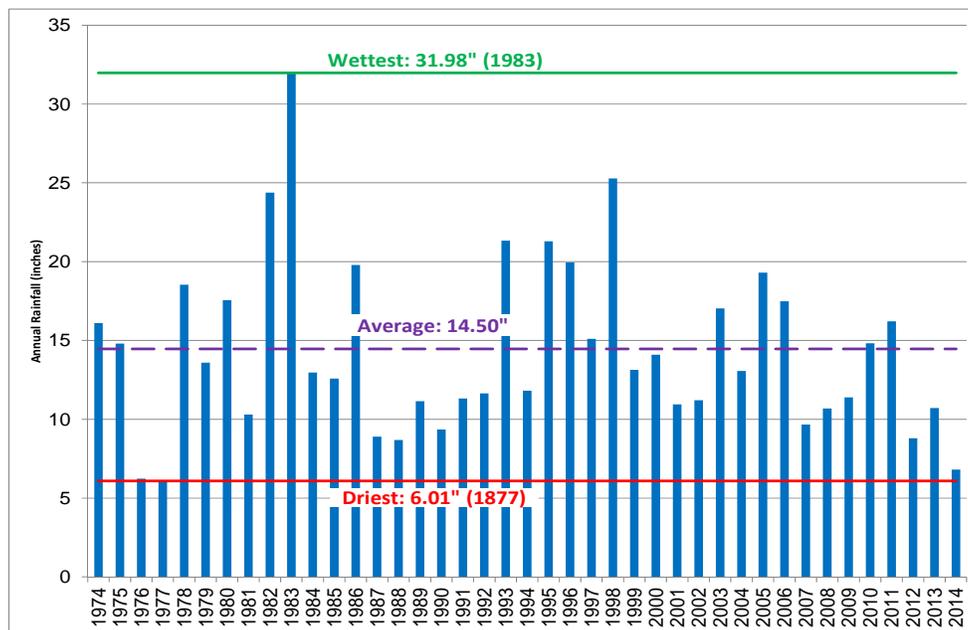
- Section 10: Groundwater Storage Management for Sustainability
- Section 11: Groundwater Supply Sustainability
- Section 12: Water Quality Sustainability

All of the data included in this report are conveyed based on the Water Year (WY, October 1 through September 30); however, due to other reporting obligations, some information in Section 11 regarding retailer pumping is also compiled and reported on a Calendar Year basis (CY, January 1 through December 31).

Climatological (Section 2)

For the 2014 WY, rainfall in the Livermore-Amador Valley was only 50% of average, and the third water year in a row with below-average rainfall. The total rainfall for Monitoring Station 15E in Livermore was 6.80 inches for the 2014 WY, which was the fifth lowest overall since the recordkeeping began in 1871. The driest water year record for Monitoring Station 15E is 6.01 inches in 1877. The aquifer replenishment from percolating rainfall was estimated to be 1,169 acre-feet (AF) which is about 27% of normal.

Figure ES-2: Sta. 15E Rainfall (inches), 1974-2014 Water Years



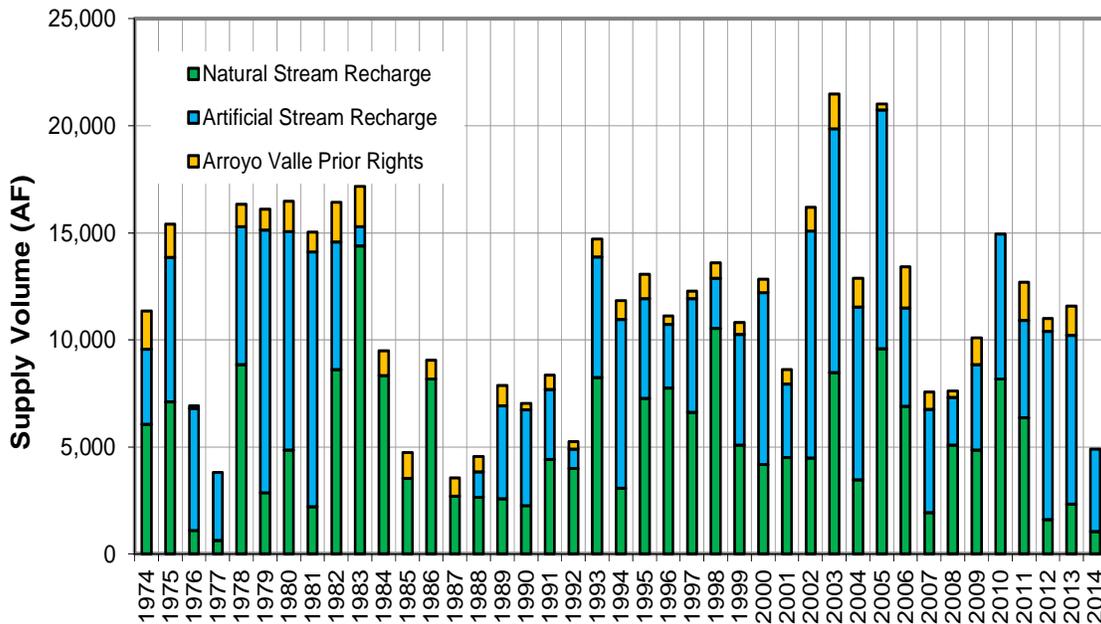
The Zone 7 network average evapotranspiration (ET_o) was approximately 49.26 inches in the 2014 WY, which is about 106% of the historical network average.

Surface Water (Section 3)

As a result of the low rainfall in the watershed and throughout Northern California during 2014 WY, natural and artificial streamflows in the Valley’s arroyos were only a fraction of their normal. Only 1% of the historical average runoff was measured at the two stream gages that monitor flows from the upper watersheds (Arroyo Mocho near Livermore [AMNL] and Arroyo Valle below Lang Canyon [AVBLC]). Zone 7 arranged for the variable releases of State Water Project (SWP) water to the Arroyo Mocho and Arroyo Del Valle between October 1 and March 30 for Zone 7’s artificial aquifer recharge operations. The releases were then discontinued for the rest of the water year due to SWP allocation cutbacks made by California Department of Water Resources (DWR). Arroyo Mocho was dry at Arroyo Mocho Hageman (AMHAG) for 77% of the water year, and Arroyo Del Valle went dry at ADVP in Pleasanton on April 28. The total stream recharge (natural and artificial) for the water year was 4,891 AF, which is 43% of average.

The dry conditions on Arroyo Del Valle precluded any water quality sampling after April 28. A total of 14,128 AF flowed past Arroyo De La Laguna at Verona (ADLLV) and out of the Valley in the 2014 WY. This is about 27% of the average outflow between 1970 and 2013.

Figure ES-3: Stream Recharge Volumes (AF), 1974 to 2014 Water Years



Chain of Lakes (Section 4)

Aggregate mining activities continued by Vulcan Materials (formerly Calmat) and Cemex (formerly RMC and Lonestar) in the central part of the groundwater basin in the 2014 WY. Vulcan Materials continued their mining in pit R24 (future Lake E), whereas Cemex continued mining in pit P42, located just north of Arroyo Valle (in the future Lake B area). As a result of mining pit dewatering activities to facilitate the extraction of aggregate resources, Vulcan

discharged 1,260 AF of groundwater to the Arroyo Mocho between October 1 and December 7, 2013, of which about 410 AF re-percolated and 850 AF flowed out of the Valley. Starting December 8, 2013, Vulcan routed its intermittent releases to Cope Lake, where Zone 7 took over management of these water resources that would have otherwise flowed out of the basin via the Arroyo Mocho.

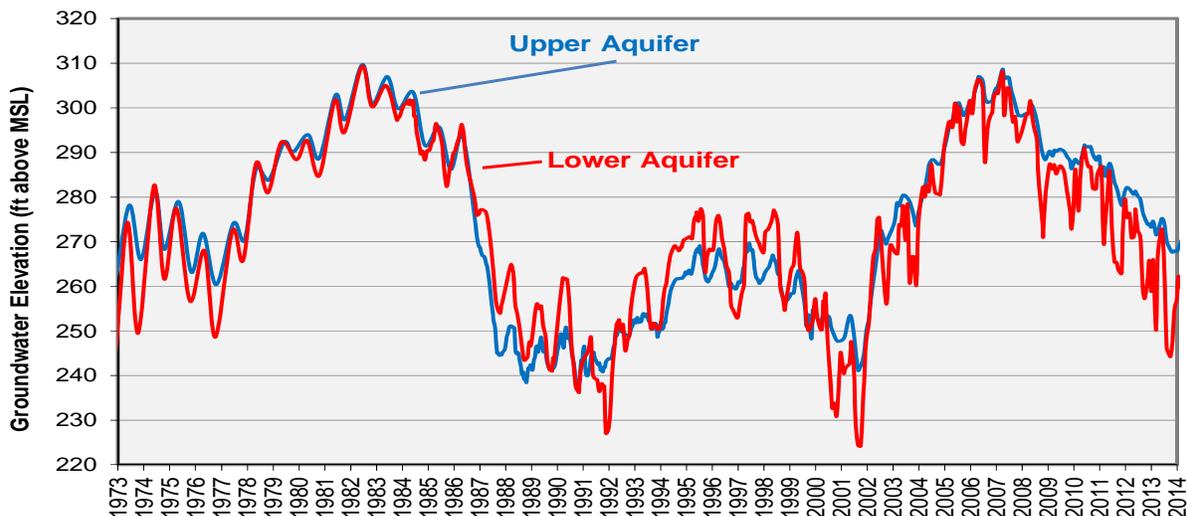
In the 2014 WY, 5,420 AF of Vulcan's discharge was captured in Cope Lake. A pipeline between Cope Lake and Lake I was installed in May 2014 that allowed approximately 881 AF of the discharged water to transfer from Cope Lake to Lake I for groundwater recharge. CEMEX did not discharge any groundwater to Arroyo Del Valle in the 2014 WY, however, evaporation from all the mining pits accounted for approximately 3,648 AF. Evaporation and exportation of moisture contained in the mined aggregate accounted for approximately an additional 700 AF of groundwater loss in the 2014 WY.

Total dissolved solids (TDS) concentrations in the mining area pits ranged from about 316 milligrams per liter (mg/L) to over 1,400 mg/L, with the better water quality (lower TDS concentrations) found in the ponds that are intercepting groundwater and artificially recharged surface water. The higher TDS concentrations are found, for the most part, in the clay-lined ponds, where evaporation is concentrating the minerals in the water.

Groundwater Elevations (Section 5)

As is usually the case, the 2014 WY groundwater levels varied with seasonal recharge and extraction. Generally the highest water levels are found in spring, at the end of the rainy season, and lowest at the end of the high demand summer/fall seasons. During the first half of the 2014 WY, groundwater elevations rose due to rainfall, artificial recharge, and subsequent reduced pumping. However, during the second half of the year, groundwater elevations leveled off and then dropped as rainfall recharge decreased and water demand increased. As a net result, water levels at the end of the water year fell between 6 and 21 feet below the levels observed at the end of the 2013 WY, in both the upper and lower aquifers.

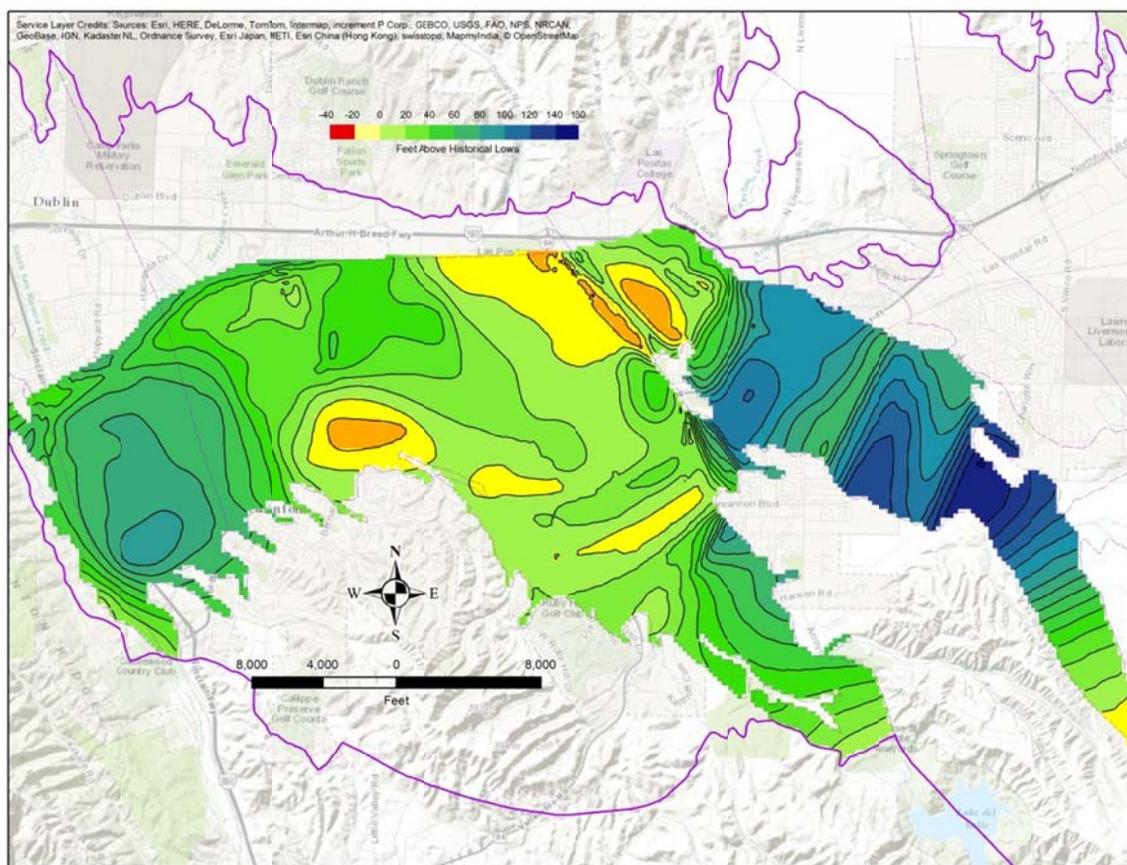
Figure ES-4: Key Well Water Levels in Amador West Subbasin (1973 to 2014)



At the end of the water year, groundwater levels in the lower aquifer in the vicinity of Zone 7's municipal wells were 25 to 69 ft above historical lows.

In the south-central portion of the Main Basin, in the vicinity of Pleasanton Well No 8, groundwater levels reached the theoretical historical low. This area of apparent historical low exceedance (shown in *Figure ES-5*), is the result of historical low elevations being approximately 10 feet higher and groundwater elevations being 20 feet lower than the surrounding areas.

Figure ES-5: Water Levels above Historical Lows (Fall 2014 Water Year)



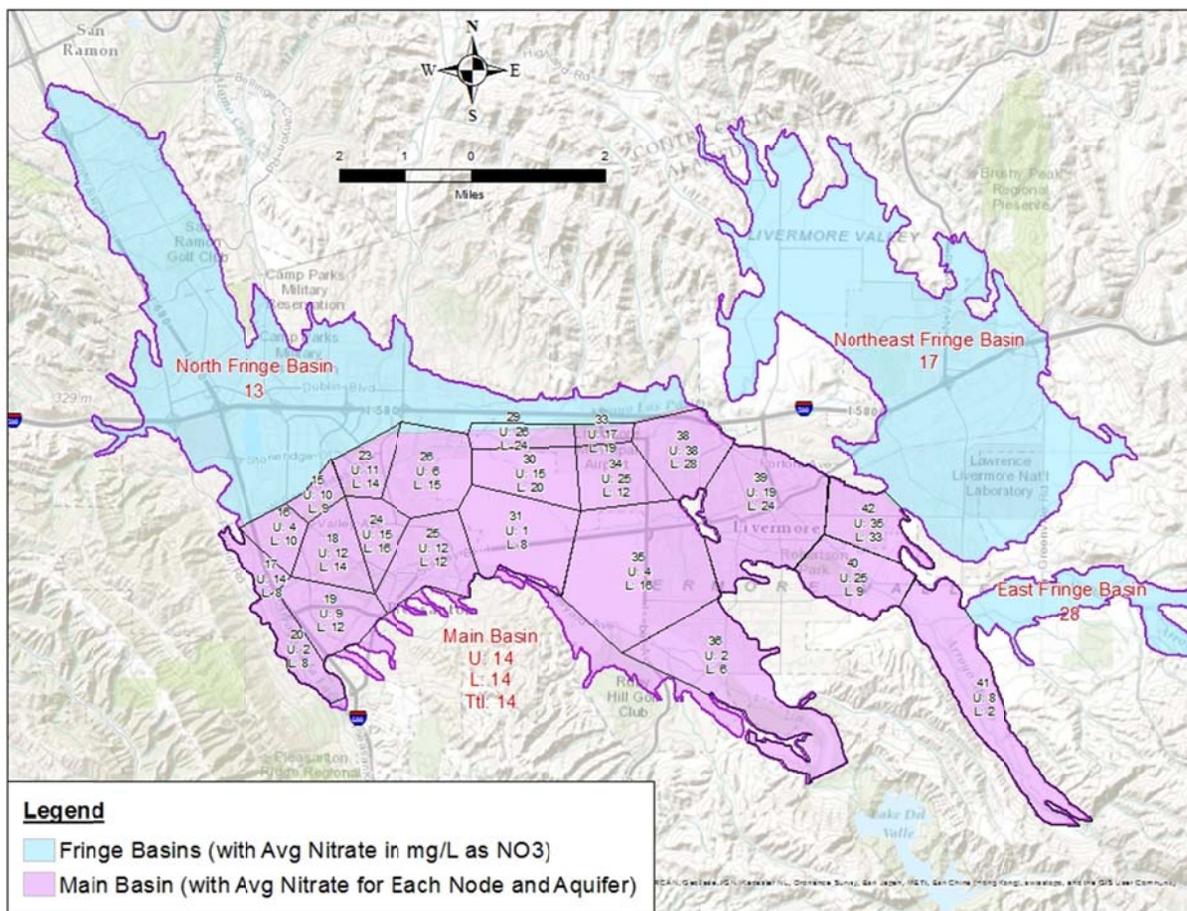
Groundwater Quality (Section 6)

Groundwater quality is generally good in the Main Basin. The main constituents of concern involved with meeting the Regional Water Quality Control Board's (RWQCB's) Basin Plan Objectives are salts (TDS) and nitrate.

The calculated basin-wide average TDS concentration at the end of the 2014 WY was approximately 598 mg/L, with the upper aquifer averaging 680 mg/L and the lower aquifer

averaging 509 mg/L. The Basin Plan objective is 500 mg/L for the Main Basin. Zone 7’s approved Salt Management Plan (SMP) provides a long-term plan for meeting this objective.

Figure ES-6: Average Nitrate Concentration by Subbasin (2014 Water Year)



There are plume-like nitrate “hot spots” distributed across the Main and fringe basins, however the aquifer weighted basin-wide average nitrate concentration is 14 mg/L (as NO₃), well below the Basin Plan objective of 45 mg/L (Figure ES-6). For the 2014 WY, the average nitrate concentration was 14 mg/L in both the upper and lower aquifers.

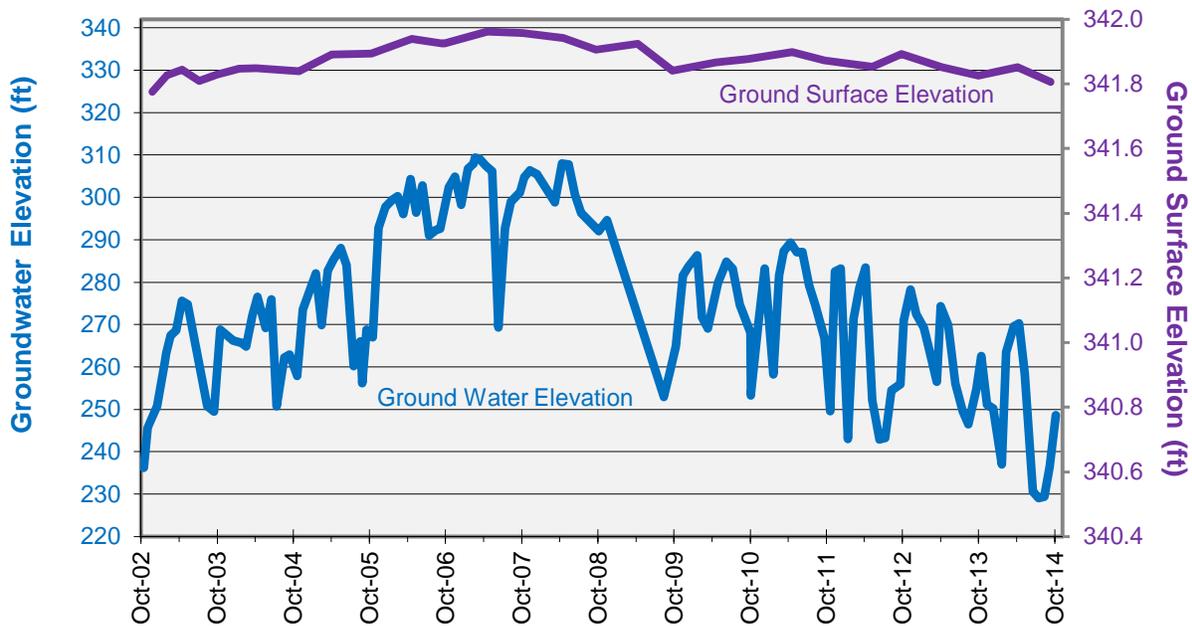
Boron is a natural occurring element typically found at very low concentrations in groundwater from the Livermore Groundwater Basin. While there is no maximum contaminant level (MCL) for boron, it is a problem for some irrigated crops when it exceeds 1 or 2 mg/L, depending on the crop’s sensitivity. Boron concentrations in the lower aquifers of the Main Basin are generally below 2 mg/L throughout the lower aquifers, but exists at elevated concentrations (up to 32.9 mg/L) in the upper aquifers mainly in two areas of the groundwater basin: 1) in the eastern fringe basin area, and 2) along the boundary between the Main Basin and the Dublin and Camp fringe

basins. The occurrences of boron in groundwater are depicted in *Figures 6-6 and 6-9* of the main report.

Land Surface Elevation (Section 7)

There were localized minor declines in surface elevations, of up to 0.08 feet (0.96 inches) in the Amador and Bernal Subbasins since the end of 2013 WY. *Figure ES-7* shows the variation in land surface elevations observed near the Mocho Wellfield from 2002 through the 2014 WY. Based on the data collected for the Surface Elevation Monitoring Program, there was no indication that inelastic subsidence occurred anywhere in the valley during the water year due to groundwater pumping.

Figure ES-7: Surface Elevation and Groundwater Levels at Mocho Wellfield



Wastewater and Recycled Water (Section 8)

Approximately 5,300 AF of the 18,623 AF of the wastewater produced in the Valley (about 28%) was recycled and used for landscape irrigation in the 2014 WY. The City of Livermore (LWRP) produced and applied about 2,140 AF of the recycled water while Dublin San Ramon Services District (DSRSD) generated and used about 3,150 AF. About 66% (1,413 AF) of the recycled water produced by LWRP was applied over the Main Basin; whereas the remainder was applied on areas outside of the Main Basin; primarily on fringe basin and upland areas north of the Main Basin. All of DSRSD’s recycled water was applied on areas north of the Main Basin. The recycled water from both wastewater plants met the State Division of Drinking Water "Title 22" water quality standards for irrigation uses during the 2014 WY.

It is estimated that less than 3% of the Main Basin’s groundwater inflow component (i.e., recharging waters) in the 2014 WY was the result of applied recycled water percolating beyond

the root zones. More important, however, the use of recycled water to irrigate urban landscape conserved up to 5,300 AF of groundwater storage, assuming that the irrigation demand would have been met with groundwater supplies in the 2014 WY.

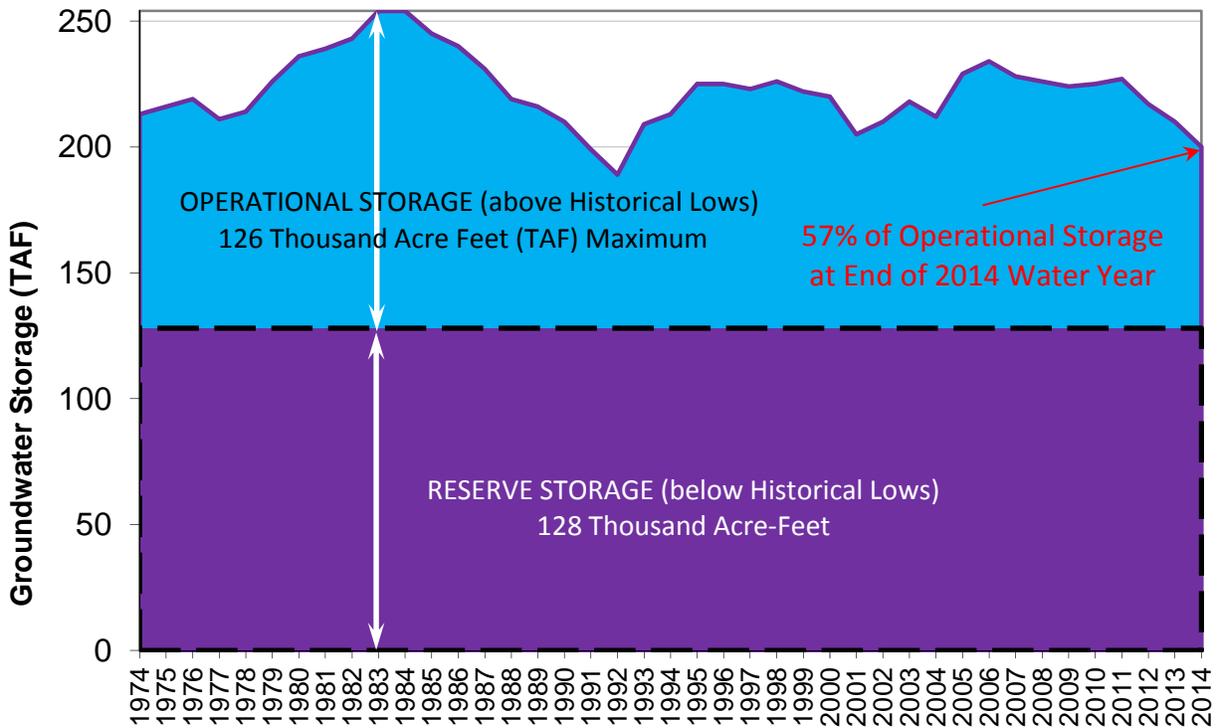
Land Use (Section 9)

The biggest change in land use over the last two years was the commercial and residential development along El Charro Road and Fallon Road (both, north and south of Interstate 580), and the addition of some irrigated vineyards in South Livermore. Otherwise land use remained similar to the 2013 WY.

Groundwater Storage Management for Sustainability (Section 10)

During the 2014 WY, groundwater supplies stored locally in the Main Basin decreased by approximately 10,000 AF. As a result, the 2014 WY ended with an estimated 200,000 AF of groundwater in total storage and 72,000 in operational (available above historical lows) storage. This represents about 57% of the Main Basin’s operational storage capacity.

Figure ES-8: Groundwater Storage (1974 to 2014 Water Years)



Groundwater Supply Sustainability (Section 11)

Groundwater supply sustainability is evaluated as two main components:

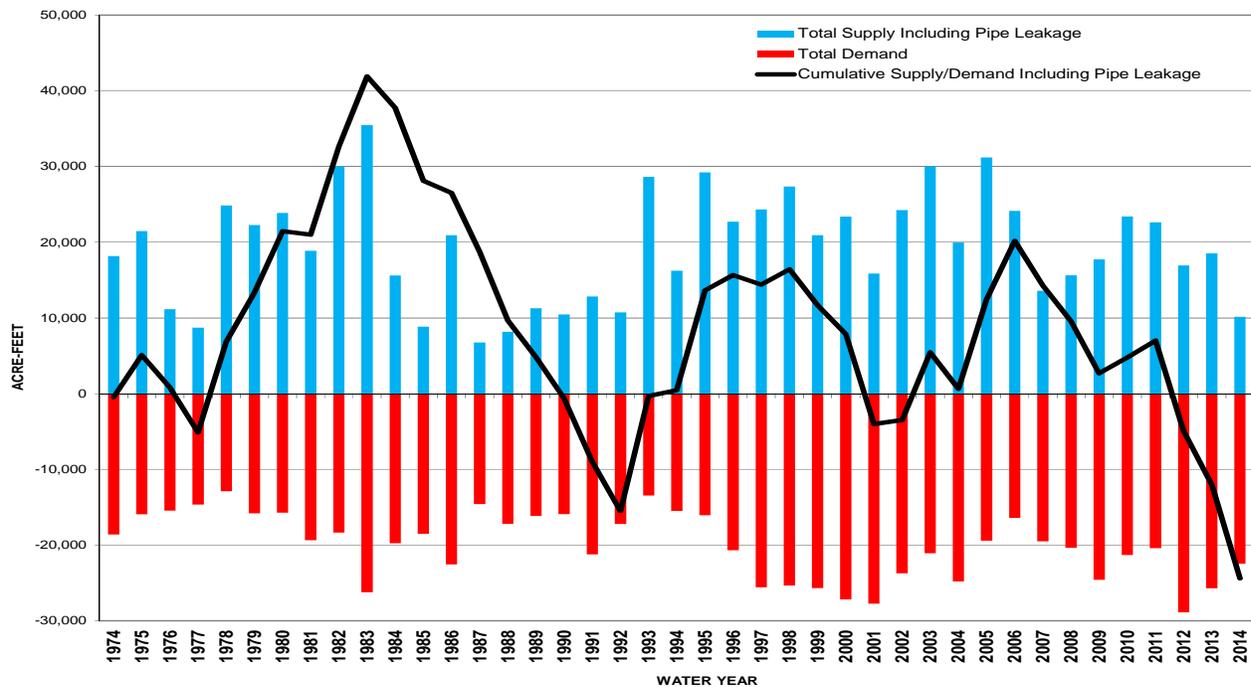
- Natural Sustainable Yield Supply and Demand
- Zone 7 Supply and Demand

The Natural Sustainable Yield Supply components include the aquifer recharge derived from natural stream flows, rainfall, irrigation percolation, and subsurface inflow. The demand components assigned to the Natural Sustainable Yield include all groundwater pumping except the Zone 7 pumping, and the mining area losses (i.e., pond evaporation, discharge outflow, and exported gravel moisture). The Zone 7 Supply and Demand components refer to the artificial recharge (supply) and municipal pumping (demand) that Zone 7 achieves each water year.

In the 2014 WY, the total Natural Sustainable Yield demand was 14,300 AF, while the total Natural Sustainable Yield supply was 6,100 AF. For the Zone 7 components, 8,100 AF was pumped from the Main Basin compared to 3,800 AF that Zone 7 artificially recharged in the 2014 WY.

On average, the Natural Sustainable Yield Demands have outpaced the Natural Sustainable Yield Supply components since 1974; however, because the Zone 7 Supply has outpaced the Zone 7 Demands during the same period, the net result demonstrates sustainability of the current conjunctive use of the groundwater basin (see *Figure ES-9* below). The supply/demand deficit depicted for the last three years in *Figure* is the short-term effect of very low rainfall and stream recharge that occurred during this drought period. A similar deficit was experienced during the 1987-92 drought, which was then followed by several years of normal rainfall and stream recharge that replenished groundwater storage. This is consistent with Zone 7's Basin Management Objectives of adding to storage during wet years and withdrawing during dry years.

Figure ES-9: Main Basin Sustainability

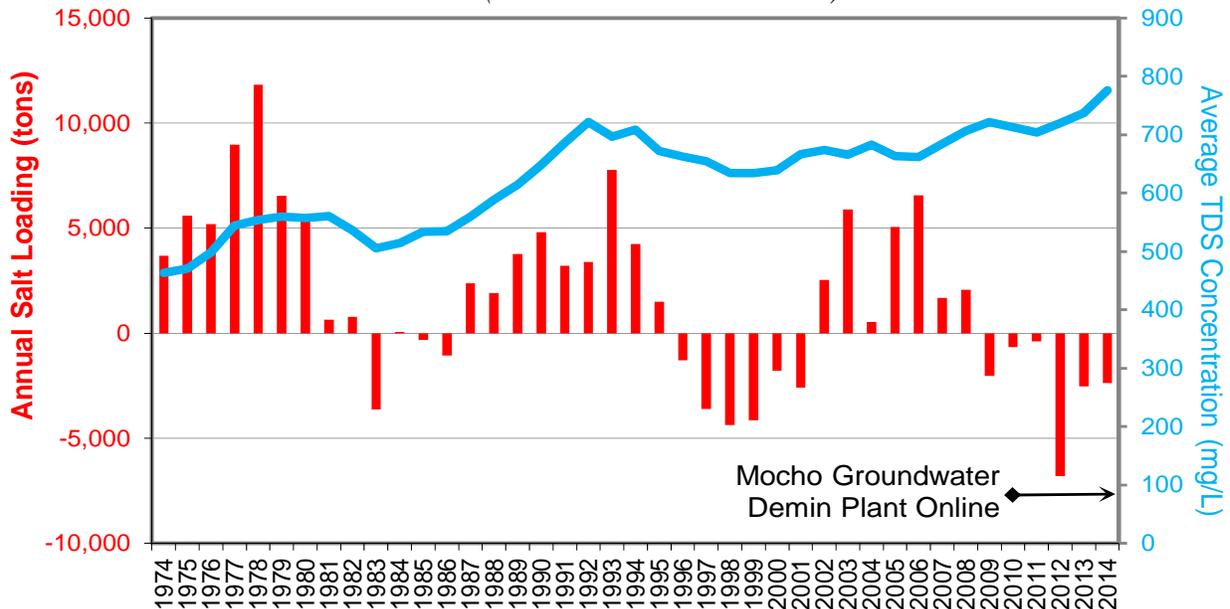


Water Quality Sustainability (Section 12)

Hydrologic conditions and water operations in the 2014 WY resulted in a net removal of approximately 2,400 tons of salt from the Main Basin. This includes an estimated 1,050 tons of salt that was concentrated and exported from the Main Basin by Zone 7’s Mocho Groundwater Demineralization Plant (MGDP), which was operated only sparingly to maintain membranes during the water year to conserve groundwater that would otherwise be exported as brine concentrate had the MGDP run more. Since the MGDP began operating in 2009, approximately 14,800 tons of salt have been removed from the Main Basin.

In addition to calculating the average TDS concentration in the upper and lower aquifers from the monitoring well samples (see Groundwater Quality Section above), Zone 7 tracks a running theoretical basin-wide average TDS concentration by dividing the inventoried salt load at the end of each water year by the year-end inventoried groundwater storage (*Figure ES-10*). Although the net salt loading (in terms of mass) has been negative during each of the last six years, the theoretical basin-wide average TDS has risen 72 mg/L (from 704 mg/L to 776 mg/L). This counter-intuitive trend is largely due to the combined effect of lowering storage by pumping relatively low TDS water for municipal supply while the average TDS concentration of the recharge components were higher than average because of drought impacts. In essence, the average TDS concentration of all the recharge waters was higher than the average concentration of the extracted water extracted, thus the concentration increased. *Figure 12-3* of the main report shows the salt loading and its effect on the basin since 1974.

Figure ES-10: Main Basin Salt Loading and Theoretical TDS Concentration (1974 to 2014 Water Years)



Zone 7 also tracks nutrient concentrations in groundwater, primarily nitrate and phosphate. In general, there is not a nutrient loading problem in the groundwater basin; however, there are a few areas with high nitrate concentrations that are believed to have been caused mainly by historical agricultural and municipal wastewater practices that are no longer being employed over the groundwater basin. Nonetheless, in the 2014 WY, Zone 7 staff worked toward completing a Nutrient Management Plan (NMP), which when completed and combined with Zone 7's SMP, together will be equivalent to the Salt/Nutrient Management Plans described in the State's 2009 Recycled Water Policy. Zone 7 is scheduled to complete the NMP in 2015.

Zone 7 manages three other groundwater protection programs for the purpose of groundwater quality sustainability, namely:

- Septic Tank Management;
- Well Ordinance/Well Permitting, and
- Toxic Site Surveillance

No special authorizations for septic tank use within the Upper Alameda Creek Watershed were made in the 2014 WY. In 2014, the RWQCB issued Waste Discharge Requirements for the onsite wastewater treatment systems in use at the Concannon Winery which expire in 2016.

In the 2014 WY, Zone 7 issued 181 drilling permits, 23 more than were issued in 2013. Zone 7 permit compliance staff inspected approximately 40% of all permitted well work in the 2014 WY. The remainder were allowed to self-monitor with required reporting.

Zone 7's Toxic Site Surveillance program tracked the progress of 53 active contamination cases where contamination has been detected in groundwater or is threatening groundwater. Thirteen of the sites are designated as "High Priority" because they have impacted or are an immediate threat to potable water supply wells or surface water. Nine of the high priority sites are fuel leak cases; the other four cases involve solvent contamination (tetrachloroethylene [PCE]). Thirteen contamination cases were closed during the 2014 WY after they were determined to no longer pose a threat to drinking water. At the end of the water year, eleven other toxic site cases were being considered for closure, including three of the high priority cases.

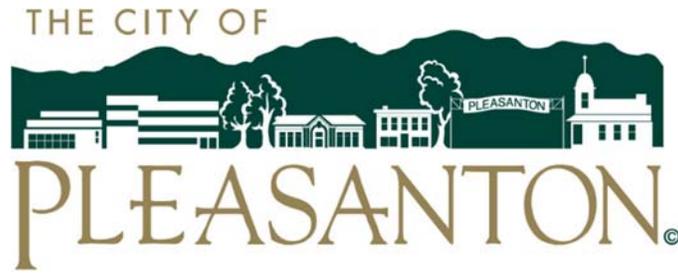
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APPENDIX I

City of Pleasanton Recycled Water Use 2015 Annual Report

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RECYCLED WATER
DISTRIBUTION & USE
PROGRAM
2015 IRRIGATION SEASON
RECYCLED WATER USE
ANNUAL REPORT



Supporting Conservation
Recycled Water is
Used at this site
for Irrigation
DO NOT DRINK



CITY OF PLEASANTON 925-931-5500

I. Introduction

The purpose of this report is to satisfy the 2015 annual reporting requirements of the Regional Water Quality Control Board (RWQCB) General Water Use Requirements for Municipal Wastewater and Water Agencies Order 96-011 (Order 96-011). This report addresses all of the requirements listed in the Order's Attachment C, Section C.2 Reporting Requirements Annual Report to the Regional Board.

II. Recycled Water Program Overview

The San Francisco Bay Regional Water Quality Control Board (RWQCB) authorized the City of Pleasanton's (City's or Pleasanton's) Recycled Water Distribution and Use Program under Order 96-011, and approved the City's Notice of Intent for coverage under Order 96-011 on July 9, 2015. In preparation for the development of a recycled water distribution program, the City entered into recycled water supply agreements with Dublin San Ramon Services District (DSRSD) and DSRSD-EBMUD Recycled Water Authority (DERWA) in November of 2013, and with Livermore in May of 2013. These agreements allowed for the supply of recycled water to Pleasanton customers under the authority of the respective recycled water supplier's Order 96-011 until Pleasanton obtained its own Order 96-011, (DERWA services Val Vista Park in the western portion of Pleasanton, and Livermore services new development in the eastern portion of Pleasanton). This report details the recycled water use of the City's recycled water users throughout the 2015 calendar year.

III. Recycled Water Program Progress & Results

a. Recycled Water Project Development

In June of 2015, the State Water Resources Control Board (SWB) approved financing through the Clean Water State Revolving Fund (CWSRF) and Proposition 1 Program Grant to support the City's Recycled Water Project (Project). All necessary design plans have been submitted and approved by the SWB, and quarterly reports continue to be submitted to the SWB per Agreement requirements.

Subsequent to the financing approval, Pleasanton began construction on the Project. The Project includes the construction of approximately 51,570 linear feet (LF) of new recycled water pipeline, ranging in diameter from 6-inches to 20-inches, and approximately 22,400 LF of existing potable pipeline being repurposed into the recycled water system. This recycled water infrastructure will connect from the recycled water supplier, DSRSD's existing Waste Water Treatment Plant (WWTP), to the City's existing 8 million gallon (MG) potable water reservoir; which as part of this Project will be converted into the recycled water storage facility. This Project will supply an estimated 1,370 acre-feet per year (AFY) of recycled water to current irrigation customers, which include: City parks, schools, commercial property landscaping, streetscapes, and multi-family residential areas. This supply will offset potable water purchased from the City's potable water wholesaler, Zone 7 Water Agency (supplied mainly by State Water Project deliveries), and local groundwater supplies. Construction completion of the Project is established as October 31, 2016. The Project is projected

to service a total of 94 permitted recycled water irrigation use sites (135 metered connections) once all customers have been hooked up to the system.

By the end of 2015, approximately 20 percent of the construction was completed. Additional customers have yet to be serviced along the new infrastructure. The City's certified cross connection specialist is actively working with the future customers along this new infrastructure in preparation for conversion to the recycled water system.

b. Recycled Water Program Studies

The Tri-Valley water agencies and cities developed a Tri-Valley Water Policy Roundtable, consisting of board and council members and executive managers at their agencies to strategize on policy direction to improve the valley's water supply reliability. Alternatives include potable reuse. In the upcoming year, Pleasanton is working with Zone 7 and the other water retailers in the Tri-Valley to develop a feasibility study for potable reuse.

IV. Recycled Water Monitoring

The City does not produce recycled water. It purchases tertiary, disinfected recycled water produced from DSRSD's WWTP, as well as from the Livermore Water Reclamation Plant (LWRP). Please refer to the 2015 Annual Report submitted by the respective recycled water producer for the producer's self-monitoring program recycled water analyses and producer total daily recycled water delivery summaries.

V. User Compliance Program Review & Results

a. Recycled Water Compliance Program Overview

Pleasanton's Municipal Code Chapter 14.06 along with the City's *Recycled Water Use Guidelines* outline the requirements and recommendations customers are to follow in order to achieve and maintain compliance with Title 22 and Order 96-011. The *Recycled Water Use Guidelines* was updated to reflect updated contact information for emergency contacts contained within Chapter 5, Emergency Procedures. To view the updated *Recycled Water Use Guidelines* go to www.pleasantonrecycledwater.com.

At this time the City permits use of recycled water for the following uses:

- Landscape irrigation to designated irrigation meters
- Construction water, dust control, and surface washing
- Impoundments (Fountains and other decorative water features)

b. Recycled Water Customer Compliance Summary for 2015

In 2015 the City had a total of 6 permitted recycled water irrigation sites. No permits have been issued which include impoundments or surface washing. One new development project began utilizing recycled water for on-site construction dust control and soil compaction purposes. This

stretch of pipeline was inspected and tested by the City's certified cross connection specialist prior to service, and water truck personnel received recycled water training from the Livermore LWRP. City staff is currently working with the property owner in the recycled water use permit process for the eventual use of recycled water for landscape irrigation. Construction projects not along the recycled water distribution system utilizing recycled water for dust control, obtain recycled water use permits from either DSRSD for commercial fill station access or Livermore LWRP and transfer recycled water to the project site.

The City's current recycled water users were originally serviced under the authority of DSRSD or Livermore's Order 96-011. In 2015, these customers used 34.05 million gallons (104.5 AF) of recycled water. Refer to Appendix A to view a tabular summary of recycled water use by billing period of each user, Appendix B to view a summary of recycled water usage by application type, and Appendix C for the list of new authorized recycled water users.

Irrigation users are required to submit semi-annual self-monitoring reports to the City's Recycled Water Program. This is to ensure they are reviewing their irrigation system(s) and are correcting observed deficiencies. The timing of the self-monitoring report submission deadlines (April 5th and October 5th) coincide with best management practices for seasonal irrigation system checks, to allow for equipment corrections prior to maximum summer use and in preparation for near shut down of the system use during late fall/winter. To view the results from the users self-monitoring reports refer to Appendix D.

The City's certified cross connection specialist performs annual visual and operational inspections of the recycled water use sites to ensure compliance with DDW (formerly CDPH) reuse criteria and Order 96-011. Appendix E provides a summary of violations found during site inspections, corrective actions taken. No Recycled Water Use Permits or use authorization were revoked in 2015.

Appendix A

Tabular Summary of Recycled Water Use by Billing Period by Each User

Permit number	Location number	Source	Name of Site	Jan/Feb	Mar/Apr	May/Jun	Jul/Aug	Sep/Oct	Nov/Dec	Total CCF	Total MG
1	43192	LWRP	Continuing Life Communities - CLC	0	802	1203	2565	953	0	5523	4.13
	43193	LWRP	Continuing Life Communities - CLC	0	774	1044	2470	2739	518	7545	5.64
2	43195	LWRP	Stoneridge Creek Park	361	2	0	147	162	178	850	0.64
3	43137	LWRP	East Stoneridge Medians - El Charro @ Stoneridge	60	33	27	135	135	77	467	0.35
	43196	LWRP	East Stoneridge Medians - @ Park	126	35	77	310	642	2361	3551	2.66
4	43197	DSRSD	Val Vista Park	0	1806	2395	7629	7884	4545	24259	18.15
5	43299	LWRP	Chrysler Stoneridge	0	0	0	0	0	1	1	0.0008
6	43359	LWRP	CLC - Skilled Nursing and Assisted Living Facilities	0	59	37	63	no read	79	238	0.18
*	43401	LWRP	(Future CarMax location - currently construction)	0	0	0	0	0	3,076	3,076	2.3
			TOTAL USAGE								34.05

*The meter account at this site is currently under the construction company ownership, and will transition to CarMax. Recycled water permit process underway. Test/inspection was performed prior to service (see report for details).

LEGEND

LWRP = Livermore Water Reclamation Plant (light green cell)
 DSRSD = DSRSD Water Water Treatment Plant (light blue cell)

Appendix B

Summary of Recycled Water Usage by Application Type for 2015

Application Type	Number of Sites/Users	Area (Acres)	Amount Distributed (MG)	% of Total Reuse Flow
<u>Landscape Irrigation</u>				
Landscapes	3	15.87	12.61	37%
Streetscapes	1	2.98	0.35	1%
Parks	2	13.38	18.79	55%
Schools	0	0	0	0
Total Landscape Irrigation	6	32.23	31.75	93%
<u>Construction</u>				
Dust Control/Soil Compaction	1	N/A	2.3	7%
TOTAL			34.05	100%

Appendix C

List of New Authorized Users in 2015

Permit number	Name of Site	Customer	Application Type	Source	Projected annual flow (AF/YR)
5	Chrysler Stoneridge ¹	Chrysler Stoneridge	Landscape	LWRP	1.9
6	Skilled Nursing and Assisted Living ² (Future CarMax location)	Continuing Life Communities CSI Construction Company ³	Landscape Construction	LWRP LWRP	3.47 2.3
Total Projected Annual Flow (AF/YR)					7.67

¹ See Attachment 1 for Chrysler Stoneridge Recycled Water Use Permit Application

² See Attachment 2 for CLC Skilled Nursing and Assisted Living Center Recycled Water Use Permit Application

³ Customer under temporary ownership of meter account. Currently the use at this site is for dust control and soil compaction only. The site under development is projected to use 8.01 AFA. Recycled Water Use Permit for CarMax is in process.

Appendix D

Results from Users' Self-Monitoring Reports

Standard Observations	Sites Reported Violations	When deficiencies were corrected	How deficiencies were corrected
Evidence of runoff of recycled water from the site	0		
Odor of recycled water origin from irrigation site	1	No corrections made	Odor dissipates
Evidence of ponding of recycled water or evidence of mosquitos breeding within the irrigation area due to ponded water	0	NA	NA
Warning signs not properly posted identifying recycled water is used on site and not safe for drinking	0	NA	NA
Evidence of leaks or breaks in the irrigation system piping or evidence of plugged, broken or otherwise faulty irrigation components	0	NA	NA
Evidence of recycled water being directly sprayed on people, dwellings, food handling facilities or drinking fountains	0	NA	NA
Failure to submit self-monitoring report	0	NA	NA

Appendix E

Summary of Violations Found During Site Inspections and Corrective Actions Taken

Permit number	Recycled Water Customer	Date Inspected	Violation Code(s)	Corrective Action Taken
1	Continuing Life Communities	7/14/2015	2 & 4	Resident agrees to keep bird baths empty, & leak repaired
2	Stoneridge Creek Park	7/7/2015	no violations	
3	East Stoneridge Medians	7/7/2016	no violations	
4	Val Vista Park	7/23/2015	2	City staff regularly checks/pumps out water if present in the skate park area. Engineering staff designing permanent fix.
5	Chrysler Stoneridge	6/26/2015	no violations	
6	CLC- SNF and ALF	1/12/2015	3	Installed missing signage

LEGEND OF VIOLATION CODES

1. Runoff
2. Ponding
3. Signs/valve tags missing
4. Leaks/breaks
5. Direct spray
6. Cross-connection

Attachment 1

Chrysler Stoneridge Recycled Water Use Permit Application

APPENDIX J

Zone 7 Water Supply Policy

DRAFT

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ZONE 7
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BOARD OF DIRECTORS

RESOLUTION NO 13-4230

INTRODUCED BY DIRECTOR QUIGLEY
SECONDED BY DIRECTOR STEVENS

Water Supply Reliability Policy

WHEREAS, the Zone 7 Board of Directors desires to maintain a highly reliable Municipal and Industrial (M&I) water supply system so that existing and future M&I water demands can be met during varying hydrologic conditions; and

WHEREAS, the Board has an obligation to communicate to its M&I customers and municipalities within its service area the ability of Zone 7's water supply system to meet projected water demands; and

WHEREAS, the Board on August 18, 2004 adopted Resolution No. 04-2662 setting forth its Reliability Policy for Municipal & Industrial Water Supplies; and

WHEREAS, the Board desires to revise the Reliability Policy to reflect recent data, analysis, and studies.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby rescinds Resolution No. 04-2662 adopting the August 18, 2004 Reliability Policy for Municipal & Industrial Water Supplies; and

BE IT FURTHER RESOLVED that the Board hereby adopts the following level of service goals to guide the management of Zone 7's M&I water supplies as well as its Capital Improvement Program (CIP):

Goal 1. Zone 7 will meet its treated water customers' water supply needs, in accordance with Zone 7's most current Contracts for M&I Water Supply, including existing and projected demands as specified in Zone 7's most recent Urban Water Management Plan (UWMP), during normal, average, and drought conditions, as follows:

- At least 85% of M&I water demands 99% of the time
- 100% of M&I water demands 90% of the time

Goal 2: Provide sufficient treated water production capacity and infrastructure to meet at least 80% of the maximum month M&I contractual demands should any one of Zone 7's major supply, production, or transmission facilities experience an extended unplanned outage of at least one week.

BE IT FURTHER RESOLVED that to ensure that this Board policy is carried out effectively, the Zone 7 General Manager will provide a water supply status report to the Board every five years with the Zone 7 Urban Water Management Plan that specifies how these goals will be, or are being, achieved.

If the General Manager finds that the goals cannot be met during the first five years of the Urban Water Management Plan, then the Board will hold a public hearing within two months of the General Manager's finding to consider remedial actions that will bring Zone 7 into substantial compliance with the stated level of service goals. Remedial actions may include, but are not limited to, voluntary conservation or mandatory rationing to reduce water demands, acquisition of additional water supplies, and/or a moratorium on new water connections. After reviewing staff analyses and information gathered at the public hearing, the Board shall, as expeditiously as is feasible, take any additional actions that are necessary to meet the level of service goals during the following five-year period; and

BE IT FURTHER RESOLVED that the Zone 7 General Manager shall prepare an Annual Review of the Sustainable Water Supply Report which includes the following information:

- (1) An estimate of the current annual average water demand for M&I water as well as a five-year projection based on the same information used to prepare the UWMP and CIP;
- (2) A Summary of available water supplies to Zone 7 at the beginning of the calendar year;
- (3) A comparison of current water demand with the available water supplies; and
- (4) A discussion of water conservation requirements and other long-term supply programs needed to meet Zone 7 M&I water demands for single-dry and multiple-dry year conditions, as specified in the Zone 7's UWMP.

A summary of this review will be provided to M&I customers.

Definitions

Level of Service for Annual Water Supply Needs—the level of service is the percent of existing or projected water demand that Zone 7's water supply system can meet during two key conditions: (1) during various hydrologic conditions and (2) during unplanned outages of major facilities.

Capital Improvement Program (CIP)—the CIP is Zone 7's formal program for developing surface and ground water supplies, along with associated infrastructure, including import water conveyance facilities, surface water treatment plants, groundwater wells, and M&I water transmission system to meet projected water demands.

Normal conditions—conditions that most closely represent median runoff or allocation from all normally contracted or available water supplies from the historic record.

Average conditions—conditions that most closely represent the average runoff or allocation from all normally contracted or legally available water supplies from the historic record.

Drought conditions—conditions that most closely represent reduced runoff or allocation level from the historic record from all normally contracted or legally available water supplies, including both single-dry and multiple-dry year conditions.

Single-dry year condition—a condition that most closely represents the lowest yield over a one-year period from the historic record from all normally contracted or legally available supplies.

Multiple-dry year condition—a condition that most closely represents three or more consecutive dry years from the historic record that represent the lowest yields from all normally contracted or legally available supplies.

Available water supplies—consist solely of (1) water supplies that Zone 7 has contracted for (e.g., listed under Schedule A of the State Water Contract, dry-year water options, special contracts with other water districts, etc.) and (2) water actually stored in surface and subsurface reservoirs.

Maximum Month—the largest monthly average water use.

ADOPTED BY THE FOLLOWING VOTE:

AYES: DIRECTORS FIGUERS, GRECI, MACHAEVICH, PALMER, QUIGLEY, RAMIREZ HOLMES STEVENS

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE

I certify that the foregoing is a correct copy of a Resolution adopted by the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District on October 17, 2012.

By 
President, Board of Directors

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APPENDIX K

Water Shortage Contingency Plan

DRAFT

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Chapter 9.30 WATER MANAGEMENT PLAN

9.30.010 Declaration of emergency.

A water shortage emergency shall be declared by resolution of the city council. The city manager may administratively determine that any water shortage is terminated, and inform the city council of such determination.

9.30.020 Purpose.

The purpose of this chapter is to provide both voluntary and mandatory water conservation stages to minimize the effect of a shortage of water on the city's customers and, by means of this chapter, to adopt provisions that will significantly reduce the consumption of water over an extended period of time, thereby extending the available water required for the city's customers while reducing the hardship to the greatest extent possible on or to the city and on or to the general public. This chapter is also intended to implement the Urban Water Management Plan's Water Shortage Contingency Planning and Stages of Action.

9.30.030 Application of chapter.

The provisions of this chapter shall apply to all customers, as defined herein, regardless of whether any customer using water shall have a contract for water service with the city. Notwithstanding other municipal code provisions inconsistent with this chapter, the provisions of this chapter shall supersede and prevail for the duration of a city council declared water shortage.

9.30.040 Definitions.

- A. "City" means the city of Pleasanton.
- B. "City manager" means the city manager of the city, or designee.
- C. "Customer" means a person, firm, partnership, association, corporation and all other institutions and businesses receiving water from the water distribution system of the city.
- D. "Director" means the operations services director of the city, or designee.
- E. "Low Water User" means a Single Family Residential Individually Metered customer using no more than a specified number of water units within one billing period as established by Council resolution when a water shortage emergency is declared.
- F. "Illicit discharge" means any discharge into a storm drain system that is not composed entirely of stormwater.

9.30.050 Creation of classes.

The following types of customers or uses are those which exist in the city's current utility billing system, as follows:

- A. "Single-family residential individually metered" consists of water service to land improved with structures designed to serve as a residence for a single family, including single-family home, townhomes, and condominiums.
- B. "Commercial and multiple-family" consists of water service to land improved with structures designed to serve commercial (including restaurants), recreational, charitable, educational and cultural uses, as well as residential uses sharing water meters.
- C. "Irrigation" consists of water service which is separately metered and is used exclusively to water turf and other landscaping areas.
- D. "Special landscape area" are uses as defined in the California Water Efficient Landscape Ordinance Government Code Section 65591 et seq.

9.30.060 Stages for reduction in water use.

The following stages of action for reduction in water use depend on the total amount of water supplied to the city by Zone 7 and the amount of water the city is able to pump out of the groundwater basin from its own wells. These stages are based on the Urban Water Management Plan.

REDUCTIONS IN WATER USE		
Stage	Overall Reduction	Voluntary or Mandatory
1	Up to 20%	Voluntary
2	Up to 20%	Mandatory
3	Up to 35%	Mandatory
4	35% or more	Mandatory

9.30.070 Calculation of customer reduction in water use.

A. When a water shortage is declared with mandatory reductions in water use, the director shall impose the applicable stage of mandatory reduction by calculating customers’ average usage for the same billing period from one to four prior years, as data is available. If sufficient historic usage information is not available, the director may base water use allocations on a combination of the limited historic usage data available, per-capita water use targets, water usage from similar customer types, and other activity-specific water usage data.

B. Usage of water in excess of a customer’s mandatory conservation amount is subject to excess use penalties in Section 9.30.100.

9.30.080 Conservation measures.

The following conservation measures are applicable for adequate supply, and the declared water shortage stage(s) indicated:

A. Level: Adequate Supply. To protect and preserve the community water supply the elimination of wasteful water uses is essential at all times, regardless of water supply level. Pleasanton customers shall always observe the following regulations on water use:

1. Use potable water for irrigation of landscapes in a manner that does not result in runoff such that water flows onto adjacent property, non-irrigated areas, driveways, private and public walkways, roadways, parking lots, or structures;.
2. Schedule regular irrigation of lawn and landscape between the hours of 6:00 p.m. and 9:00 a.m. the following day. Watering is permitted at any hour if a hand-held nozzle or drip irrigation is used. Special landscapes are exempted.
3. The use of potable water to wash down sidewalks, walkways, driveways, parking lots, open ground or other hard surface areas by the direct application of water is prohibited.
4. No wastewater from vehicle washing may enter the storm drain system. The use of water for motor vehicle or machinery washing, from a hose equipped with a shutoff nozzle shall not result in runoff or illicit discharge.
5. Repair potable water leaks from breaks within the customer’s plumbing system within eight hours after customer is notified or discovers the break.
6. Reduce other interior or exterior uses of water to minimize or eliminate excessive runoff or waste.
7. Restaurants shall serve water to their customers only when specifically requested.
8. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.

9. The use of water for construction activities and commercial power washing shall utilize recycled water, rather than potable water. Such use shall occur in a manner that does not result in runoff or illicit discharge into the storm drain system.

B. Level: Stage 1—Up to 20% Voluntary Reduction. There is sufficient uncertainty concerning water supplies for this year or in the next few years that it would be prudent to conserve local water supplies so that these supplies may be used to meet water demands in future years. The following restrictions shall be applicable during a Stage 1 activation of the water shortage contingency plan:

1. All of the adequate supply level restrictions, in subsection A, shall continue to be mandatory during Stage 1.
2. There shall be no hose washing of hard-surfaced areas. Use bucket and broom to wash down hard-surfaced areas if necessary for the benefit of public health and safety.
3. Outdoor irrigation of lawn and ornamental landscaping shall be limited to one day per week October through March, and three non-consecutive days per week April through September.
4. Commercial customers should post water conservation messages on bathroom lavatory mirrors.
5. Swimming pools, spas, fountains, and decorative ponds should be leak proof. Any leak should be repaired in a timely manner after notification by the city, but should not exceed 72 hours.
6. Cover pools when not in use to reduce evaporation.
7. Using potable water for construction is discouraged if a feasible alternative source of water for construction exists.

C. Level: Stage 2—Up to 20% Mandatory Reduction. There are definable events that lead to a reasonable conclusion that in the current and/or upcoming water years, water supplies may not be adequate to meet all customer water demands. The following mandatory restrictions shall be applicable during a Stage 2 activation of the water shortage contingency plan:

1. All of the prohibitions and restrictions set forth during adequate supply, as well as the voluntary Stage 1 restrictions, shall all be in effect and shall all be mandatory.
2. Outdoor irrigation of lawn and ornamental landscaping shall be limited to one day per week October through March, and three non-consecutive days per week April through September. Irrigation system checks for breaks/leak repairs by present irrigation professionals who remain on-site directly observing the system are excluded.
3. Restaurant kitchens shall be equipped with low-flow rinse nozzles.
4. No potable water may be used for compaction or dust control purposes for construction activities, and commercial power spraying.

D. Level: Stage 3—Up to 35% Mandatory Reduction. There are definable events that lead to a firm conclusion that in the current water year, water supplies will not be adequate to meet customers' water demands. The following mandatory restrictions shall be applicable during a Stage 3 activation of the water shortage contingency plan:

1. All of the prohibitions and restrictions set forth during adequate supply, as well as the voluntary Stage 1 restrictions, and the prohibitions and restrictions in Stage 2, shall all be in effect and shall all be mandatory.
2. Outdoor watering under Stage 3 is restricted as follows:
 - a) 20 through 25% Mandatory Reduction. Lawn watering and landscape irrigation, for all customer classes, shall be reduced to no more than one day per week during the months of October through March, and no more than two non-consecutive days per week during the months of April through September.

b) 26 through 35% Mandatory Reduction:

- i. Single-family residential individually metered and multi-family (non-irrigation) classes shall be limited in the use of all outdoor watering to hand-watering using a hose with a positive shut-off nozzle, drip, or subsurface irrigation on two non-consecutive days only.
- ii. All other water customers classes not falling under subsection (D)(2)(b)(i) (with the exception of commercial nurseries, public sport fields, golf courses, and other water dependent industries, per subsection (D)(2)(b)(iii)) shall be limited in the use of all outdoor watering to hand-watering using a hose with a positive shut-off nozzle, drip, or subsurface irrigation to two non-consecutive weekdays; specified as Mondays and Thursdays unless otherwise granted permission for alternate watering days by the director.
- iii. Commercial nurseries, public sport fields, golf courses and other water dependent industries shall work together with city staff under the direction of the director to develop an approved irrigation schedule.

c) Irrigation system checks for breaks/leak repairs by on-site irrigation professionals who remain on-site directly observing the system are excluded.

3. Potable water use to clean sidewalks, walkways, driveways, parking areas, and other hard-surface areas, is prohibited, with the exception of public health and safety in a manner that does not result in runoff or illicit discharge into the storm drain system.
4. No person shall empty and refill a swimming pool except to prevent or repair structural damage or to comply with public health regulations.
5. Equip swimming pools with recirculating pump if not already equipped, and cover pools when not in use to reduce evaporation.
6. Potable water shall not be used for decorative ponds, basins, lakes, waterways, and fountains.
7. Washing of autos, trucks, trailers, and other types of mobile equipment is permitted only at commercial car wash facilities that recycle all or part of the water.

E. Level: Stage 4—35% or More Mandatory Reduction. Earlier stages have been in effect and the reduction goal is not being met, or new definable events require increasing the reduction goal. The following mandatory restrictions shall be applicable during a Stage 4 activation of the water shortage contingency plan:

1. All of the prohibitions and restrictions set forth during adequate supply, as well as the voluntary Stage 1 restrictions, and the prohibitions and restrictions in Stages 2 and 3, shall all be in effect and shall all be mandatory.
2. The irrigation of turf or lawn using potable water is prohibited. All water customers, with the exception of commercial nurseries, golf courses, sport fields, and other water dependent industries, shall be limited in the use of all other non-lawn area watering to hand-watering from a container of less than five-gallon capacity on Saturday and Sunday only. The aforementioned water dependent industries shall work with city staff under the direction of the director to develop an approved irrigation schedule.
3. No person shall drain and refill swimming pools and spas. Nor shall new pools be filled.
4. The use of potable water for washing autos, trucks, trailers, other mobile equipment, and the exterior of any building or structure through a hose, including pressure washing, is prohibited.
5. Laundromats are prohibited from using non-efficient washing machines.
6. Public Health and Safety. These regulations shall not be construed to limit water use which is immediately necessary to protect public health and/or safety.

9.30.090 Emergency shutoff—Nonessential use.

A. It is the purpose of the city to protect the public health, safety and welfare, as well as property of customers within the city. Any time there is evidence that the fire storage water volume is threatened in any reservoir or that low water pressure may occur in any pressure zone, the city may, without notice, temporarily shut off by locking out any water service connection. The city shall restore such service as soon as an adequate water supply is assured. Efforts will be made to contact customers from the billing information on record if it appears that service will be interrupted for more than 24 hours.

B. Emergency public announcements may be made by electronic media, local radio and television whenever a shut off is found to be necessary.

9.30.100 Excess use penalties.

A. Water usage in excess of the amount provided in Section 9.30.070 is subject to the following penalties:

	Exceed 1 time	Exceed 2 times	Exceed 3 times	Exceed 4 or more times
Stage 1 Up to 20% Voluntary	No penalty	No penalty	No penalty	No penalty
Stage 2 Up to 20% Mandatory	\$2.50 additional for all units	\$5 additional for all units + \$25	\$7.50 additional for all units + \$50	\$10 additional for all units + \$100
Stage 3 Up to 35% Mandatory	\$4 additional for all units + \$50	\$8 additional for all units + \$100	\$12 additional for all units + \$250	\$16 additional for all units + \$500
Stage 4 35% or more Mandatory	\$6 additional for all units + \$100	\$12 additional for all units + \$250	\$18 additional for all units + \$500	\$24 additional for all units + \$750

1. These Excess Use Penalties may be added to a water bill using the identifier: “drought surcharge”, or billed separately, at the discretion of the director.
2. Additional penalties for multiple times exceeding water use amount are for the number of times within the prior 12 months.

B. The City Manager is authorized to suspend excess use penalties for all customers when weather conditions, seasonal temperatures, or other factors make water use reduction impracticable. Such suspension of excess use penalties may be administratively enacted upon the following:

1. The City Manager’s consultation with the Director of Operation Services.
2. The City Manager notifying the City Council, and providing the City Council with the option to discuss the suspension at a future City Council meeting.
3. Notice provided to customers via water bills, as well as notices on the City’s website, stating the time period of such suspension (e.g. the starting and ending dates).
4. After reaching the ending date of any suspension of excess use penalties, customers will not be subject to the possibility of any re-imposed excess use penalties until a full billing cycle beyond the suspension occurs.

9.30.110 Prohibition of certain water uses.

During the time this chapter is in effect:

- A. It is unlawful for any customer to use water obtained from the water system of the city of Pleasanton through fraud, including misrepresentation made to obtain a particular allocation.
- B. It is unlawful for any customer to waste water. As used herein, the term “waste” means:

1. Use of potable water between 9:00 a.m. and 6:00 p.m. to irrigate grass, lawns, ground-cover, shrubbery, crops, vegetation, and trees, with the exception of hand watering and drip irrigation;
2. The application of potable water to outdoor landscaping in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;
3. Use of potable water to irrigate outdoor landscaping during and within 48 hours after measurable rainfall;
4. Use of potable water to wash down sidewalks, walkways, driveways, parking lots, open ground or other hard surface areas by the direct application of water thereto;
5. Allowing potable water to escape from breaks within the customer's plumbing system for more than eight hours after the customer is notified or discovers the break;
6. Use of water in non-recirculating decorative ponds, fountains, and other water features; with the exception of child water-play features;
7. The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased;
8. Use of potable water for any purpose in excess of the customer's allowed usage as provided in Section 9.30.070.

9.30.120 Adjustments.

- A. Any customer who believes that the application of the provisions of this chapter results in unfair treatment or causes undue hardship may seek an adjustment in the customer's allocation.
- B. Such customer shall request the adjustment in writing and shall state with specificity the reasons why the adjustment is warranted, and provide any applicable supporting documentation. Such request for an adjustment shall be submitted within thirty (30) days of receipt of the bill that is the subject of the adjustment request.
- C. The director shall consider all requests and make a written decision, transmitted by U.S. mail or email, within 30 days of receiving all information supporting the adjustment request. In making a decision, the director shall give particular consideration to the following:
 1. The reduction would cause conditions threatening to health, sanitation, fire protection or safety of the customer, the customer's dependents or the general public.
 2. The reduction would cause unfair economic hardship including, but not limited to, loss of employment, loss of production, or loss of jobs, or be unfair or result in the unnecessary loss of a business.
 3. Medical requirements of the customer.
 4. Permanent change to the household size of the residential customer (temporary visitor(s)/guest(s) do not warrant a request for adjustment).
- D. The director's decision may be appealed in writing to the city manager for reconsideration on the written record. Such appeal shall be submitted within fifteen (15) days of the date of the director's decision. The city manager shall review written material submitted by the customer, written information from the director, and shall issue a decision within 30 days of receipt of the complete written materials. The city manager's decision as to the request shall be final.

9.30.130 Notification to customers.

After the city council adopts a water shortage contingency plan stage, customers will be notified by publication in the newspaper and/or by mail. The failure of any customer to receive actual notice shall not invalidate any action taken by the city council as to a particular customer nor reduce the amount of the penalties provided herein.

9.30.140 Calculation of allowable water use for new customers.

Where the current customer has no billing history, or only a partial billing history, the director shall determine the customer's allocation, based upon the allocation for similar customers.

9.30.150 Severability.

If any provision of this chapter is held to be unconstitutional, it is the intent of the city council that such portion of such chapter be severable from the remainder and that the remainder be given full force and effect.

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CITY OF PLEASANTON WATER EMERGENCY RESPONSE PLAN

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*Emergency Procedure Overview
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Appendix C

I. PURPOSE AND SCOPE/INTRODUCTION

The City of Pleasanton operates and maintains a water distribution and treatment system, which provides vital water service to the community. The City is, therefore, obligated to respond to emergencies in a timely and efficient manner in order to maintain or restore water service.

The following plan is designed to assure that each employee will carry out their respective assignments quickly and without the need for specific orders during a water emergency. The plan requires the full cooperation and good judgment of City personnel who are trained and skilled in their assigned emergency tasks.

The water emergency in this context is any situation that would require immediate action beyond the scope of normal City operations. Situations that would warrant this plan to go into effect would be similar to the following:

- 1) A natural or manmade disaster such as a major earthquake, flood, storm, fire, industrial or transportation accident or any other hazardous condition which would cause a major short or long term disruption to the amount or quality of water delivered from the City's water system.
- 2) Terrorist attack.
- 3) A nuclear emergency.
- 4) Civil disorders.
- 5) A mechanical, electrical or other failure occurring in one or more of the City's or other local agency water supply or production facilities.
- 6) A condition where the demand on the City's water system cannot be met by the combination of surface treated water and ground water pumping from all current sources. This would mean that the City's emergency and operational storage within our reservoirs is depleted or nearing so and no additional water supplies are available to meet this demand.

II. PURPOSE OF THIS PLAN

- A. To preserve the safety and well being of the residents of Pleasanton, to help save lives and to restore normal water system operations as soon as possible in the event of an emergency.
- B. To define who is in charge and what should be done.
- C. To assist the City Water Division employees and those of other departments in understanding the emergency procedures necessary to help mitigate the situation.
- D. Provide public information during a water emergency condition.

III. SCOPE

- A. This plan outlines procedures for dealing with a number of possible emergencies such as, (a) natural emergencies, (b) terrorist attack, (c) nuclear emergencies and (d) civil disorders. The plan is general in nature and provides a framework for action for a variety of emergencies.

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IV. GENERAL DESCRIPTION OF WATER SYSTEM

System Identification

City of Pleasanton Water Division
Water system ID # 0110008
P.O. Box 520
Pleasanton, CA. 94566

Population Served

68,200 population, with 21,634 service connections as of January 1, 2009

Service Area

The City of Pleasanton service area covers approximately 22 square miles. The service area is bounded on the north by the City of Dublin, on the east by the City of Livermore, and the Pleasanton hills on the west and south.

Average Daily Demand

During normal weather conditions the average daily demand is approximately 16.3 million gallons per day (16.3 MGD) with 13.2 MGD being delivered by Zone 7 and the remaining 3.1 MGD coming from the City's wells.

Water Sources

Source	Production Facility	Maximum Production
1. Ground Water	4 groundwater wells (1 inactive well – Well #7)	10.8 MGD
2. Surface Water	Patterson Pass, Del Valle Treatment Plants, and Zone 7 groundwater wells.	45 MGD

Storage Facilities

Treated water is currently stored in twelve tanks and reservoirs with a total storage capacity of 34.2 million gallons. This represents approximately one-day average consumption (16.3 million gallons), while reserving capacity for fire and operation storage.

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Pressure Zones

The City has 8 major water pressure zones, designated as follows:

Lower Zone, Foothill Zone, Bonde Zone, Kottinger A Zone, 770 Zone, Kilkare Zone, Canyon Meadows and Grey Eagle.

V. GENERAL EMERGENCY INFORMATION

WATER EMERGENCY NOTIFICATION PLAN

Name of Utility: City of Pleasanton System #: 0110008

System Location/County: (Alameda County)

The following person(s) have been designated to implement the plan upon notification by the State Department of Health Services that an imminent danger to the health of the water users exists:

<u>Name</u>	<u>Title</u>	<u>Day Phone/Evening Phone</u>
1. <u>Dan Martin</u>	<u>Utilities Superintendent</u>	<u>(925) 931-5523 / (925) 354-0477</u>
2. <u>Leo Lopez</u>	<u>Assistant Utilities Superintendent</u>	<u>(925) 931-5507 / (925) 570-1420</u>
3. <u>Leonard Olive</u>	<u>Assistant Director Operations</u>	<u>(925) 931-5505 / (925) 519-8377</u>

The implementation of the plan will be carried out with the following State and County Health Department personnel.

<u>Name</u>	<u>Title</u>	<u>Day Phone</u>	<u>Evening Phone</u>
1. <u>Bob Brownwood</u>	<u>District Engineer</u>	<u>(510) 620-3454</u>	<u>(xxx) xxx-xxxx</u>
2. <u>Marco Pacheco</u>	<u>Sanitary Engineer</u>	<u>(510) 620-3467</u>	<u>(925) 323-6131</u>
3. <u>Ron Torres,</u>	<u>R.E.H.S.</u>	<u>(510) 567-6736</u>	<u>(510) 520-3255</u>

If the above personnel cannot be reached, contact The Office of Emergency Services (24 hours) at (800) 852-7550 or (916) 845-8911.

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Potential Emergencies

Emergencies can be classified in broad terms as:

1. Natural emergencies
2. Terrorist attack
2. Nuclear emergencies
3. Civil disorder

Natural Emergencies

- A. Earthquake - Earthquakes are the greatest potential for a natural disaster because the Calaveras Fault and other minor faults extend through the city. Historical records indicate activity on these faults since the 1800's. Earthquakes can cause earth flow, earth slides, fires, structural damage and flooding.
- B. Epidemics - Epidemics can be natural or manmade which could cause chemical or biological contamination of the water supply. The affects of these could be catastrophic to water supplies.
- C. Hazardous Material Spill - Major railroads and highways run through the City and there is always the danger of a hazardous material spill.
- D. Fires - Fires can be natural or man-made and can cause depletion of the water storage or damage to pumping stations and other facilities.

Terrorist Attacks

In recognition of the events of September 11, attacks on water systems by terrorists, sabators and vandals must be treated as a probable event. The objections of such an attack could be to contaminate the water supply, reduce the water supply and fire fighting capability and cause general panic.

Nuclear Attacks and Emergencies

We can expect up to approximately one-hour advance warning of a nuclear attack in this part of the United States. Other risks from nuclear weapons being transported by air or ground between depots, ship and laboratory facilities represent a threat of nuclear incident.

Civil Disorder

Civil disorders cause any or all of the following:

- Contamination of water supplies
- Large-scale wastage of water

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- Disruption of pumping facilities
- Loss of power
- Disruption of communication
- Interruption of maintenance and repair operations
- Curtailement of services
- Extensive fires

In summary, earthquakes, epidemics, spills, nuclear threats, fires and civil disorders may occur at any time without warning. It is the City's goal to respond to any emergency in the most effective manner possible. This Emergency Operations Plan is a tool to help achieve that goal.

VI. PRIORITIES

In an emergency to insure that an adequate quantity and quality of water is provided to all citizens with particular attention being paid to:

1. Life-threatening injuries.
2. Life-threatening fires, floods, leaks, etc.
3. The sick, handicapped and elderly
4. Major threats to property.
5. Essential systems and services.
6. Continuity of government services.

VII. THE WATER EMERGENCY OPERATIONS CENTER

The Water Emergency Operations Center is at the City's Operations Service Center-Water Department Building, 3333 Busch Road, Pleasanton, CA.

VIII. ACTIVATION OF THIS PLAN

- A. Who activates the plan? The plan is activated when the Water Emergency Operations Center is activated. This occurs when:
- The City Council, the Director of Emergency Services (City Manager), the Director of Operations Services or the Utilities Superintendent has declared a water emergency situation.
 - A local water emergency has been proclaimed in the City of Pleasanton, in the Zone 7 sphere of influence or in the County of Alameda which would affect the City's water system.
 - A water quality emergency is declared by the Department of Health Services for the City of Pleasanton Water System.
 - A State of Emergency exists, declared by the Governor of the State or by the President of the United States.

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B. There are three types of activation of this plan.

1. First type: Normal operations. This is the time for employees within the Utilities Division and other affected departments to familiarize yourself with the contents of this plan, to develop and update resource lists, and participates in water emergency drills.
2. Second type: Partial activation. The Water Emergency Operations Center (WEOC) is activated, but only some of the positions are filled. This may involve a smaller emergency that a limited number of responders can handle, or it might involve the early stages of what later escalates into the full activation of the plan.
3. Third type: Full activation. The WEOC is activated, and all or most of the positions are filled. This involves an emergency requiring an all-out City Utilities Division (or greater) response effort.

IX. THE EMERGENCY ORGANIZATION

A. Description

In an emergency, several personnel and departments work under the direction of one person. Personnel may be assigned to another department during the emergency.

B. Who is in Charge?

The position of authority will be given to the most qualified person in this order:

1. Director of Emergency Services (City Manager)
2. Director of Operations Services
3. Utilities Superintendent - Water and Sewer Operations.
4. Chief Utilities System Operator
5. Lead Utilities System Operator
6. 24-hour on-call duty Utilities Operator

C. Water Emergency Personnel

In an emergency, available personnel will be used in this order:

1. City Utilities Division Staff
2. Other Maintenance and Operations Staff
3. Other City Employees.
4. Skilled individuals from other organizations
5. Emergency volunteers and service organizations.
6. Citizens pressed into service by the Director.

All of the above are considered “Water Emergency Service Workers.”

X. GOVERNMENTAL RELATIONS

Emergency service offices have been established at all levels of government (city, county, state, and federal). The City would function under the utilities annex of the various governmental emergency operations plans. Under emergency operations, the City would function under its own core management, setting priorities and implementing procedures subject to the requirements generated by the emergency. City liaison personnel will be assigned to the cities and county emergency operations centers, on an as needed basis. In addition, Chapter 7, Division 1 of Title 2 of the Government Code and Chapter 1, Division 7 of the Military and Veterans Code stipulate that the City is subject to the direction of the Governor of the State in case of “State of War Emergency” or a declared “State of Emergency.

The State Emergency Plan provides for local county governments to direct civil defense activities. Civil defense activities involving the City will be directed through the Utilities Division of the California Office of Emergency Services and locally administered through the Alameda County office of Emergency Services.

The following county, state and federal emergency offices may be contacted for assistance and information:

1. County of Alameda
Office of Emergency Services
2000 - 150th Avenue
San Leandro, CA 94578
Senior Coordinator: Terry Gitlin
Business Phone: (510) 803-7800; Nights and weekends (510) 677-7721

2. State of California
Office of Emergency Services Region II
360 Civic Drive, Suite 1
Pleasant Hill, CA 94523
Regional Manager: Richard Eisner
Business Phone: (24 hours) (510) 286-0895
Utilities Coordinator (Sacramento):
Business Phone: (24 hours)
Hazardous Material Spills: (24 hours) (800) 852-7550

3. Federal Emergency Management Agency (FEMA)
Federal Disaster Assistance Administration Region 9
Building 105
Presidio of San Francisco, CA 94129
Manager: Roy Gorup
Business phone: (415) 923-7283

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Emergency Procedure Overview

1. Inspection and Report Back

It is important that immediate inspections and damage assessments of the system be made and reported to the District Emergency Operations Center in order to:

- a. Prevent loss of water from the distribution and storage systems.
- b. Prevent or detect contamination to the system.
- c. Determine damage or impending damage to treatment and pumping equipment.
- d. Maintain the best possible service.
- e. Request outside assistance, if necessary.

Following inspection and evaluation of damage, priorities will be established for the allocation of men, equipment and materials.

2. Repairs

Repairs must be made as soon as possible following the inspection and evaluation of damages. The responsible supervisor shall coordinate the work by order of priority.

3. Reestablishing Service

To reestablish adequate service, decisions must be made in the following areas:

- a. Request for aid from outside the District.
- b. Connections to adjacent potable and/or raw water systems.
- c. Manual operations of automatic equipment.
- d. Movement of portable pumps.
- e. Transferring of storage water.
- f. Rationing of water, etc.
- g. Installation of bypass pipelines (temporary in nature).

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XI. EMERGENCY POWERS

A. Proclamation of an Emergency

The City Council, the Director of Emergency Services (City Manager), or the Director of Operations Services has the power to proclaim a Local Water Emergency. The City Council must ratify a proclamation made by any of these individuals within seven days, review it every 14 days and terminate it as soon as possible.

B. Command and Control

The Director of Operations Services, or the Utilities Superintendent has the power to direct staff and civilian responses and to settle questions of authority and responsibility.

C. Water Emergency Orders and Regulations.

The Council or the Director of Emergency Services may promulgate orders and regulations to protect life and property or to preserve public order and safety during an emergency. These must be in writing and must be given widespread publicity.

D. Resources

In a declared water emergency, the Director of Operations Services, or the Utilities Superintendent may buy or commandeer supplies and/or equipment, and may command the aid of citizens.

XII. LEGAL IMMUNITIES

In a proclaimed water emergency, the City and its employees are immune regarding injuries as a result of:

- A. Water emergency actions that involve discretion, such as the decision to evacuate a certain area.
- B. Water department or other departments staffing levels.
- C. Impending peril or action taken to abate such peril.

XIII. EMERGENCY COMMUNICATIONS

- A. Communication with City personnel is of the utmost importance during a water emergency. Normal communication methods may be out of order or otherwise overloaded due to heavy use. There are, however, the following systems available:
 - 1. Our own two-way radio system could be used to contact City personnel and maintain communication with the command center and personnel in the field.
 - 2. The Emergency Broadcasting System (EBS) may be used to provide emergency

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water information to the public. Access is through the Alameda County Emergency Operations Center (EOC).

XIV. OTHER ORGANIZATIONS

A. Mutual Aid

Since Pleasanton's resources may be stretched to exhaustion during an emergency, we have emergency mutual aid agreements (not specifically water related) with other governments. Generally, mutual aid starts locally and ascends in this order:

1. Adjacent City, Zone 7 or special district water departments.
2. Alameda County Operational Area (combined city, special districts, and county resources; coordinated by the County).
3. State Water Agencies and the Department of Health Services.

B. Financial Aid

The State may help local agencies cover the costs of water emergencies. An emergency must be declared within 10 days of the actual occurrence.

C. Amateur Radio Operators

Local amateur radio operators are organized and ready to assist with communications in an emergency.

D. Military

The National Guard usually provides military aid. Their role is to assist, but not substitute for, City response efforts.

XV. WATER EMERGENCY PROCEDURES

Most of the situations which may occur to bring about the declaration of a water emergency involve loss of water supply, rapid and abnormal loss of storage volumes or pumping and/or distribution failures which can generally be classified as quantity or water quality problems. The following emergency procedures should be followed during the normal workdays or during non-working hours once a water emergency has been declared:

1. Notify the Utilities Superintendent, the Director of Operations Services, or the Director of Emergency Services (City Manager) of the situation in the above order.

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2. The individual with the highest responsibility level at the time of the event shall determine the severity of the situation and advise staff and management of the situation. This person shall also formulate and implement a plan of response to the situation.
3. Call additional Utilities Division staff as follows:
 - A. Utilities Standby Operator after hours.
 - B. Utilities Division Leadperson.
 - C. Additional Utilities Division staff as needed.
 - D. Additional Operating Department Personnel as needed.
 - E. Additional City Employees or Mutual Aid personnel as needed.
4. Check overall distribution system for status.
5. If the water emergency is a quantity problem, take one or more of the following appropriate steps to correct the situation to provide additional water supply into the system:
 - A. Turn on additional City wells
 - B. Call Zone 7 for additional water.
 - C. Shift water into or from various water pressure zones through valve operations or other methods as appropriate.
 - D. Maintain constant operation and monitoring of wells and pump stations through the telemetry system or with personnel, as necessary, to insure 24 hour run capability.
 - E. Contact and put into place emergency connections from the Alameda County Fairgrounds and the San Francisco Water Department.
 - F. Put into operation other available sources as appropriate.
 - G. If emergency is prolonged, schedule staff for rotating shifts to cover the duration of the emergency.
6. After some or all of the above measures have been taken to increase supply and the water emergency remains a quantity problem, take one or more of the following appropriate steps to reduce demand on the City's water system:
 - A. Advise and assist Parks Department for shut down of landscape irrigation in parks, planter strips, etc., and continue to work out scheduling with Parks Department for

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the required recovery period only.

- B. Advise and assist business parks for shut down of irrigation systems for recovery period.
 - C. Notify public through newspapers, radio and other means necessary to request reduction in water use to a level appropriate to the water emergency situation. If after hours, still notify papers and radio for morning information.
 - D. Constantly update staff, management, information officers, newspapers, and radio stations as to the status of the emergency.
7. If the water emergency is a quality problem, the pertinent steps outlined above should be followed with the addition of the following:
- A. The State Department of Health Services (DOHS), the Alameda County Health Department and the State Department of Fish and Game should be contacted and consulted to address the particular situation as necessary and appropriate.
 - B. Provide emergency water to public through water trucks at central location during emergency situations.

XVI. PERSONNEL AND RESPONSIBILITY INDEX

Director of Emergency Services	City Manager	Nelson Fialho
Director of Water Emergency	Director of Operations Services	Daniel Smith
Coordinator of Field Personnel	Asst. Director of Operations Services	Craig Higgins
Coordinator of Utility Personnel	Utilities Superintendent	Dan Martin
Field Supervisor	Chief Utilities System Operator	Jeff Ballou
Field Leadpersons	Lead Utilities Operators	Scott Petersen, Scott Walker
Public Information Officer	Public Information Officer	Joanne Hall
Legal Advisor	City Attorney	Jonathan Lowell
Damage Assessment/Building	Dir. of Building Inspection	George Thomas
Compensation/Claims	Assistant City Attorney	Julie Harryman

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Water Quality Laboratory

Water Quality Technician

Susan Clough

DIRECTOR OF WATER EMERGENCY

RESPONSIBLE PARTY	Nelson Fialho	Director of Emergency Services
ALTERNATIVE	Dan Martin Daniel Smith Jeff Ballou	Utilities Superintendent Director of Operations Services Chief Utilities Operator
WORK AREA		OSC Command Center

BASIC RESPONSIBILITIES

1. Report to Director of Operations Services unless Director of Emergency Services (City Manager) is present.
2. Officially place emergency services plan into effect.
3. Assume overall direction and responsibility. Make final major decisions.
4. Monitor and coordinate the situation.
5. Provide emergency alerting and mobilization instructions.
6. Carry out State policies on resource management operations.
7. Conduct debriefing sessions.

STAFF SOURCE

All City staff, personnel, and resources
 Volunteers of the community
 Manpower and resources of the private sector
 Adjacent jurisdictions
 Mutual aid agreements with Local, County, State and Federal agencies

PUBLIC INFORMATION OFFICER

RESPONSIBLE PARTY	Joanne Hall	Public Information Officer
ALTERNATE		(As designed by the Director)
WORK AREA		

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BASIC RESPONSIBILITIES

1. Report to the Command Center and be updated on situation.
2. Establish contact with news media.
3. Establish an information center for news media.
4. Provide information for all news media.
5. Assist the Director of Emergency Services, Director of Water Emergency and City Council with public information and direction statements.

STAFF SOURCE

All field operations units for information

COORDINATOR OF FIELD PERSONNEL

RESPONSIBLE PARTY	Daniel Smith	Director of Operations Services
ALTERNATE	Dan Martin	Utilities Superintendent
Water Personnel Alternate	Jeff Ballou	Chief Utilities System Operator

BASIC RESPONSIBILITIES

1. Coordinate all operations for field personnel.
2. Keep Public Information Officer apprized of situation.
3. Make decisions concerning repairs.
4. Determine short, medium, and long-term effects and how the city will be supplied with water.

STAFF SOURCE

All water department personnel and other city staff as may be required.

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FIELD SUPERVISOR

RESPONSIBILITY	Jeff Ballou	Chief Utilities System Operator
ALTERNATE	Scott Petersen, Scott Walker	Utilities Division Leadpersons
WORK AREA		

BASIC RESPONSIBILITIES

1. Coordinate activities of staff called out to assist in the emergency.
2. Supervise repairs.
3. Provide information for making decisions about short, mid, long-term water supply.
4. Coordinate acquisition of necessary supplies for repairs.

STAFF SOURCE

Field Personnel
 Coordinator of Field Personnel
 Finance Department

LEGAL ADVISOR

RESPONSIBLE PARTY	Jonathan Lowell	City Attorney
ALTERNATE	Julie Harryman	Assistant City Attorney
WORK AREA		City Hall EOC or OSC Command Center

BASIC RESPONSIBILITIES

1. Report to OSC Command Center.

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- 2. Prepare proclamations, emergency ordinances and other legal documents required by the City Council and the Director.
- 3. Advise the City Council and the Director on the legality and or legal implications of contemplated emergency actions.
- 4. Develop the rules, regulations and laws required for acquisition and or control of critical resources.

STAFF SOURCE

Clerical personnel
 Other members of the legal profession

DAMAGE ASSESSMENT/BUILDING INSPECTION

RESPONSIBLE PARTY	George Thomas	Building Inspection
ALTERNATE	Les Lyons	Building Inspection
WORK AREA		

BASIC RESPONSIBILITIES

- 1. Inspect city infrastructure for damage assessment
- 2. Inspect shelter facilities, if needed.
- 3. Collect and collate information regarding damage.
- 4. Be prepared to request or provide mutual aid services.

STAFF SOURCE

Building department staff, including secretaries
 Outside agencies

WATER QUALITY LABORATORY

RESPONSIBLE PARTY	Susan Clough	Water Quality Technician
ALTERNATE	Jeff Ballou	Chief Utilities System Operator
WORK AREA		OSC Water Quality Laboratory

BASIC RESPONSIBILITIES

1. Test water to insure safety.
2. Coordinate with Water Division staff for testing of water.
3. Maintain records of testing, when, where, results.
4. Report results of testing to Director.
5. Assist in preparation of statements to public concerning proper methods of sterilization (if necessary).

STAFF SOURCE

Utilities Staff

XVII WATER DIVISION MATERIAL

The Utilities Division stockpiles material necessary for normal operations and maintenance. Pipe, full circle clamps, and dresser couplings are stored and maintained in minimum quantities for most emergencies.

Items of particular importance are:

CHLORINE			
Location	Type of Chlorine Stored	Quantity	Total
Amador Aquatic Center	Sodium Hypochlorite	1,750 gallons	1,750 gallons

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Operations Service Center	Tablet chlorine	50 lb pails	2 pallets
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FLUORIDE			
Location	Barrels Stored	Barrels (on line)	Total
Turnout 1	Bulk tank	500 gals	1
Turnout 2	Bulk tank	500 gals	1
Turnout 3	Bulk tank	500 gals	1
Turnout 4	Bulk tank	500 gals	1
Turnout 5	Bulk tank	500 gals	1
Wells 5 and 6	Bulk tank	500 gals	1
Well 8	Bulk tank	500 gals	1
Well 7 (Inactive)	0	0	0
Ruby Hills	Bulk tank	500 gals	1
Vineyard Hills	Bulk tank	500 gals	1

NOTE: Should the Utilities Division supplies of chlorine be exhausted, local swimming pool supply shops are an excellent source.

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3. Gasoline and Diesel Fuel

Gasoline and diesel fuels are stored at the Operations Service Center, the Police Department, three Fire Stations, and the Canyon Meadows Pump Station, in underground and above ground storage tanks in the following quantities:

GASOLINE AND DIESEL FUELS		
Location	Diesel Fuel	Unleaded Gasoline
Operations Service Center <i>underground</i>	10,000 Gallons	10,000 Gallons
Police Department <i>underground</i>	10,000 Gallons	6,000 Gallons
Fire Stations 1 and 3 <i>underground</i>	550 Gallons	550 Gallons
Fire Station 2 <i>above ground</i>	1,000 Gallons	1,000 Gallons

For normal delivery time is 1 – 2 days. A two-week supply is maintained in all tanks.

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XVIII VEHICLES AND EQUIPMENT

All equipment should be maintained in top condition. All vehicles should contain at least one-half tank of gasoline at all times, as the gasoline pumps may not be functioning at the time of a disaster.

VEHICLES				
Vehicle No.	Year	Make	Model	Radio
301	1997	Ford	½ Ton Pickup	Yes
302	1996	Ford	¾ Ton Utility Truck	Yes
303	2001	Ford	¾ Ton Utility Truck	Yes
305	2001	Ford	¾ Ton Utility truck	Yes
306	2002	Ford	½ Ton Pickup	Yes
307	2001	Ford	1 ½ Ton Dump	Yes
308	1999	Ford	1 ½ Ton Flatbed	Yes
309	1997	Ford	5 Yd Dump Truck	Yes
310	1998	Ford	¾ Ton Utility Truck	Yes
311	1997	Ford	½ Ton 4 X 4 Pickup	Yes
312	2002	Freightliner	7 Yd Dump Truck	Yes
314	2004	Ford	1 ½ Ton Utility Truck	Yes
315	2003	Ford	½ Ton Pickup	Yes
316	1990	Ford	5 Yd Dump Truck	Yes
317	2003	Ford	1 Ton 4 X 4 Utility Truck	Yes
395	2001	Ford	½ Ton Van	Yes
OTHER EQUIPMENT				
320	2002	Caterpillar	416D Backhoe 4 x 4	
322	1998	Caterpillar	416D Backhoe 4 X 4	Yes
369		Honda	2" Water Pump	
370			Gas Powered Concrete Saw	
371		Honda	2" Pump	

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372		Honda	2" Pump	
379	1984	Lopr	Traffic Controller	
385	1986	Caterpillar	Diesel Generator, 250 KW	
386	1986	Case	Front Loader	

XIX MUTUAL AID

A major source of outside resources will be through agreement and cooperation with other public agencies. The City currently has a Mutual Assistance Agreement with the following agencies:

San Francisco Water Division (SFWD)
 425 Mason Street
 San Francisco, CA 94102
 Patricia Martel, General Manager
 Water Emergency Calls (415) 550-4 911
 Sunol Office: Steven Merier: (925) 862-5500

City of Livermore
 1052 South Livermore
 Livermore, CA 94550 (925) 960-4100- City Hall
 Linda Barton, City Manager
 After Hours: (925) 960-8160
 WWTP Plant No.: (925) 960-8100
 Contacts: Dan McIntyre, Darren Greenwood or Randy Werner

Dublin San Ramon Services District
 7051 Dublin Boulevard
 Dublin, CA 94568 (925) 875-0515
 Bert Michalczyk, General Manager
 Dan Gallagher, Operations Manager, WWTP 24 Hour number: (925)875-2345
 Levi Fuller, WWTP Operations Supervisor (925) 875-2300
 Jim Dryden, Field Operations Supervisor (925)875-2367

Zone 7 Water Agency
 5997 Parkside Drive
 Pleasanton, CA 94566 (925) 454-5000
 Jill Duerig, General Manager (925) 454-5016
 Diana Gaines (925) 454-5021
 Dan Moy (925) 454-5043
 Rich Gould (925) 519-3109
 Vince Wong (925) 454-5004

It is expected that each agency will exhaust its own resources first, and then call on neighboring agencies for aid. Request for emergency assistance under the agreement shall be directed to the General Manager or contact person of the lending agency.

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An Emergency Resources Directory on pages 26 through 30 showing supplies normally in stock and equipment and personnel at the participating agencies.

XX. OUTSIDE SERVICES

AERIAL SURVEY AND TRANSPORT

Aris Helicopters
1138 Coleman Avenue
San Jose, CA
(408) 998-3266 (24 hours)

Crane Helicopter Services
Milpitas, CA
(909) 793-0251 (24 hours)
Large construction helicopters

AUTOMOTIVE REPAIR

Combs and Dodson
183 Wyoming Street
Pleasanton, CA 94566
(925) 462-3237
After Hours: (209) 836-4237

BACKHOE SERVICES

Ponte Engineering
P.O. Box 32659
San Jose, Ca. 95152
(408) – 251-9257
(408) 204-5269 cell

CHEMICAL SPILLS

Chemtrec
800-424-9300

National Response Center
800-424-8802

Basic Chemical Solutions
525 Seaport Blvd.
Redwood City, CA 94063
(650) 363-1661

CHEMICAL SUPPLIERS

Clear Solutions

CHEMICAL TOILET RENTAL

A-1 Advantage
Pleasanton, CA 94566
(925) 846-4062

EARTHWORK CONTRACTORS

Gradeway Construction
43801 Osgood Road
Fremont, CA 94538
(510) 490-1070

Granite Construction
10500 S. Harlan Road
French Camp, CA 95321
(209) 982-4750

Oliver De Silva & Gates Construction
11555 Dublin Boulevard
Dublin, CA 94568
(925) 829-9220

ELECTRICAL CONTRACTORS

SD Electric
2455 North Naglee Rd, Suite 220
Tracy, Ca 95304
(209) 832-0870
Steve's Mobil # (925) 525-2349
Alternate Contacts: John (209) 918-2333 for
Tesco/Control Circuitry Problems
Larry (925) 525-6076 for Basic Electrical Problems

TS Electrical
1039 Serpentine Lane, Suite A
Pleasanton, CA. 94566
(925) 495-9806
Norm Petker (925) 570-0208 cell

CRANES

Layne Western Co., Inc.
P.O. Box 1326
Woodland, CA 95695

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2680 Kadema Dr, Suite 100
Sacramento, CA 95864
(916) 486-9388

***In emergency you can call UNIVAR (866)486-3587 or
(559)488-4709 in Fresno. They stock tablets for Clear
Solutions. You can arrange to pick up tablets in Fresno***

Basic Chemical Solutions
525 Seaport Blvd.
Redwood City, CA 94063
(650) 363-1661

FIRE DEPARTMENTS

Livermore-Pleasanton
Chief Bill Cody
(925) 454-2300

Dougherty Regional Fire Authority
Chief Harold Ritter
(510) 829-2333 or
(510) 829-2334 (after hours)

GENERATORS

Bayside Equipment Company
Redwood City, CA
(415) 368-3955

Peterson Power System, Inc.
2828 Teagarden Street
San Leandro, CA 94577
(510) 895-8400

CALIFORNIA HIGHWAY PATROL

4999 Gleason Drive
Dublin, CA 94568
(925) 828-0466
After hours: (707) 648-5515

CONSULTING ENGINEERS

James M. Montgomery, Inc.
355 Lennon Lane
Walnut Creek, CA 94598
(510) 933-2250
Carl Thorwaldsen

Kennedy/Jenks Engineers
303 Second Street

(916) 662-2825
Tom Dea, Ken Worster, Jim Brookshire

Biggee
San Leandro, CA
(510) 638-8100
Duty man for emergency

GEOGECHNICAL CONSUSTANTS

BSK & Associates
5729 Sonoma Drive
Pleasanton, CA 94566
(925) 462-4000
Daytime only

Berlogar Geotechnical Consultants
5587 Sunol Boulevard
Pleasanton, CA 94566
(925) 484-0220
Daytime only

LABORATORIES

Clayton Environmental
1252 Quarry Lane
Pleasanton, CA 94566
(925) 426-2600 Marianne Gambini
Daytime only

Dublin San Ramon Services District
7933 Johnson Drive
Pleasanton, CA 94588
(925) 846-4585 "Bing" Misra
Daytime only

City of Livermore
101 West Jack London Blvd.
Livermore, CA 94550-7632
(925) 373-5230 Kumudini Dharmawardana
Daytime only

Alameda County Sheriff's Dept.
Charles Plummer, Sheriff
Office of Emergency Services
(510) 667-7740

PUMPS

Paco Pumps
845 – 92nd Avenue
Oakland, CA 94603
(510) 639-3346
Gary Pauline (510) 522-4039

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San Francisco, CA 94107
(415)

John O. Glover (510) 243-2579

Brown & Caldwell

3480 Buskirk Avenue
Pleasant Hill, CA 94523-4342

P.O. Box 8045

Walnut Creek, CA 94596-1220
(510) 937-9010

Joseph A. Cotteral (510) 937-9010
Grace Chow

Corollo Engineers

450 N. Wiget Lane
Walnut Creek, CA 94598
(510) 932-1710

Stan Saylor, Howard Way

Nolte and Associates

60 South Market Street, Suite 600
San Jose, CA 95113

(408) 287-3400

Michael K. Mullis

Zone 7, Water Agency Lab

Del Valle Treatment Plant
(510) 447-6704 (Daytime & After Hours)

Patterson Pass Treatment Plant
(510) 447-6703 (Daytime only)

PIPELINE CONTRACTORS

A.M.G. Pipeline, Inc.

42536 Osgood Road
Fremont, CA

(510) 490-4432

Tony Gonzalves (510) 582-5357

Fee Construction

5340 Brisa Street
Livermore, CA 94550
(510) 454-2800

Silva's Pipeline, Inc.

1310 Ruus Lane
Hayward, CA

(510) 786-2722

Steve Wintch (510) 838-7274

Jim Silva (510) 782-7311

Ponte Engineering

P.O. Box 32659
San Jose, CA 95152
(408) – 251-9257

Rich Pillado (510) 426-8392

Pump Repair Service

405 Alan Street
Daly City, CA 94014
(415) 467-2150
(415) 716-5461 (cell)

Shape Incorporated (Pleasanton)

6600 Koll Center Pkwy, Ste#220
PLEASANTON, CA 94566
(925) 485-9720 x20
Mobile # (925) 699-8865

TELEMETRY AND INSTRUMENTATION

Tesco

3434 – 52nd Avenue
Sacramento, CA 95823-0510
(916) 395-8800 (Daytime only)

RENTALS

Cresco

20 California Avenue
Pleasanton, CA 94566
(925) 846-0151

Big 4 Rents

5187 South Front Road
Livermore, CA 94550
(510) 373-4444
Wayne Boatman (707) 553-9595
Jim Hill (510) 833-7636

Rental World

6457 Dublin Court
Dublin, CA 94568
(925) 829-2980
Mark Otuos (925) 606-0201
Larry Wilson (209) 835-9102

TIRE REPAIR

Valley Tire Service

3110 Busch Road
Pleasanton, CA 94566
(925) 846-5887
Dan Martinez (925) 449-1492
Tom Willis (925) 846-4286

Big O Tires

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(408) 204-5269 cell

PIPE SUPPLIERS

Edward S. Walsh Co.

812 North Vasco Road
Livermore, CA 94550
(510) 447-3520
Bill Helling: (510) 846-9799

Groeniger & Company

27750 Industrial Boulevard
Hayward, CA

P.E. O'Hair

2112 Loveridge Road
Pittsburg, CA 94565
(510) 432-7375 (Answering Service)

POLICE DEPARTMENTS

City of Livermore

Chief Ron Scott
(925) 371-4900 – Day
(925) 371-4987 – Dispatch

SAND & GRAVEL

CEMEX

1544 Stanley Boulevard
Pleasanton, CA 94566
(925) 846-2824

Vulcan Materials Co.-Western

52 El Charro Rd.
Pleasanton, CA 94566
(925) 846-5125

UTILITIES

Pacific Bell

Priority Repairs 811-8081
General Repairs 611
Emergency Cable Locations 977-2230, 977-2259

PG&E

Emergency Gas & Electric Locations
(925) 447-1480
Night Operator (510) 783-1826
Power outages 800-743-5002

Santa Fe Pacific Pipeline

(408) 435-7399

3688A Washington
Pleasanton, CA 94566
(925) 462-7650
Dave Cherry (925) 462-3460

Seever & Sons Tire

3687 Old Santa Rita Road
Pleasanton, CA 94588
(925) 463-3443
Richard Murdock (209) 982-1953

WELL DRILLING & REPAIR CONTRACTORS

DeLucchi Well & Pump, Inc.

35137 Mission Boulevard
Fremont, CA 94538
(510) 793-2822
(510) 794-6819 John DeLucchi

C&N Well Pump

1745 Walsh Avenue
Santa Clara, CA
(408) 727-3395
Jerry Shadley: (408) 693-3107

Maggiora Bros. Drilling, Inc.

595 Airport Blvd.
Watsonville, CA
1-800-521-2935 (24 hours)

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USA
Underground Service Alert
800-227-2600
City Identification number **1165**

XXI. EMERGENCY NOTIFICATION

WATER QUALITY EMERGENCY NOTIFICATION PLAN

Name of Utility: City of Pleasanton System #: 0110008

System Location/County: (Alameda County)

The following person(s) have been designated to implement the plan upon notification by the State Department of Health Services that an imminent danger to the health of the water users exists:

<u>Name</u>	<u>Title</u>	<u>Day Phone/Evening Phone</u>
1. <u>Dan Martin</u>	<u>Utilities Superintendent</u>	<u>(925) 931-5523 / (925) 354-0477</u>
2. <u>Daniel Smith</u>	<u>Director of Operations Services</u>	<u>(925) 931-5509 / (209) 892-7905</u>
3. <u>Jeff Ballou</u>	<u>Chief Utilities Operator</u>	<u>(925) 931-5521 / (925) 437-3604</u>

The implementation of the plan will be carried out with the following State and County Health Department personnel.

<u>Name</u>	<u>Title</u>	<u>Day Phone</u>	<u>Evening</u>
<u>Phone</u>			
1. <u>Betty Graham</u>	<u>District Engineer</u>	<u>(510) 620-3454</u>	<u>(510)501-6856</u>
2. <u>Marco Pacheco</u>	<u>Sanitary Engineer</u>	<u>(510) 620-3467</u>	<u>(925) 323-6131</u>
3. <u>Ron Torres,</u>	<u>R.E.H.S.</u>	<u>(510) 567-6736</u>	<u>(510)520-3255</u>

If the above personnel cannot be reached, contact The Office of Emergency Services (24 hours) at (800) 852-7550 or (916) 845-8911.

Describe methods or combination of methods to be used (radio, television, door-to-door, sound

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truck, etc). For each section of your plan, give an estimate of the time required, necessary personnel, and estimated coverage. Consideration must be given to special organizations, particularly non-english speaking groups and outlying water users. (Use the other side or attach additional pages if necessary).

Report Prepared by;

Signature and Title

Date

Date:

BOIL WATER ORDER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

BOIL YOUR WATER BEFORE USING

Failure to follow this advisory could result in stomach or intestinal illness.

Due to the recent event [e.g., water outage, power outage, flood, fire, earthquake or other emergency situation], the California Department of Health Services in conjunction with the Alameda County Health Department, and the City of Pleasanton Water System are advising residents of Pleasanton to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution.

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a boil, **let it boil for one (1) minute**, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking and food preparation **until further notice**. *Boiling kills bacteria and other organisms in the water.*

Optional alternative to include for prolonged situations where it fits.

- An alternative method of purification for residents that do not have gas or electricity available is to use fresh liquid household bleach (Clorox®, Purex®, etc.). To do so, add 8 drops (or 1/4 teaspoon) of bleach per gallon of clear water or 16 drops (or 1/2 teaspoon) per gallon of cloudy water, mix thoroughly, and allow to stand for 30 minutes before using. A chlorine-like taste and odor will result from this purification procedure and is an indication that adequate disinfection has taken place.
- Water purification tablets may also be used by following the manufacturer's instructions.

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- **Optional:** Potable water is available at the following locations: [List locations]
Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem within [estimated time frame].

For more information call:

Water Utility contact: Dan Martin, Utilities Superintendent, (925) 931-5523.

California Department of Health Services – Drinking Water Field Operations Branch - District Office at (510) 540-3004.

Local Environmental Health Jurisdiction: Alameda County at (510) 567-6736.

Please share this information with all the other people who drink this water, especially those who may be visiting your homes, schools, or businesses, or who are receiving water from a public utility or distributor.

ORDEN DE HERVIR EL AGUA

Fecha:

Hierva su Agua antes de Usarla

Falta de seguir este aviso podría tener resultados estómago o enfermedad intestinal

Debido a la [falta de agua (water outage), falta de electricidad (power outage), inundación (flood), incendio (fire), temblor (earthquake) or other emergency], durante [date, month, etc.], el Departamento de California de Servicios de Salud en conjunción con la City of Pleasanton Water System y el Condado de Alameda County esta aconsejando a todos usuarios de el sistema de City of Pleasanton Water System que hiervan el agua de canilla o usen agua embotellada para beber y cocinar como medida de seguridad.

Que debo hacer?

NO BEBA EL AGUA SIN ANTES HERVIRLA. Hierva toda el agua, **déjela hervir por un minuto**, y déjela reposar antes de usarla, o utilice agua embotellada. Agua hervida o embotellada debe ser usada para beber y para preparar la comida hasta el próximo aviso. **Hierviendo mata a bacteria y otros organismos en el agua. [or Este es el metodo preferido para asegurar que el agua esta segura para beber.]**

Optional alternative to include for prolonged situations where it fits.

- Otro método de purificación del agua para los residentes que no tengan gas o electricidad disponibles es utilizar blanqueador líquido de uso doméstico (Clorox®, Purex®, etc.). Para hacerlo, añada 8 gotas (o 1/4 cucharadita) de blanqueador por galón de agua clara, o 16 gotas (o media cucharadita) por galón de agua turbia, mézclelo bien y déjelo descansar 30 minutos antes de utilizarlo. Este procedimiento de purificación causa que el agua huela y tenga sabor a cloro, lo que indica que ha sido desinfectada de manera adecuada.
- También se puede utilizar tabletas de purificación del agua siguiendo las instrucciones del fabricante.
- **Optativo:** Hay agua potable disponible en los siguientes sitios: [List locations]
Traiga un recipiente limpio para el agua (con una capacidad máxima de 5 galones).

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Le informaremos cuando las pruebas demuestren que no hay bacterias y que usted ya no necesita hervir su agua. Anticipamos que resolveremos el problema el [date of expected resolution in Spanish day-month-year].

Para mas información, por favor póngase en contacto con:

Contacto del sistema de agua: [Dan Martin, Utilities Superintendent](#) al (925)-931-5523 o escribiendo a [P.O. Box 520 Pleasanton, CA. 94566](#).

Departamento de Salud de California: [\(510\)-540-3004](#).

Condado de [Alameda County](#): contact at (510)-567-6736.

Por favor comparta esta información con otros que pueden tomar de esta agua, colocando este aviso en lugares visibles, o remitiéndolo por correo, o entregandolo manualmente. Es de particular interés distribuir este aviso ampliamente si usted lo recibe representando un negocio, un hospital u hogar de infantes u hogar de ancianos o comunidad residencial.

City of Pleasanton

DATE _____

CANCELLATION OF BOIL WATER ORDER

On (date) _____ you were notified of the need to boil/disinfect all tap water used for drinking and cooking purposes.

The City of Pleasanton Water System in conjunction with the California Department of Health Services, and/or Alameda County Health Local Environmental Health Jurisdiction, has determined that, through abatement of the health hazard and comprehensive testing of the water, your water is safe to drink. **It is no longer necessary to boil your tap water or for you to consume bottled water.**

For more information call:

Water Utility contact: Dan Martin, Utilities Superintendent, (925) 931-5523

California Department of Health Services: Betty Graham, Sr. Sanitary Engineer, (510) 540-3004

Local Environmental Health Jurisdiction: Ron Torres, R.E.H.S. (510) 567-6736

Appendix C

NOMBRE DEL SERVICIO DE AGUA

FECHA

CANCELACIÓN DE LA ORDEN DE HERVIR EL AGUA

El (fecha) de _____ le notificaron que tenía que hervir o desinfectar toda el agua de la llave que utilizara para beber y cocinar.

El Sistema de Agua de _____ junto con el Departamento de Servicios de Salud de California, o la Jurisdicción Local de Salud Ambiental han determinado tras la supresión del riesgo de salud, seguido por un análisis completo del agua, que puede beber el agua de su llave sin peligro. **Ya no es necesario que hierva el agua de su llave ni que consuma agua de botella.**

Para más información llame a:

Contacto en el Servicio de Agua: _____
(Nombre, puesto y no. de teléfono del representante del servicio de agua)

Departamento de Servicios de Salud de California: _____

Jurisdicción Local de Salud Ambiental: _____

UNSAFE WATER ALERT

[

**City of Pleasanton water is possibly contaminated
with [an unknown substance]**

DO NOT DRINK YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the City of Pleasanton due to a recent [intrusion; break-in] at [one of the wells; Zone 7 treatment plant; storage tank; specific facility]. The California Department of Health Services, Alameda County Health Department, and City of Pleasanton Water System are advising residents of Pleasanton to NOT USE THE TAP WATER FOR DRINKING AND COOKING UNTIL FURTHER NOTICE.

What should I do?

- **DO NOT DRINK YOUR TAP WATER---USE ONLY BOTTLED WATER.** *Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice and food preparation **until further notice.***
- **DO NOT TRY AND TREAT THE WATER YOURSELF.** *Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.*

OPTIONS

- **Optional:** Potable water is available at the following locations: [List locations]
Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within [estimated time frame].

For more information call:

Water Utility contact: Dan Martin, Utilities Superintendent, (925) 931 - 5523, 3333 Busch Road, Pleasanton, CA.

California Department of Health Services at: Drinking Water Field Operations Branch. Berkeley, Betty Graham, Sr. Sanitary Engineer, (510) 540-3004

Local County Health Department: Alameda County Health (510) 567-6736.

This notice is being sent to you by City of Pleasanton. California Public Water System ID # 0110008. Date Distributed: _____.

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this

Date:

UNSAFE WATER ALERT

[Insert one-liner language other than Spanish here, otherwise delete.]

**The City of Pleasanton water is possibly contaminated
with [an unknown substance]**

DO NOT USE YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the City of Pleasanton due to a recent [intrusion; break-in] at [one of the wells; Zone 7 treatment plant; storage tank; specific facility]. The California Department of Health Services, Alameda County Health Department, and the City of Pleasanton Water System are advising residents of Pleasanton to NOT USE THE TAP WATER FOR DRINKING, COOKING, HAND WASHING, OR BATHING UNTIL FURTHER NOTICE.

What should I do?

- ***DO NOT USE YOUR TAP WATER---USE ONLY BOTTLED WATER.*** *Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice, food preparation and bathing **until further notice.***
- ***DO NOT TRY AND TREAT THE WATER YOURSELF.*** *Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.*

OPTIONS

- **Optional:** Potable water is available at the following locations: [List locations]
Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within [estimated time frame].

For more information call:

Water Utility contact: Dan Martin, Utilities Superintendent, (925) 931 - 5523, 3333 Busch Road, Pleasanton, CA.

California Department of Health Services at: Drinking Water Field Operations Branch, Berkeley, Betty Graham, Sr. Sanitary Engineer, (510)540-3004.

Local County Health Department: Alameda County Health (510) 567-6736.

This notice is being sent to you by The City of Pleasanton. California Public Water System ID # 0110008. Date Distributed:_____.

Please share this information with all other people who receive this water, especially

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those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

APPENDIX L

Conservation Materials

DRAFT

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Pleasanton Today

June 20, 2014

The City of Pleasanton Newsletter

www.cityofpleasantonca.gov

DROUGHT

*A New Norm Spawns New Habits
as Pleasanton Becomes Water-Wise*

Saving money. Saving calories. Saving memories. There are blogs, books, and websites galore about these topics, but saving water? With the driest year in California's recorded history well underway, Pleasanton residents will begin the hottest months of the year already familiar with Stage III water shortage planning and restrictions. By fall of this year, we will all be better acquainted with strategies to conserve water.

The Situation

Unprecedented low rainfall totals combined with a scant snowpack of just 15% of normal were the beginning of many "firsts" for California residents. Another worrisome "first" was delivered in April, when the State Water Project, which shoulders the majority of California's water system, and is the source of 80% of the water delivered to Pleasanton, announced that it would reduce its potable water delivery by 75%. In turn, our region's water wholesaler, Zone 7 Water Agency, informed the cities of Pleasanton and Livermore and the Dublin-San Ramon Services District that water supplies would be cut by 25% every month through the end of calendar year 2014. As a result, we must now manage with 75% of the water allotment needed to meet our demands.

The City's Response

In an attempt to cope with future shortages, the Pleasanton City Council enacted Stage I Water Shortage Planning measures in February 2014, which called upon residents and businesses to voluntarily cut water usage by 20%. As a result, water consumption was reduced minimally, by just .6%, and



Val Vista Park will stay green throughout the summer thanks to a new recycled water irrigation system.

actually represented an increase in usage over the same period last year. The need to protect our potable water supply through the upcoming summer months prompted a unanimous vote of the City Council on May 6 to implement Stage III Water Shortage Planning measures. This level mandates a 25% reduction of water consumption from the same period in 2013.

With 42 groomed parks, dozens of public facilities, and hundreds of acres of landscaping to maintain, the City faces many of the same challenges as residents, only on a larger scale. In an effort to lead by example, all park watering is being strategically reduced to meet the 25% goal. Further, Val Vista, Pleasanton's second largest park, is now being irrigated with recycled water from the Dublin San Ramon Services District. Also, large portions of landscaped grass have been removed from the City Hall campus at 123 Main Street and replaced with mulch, drought tolerant plants, and a drip irrigation system. Callippe Municipal Golf Course will be irrigated with recycled water this summer. Residents can

also expect water features at all city parks to be turned off this summer. The Dolores Bengtson Aquatic Center is open, and the standard practice of covering the pools each evening to reduce evaporation will continue. However, you won't see staff power washing the decks as in wetter times, and patrons will notice signage in the locker rooms requesting everyone to take shorter showers.

What Residents and Businesses Can Do

Pleasanton residents and businesses are pitching in to conserve water to meet our health, safety, and fire protection needs. Here are some tips to help reduce water use by at least 25%:

- Repair all leaks in and around your home and/or business; these include leaky toilets, faucets, showers, sprinklers, and valves.
- No hose washing of hard-surfaced areas.
- Limit outdoor watering to no more than 2 non-consecutive days per week.
- Eliminate water run-off by shortening watering time and adding multiple watering cycles.
- Water landscaping between 6 p.m. and 9 a.m. to reduce water loss from wind and evaporation
- Wash cars, trucks, etc., at car wash facilities that recycle water.
- Turn off the tap when brushing teeth, shaving or dishwashing by hand.
- Wash only full loads of laundry and dishes.
- Install water-efficient devices, such as faucet aerators and showerheads.
- Take shorter showers. Reducing your shower time by 5 minutes can save up to 12.5 gallons of water!

For more information about water conservation, please call the Water Conservation Hotline at (925) 931-5504 or visit pleasantonwaterconservation.com.



A new Mercedes Benz showroom and maintenance building are among several new "looks" in Pleasanton.

On the Economic Development Front

You may have noticed more commercial development around town over the past two years. This is the result of continued planning during the recent recession to be prepared for the economic recovery. While the economy may not have fully recovered to its earlier strength, signs are looking more positive and affirm Pleasanton's position as a great place for business. Here's a glimpse into what's coming to our community.

Several Pleasanton auto dealers are putting on a new face. The Mercedes Benz dealership completed a reconstruction of its showroom and maintenance shop with

a beautiful building that can be seen from both Owens Drive and I-580. Mini Cooper and BMW is just about ready to upgrade their facilities, while Lexus has just received approval from the City to replace its buildings with more a contemporary showroom and service bay.

These improvements will allow the dealerships to better serve customers' purchasing and service needs, while integrating new architecture into Pleasanton's high design standards. We can also expect a new CarMax at the Staples Ranch site located at I-580 and El Charro Road in 2015/16 with a selection of quality used cars.

Meanwhile, Specialty's Café is renovating a former restaurant building on Hopyard Road at Owens Drive, while also moving its headquarters to Pleasanton, and Eddie Papa's is preparing to expand its outdoor seating area. On a slightly larger scale, the JC Penney Plaza on Springdale Avenue is now under new ownership with plans to revamp and reenergize the center to better serve nearby residents, workers and patrons of Stoneridge Shopping Center.

Throughout the City's retail centers, new shops, services and restaurants are opening, including in downtown Pleasanton. The few vacant storefronts now have multiple tenants

bringing additional offerings to the heart of our community. The City's efforts to encourage private redevelopment are paying off with two new projects that will bring new architecture and activity to the downtown district.

The Pastime Pool building will be renovated into a 2-story building to accommodate retail and restaurant on the ground floor and retail and services on the second floor. A few blocks north, the vacant lot has a new owner who is developing plans for a building to fill the space and add to the tenant mix.

Pleasanton's commercial office environment also continues to strengthen. Leading cloud computing company Workday has plans to build a new 430,000 square foot office building next to the West Pleasanton BART station on Stoneridge Mall Road, firmly establishing Pleasanton as its home. Blackberry has also leased a large space in Bernal Corporate Park. In Hacienda business park, a new medical care facility — a partnership between Tenet Healthcare, parent company of the San Ramon Regional Medical Center, and John Muir Health — will soon open on Owens Drive across from the East Pleasanton BART station, and the California Center has been sold to new owners that will invest in and reposition the campus to attract new firms.

These businesses generate jobs, provide services, and their employees patronize other Pleasanton businesses, which contributes to a healthier economy for the city.

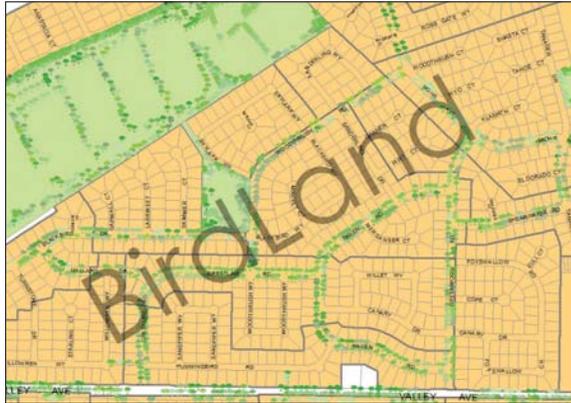
Pleasanton Police Department Unveils Nextdoor

The Pleasanton Police Department recently introduced Nextdoor, a private social network for neighborhoods that enables residents to communicate online, in a private secure website, to build stronger communities.

Nextdoor is a great way to share recommendations about local services such as babysitters, dentists, contractors, etc., or organize neighborhood events such as Neighborhood Watch programs and yard sales. Through your respective neighborhood site you can also report suspicious activities, help prevent crime, find lost pets, and get updates from the Pleasanton Police Department, such as safety tips and crime alerts.

Many neighborhoods in Pleasanton have already started Nextdoor sites with nearly 3,000 members representing 50 Pleasanton neighborhoods. Interested in joining? Just visit nextdoor.com and enter your address. If Nextdoor is available in your area, you can sign up immediately, or you can apply to bring Nextdoor to your neighborhood.

Nextdoor is free for residents and the Police Department. Each



Pleasanton neighborhood has its own private Nextdoor neighborhood website, accessible only to residents who must verify their residency in that neighborhood. Neighborhoods establish and self-manage their own Nextdoor websites and the Police Department will not access residents' websites, contact information, or content. Information shared on Nextdoor is password protected and cannot be accessed by those outside the

neighborhood or found on Google or other search engines. In addition, Nextdoor never shares personal information with third parties.

The Pleasanton Police Department also uses Facebook, Twitter, and Nixle to deliver important public safety messages. Nextdoor will further support their outreach efforts by providing an interactive way to communicate with residents regarding issues that are affecting their particular neighborhoods.

Purple Pipe is Coming to Pleasanton

Recycled Water Will Irrigate Sports Park

Recycled water is a solution that would provide a reliable and locally controlled water source to irrigate Pleasanton parks and other large commercial water users that have separate irrigation meters. With more than 42 thirsty parks needing water, and the large commercial area that is the Hacienda Business Park, City staff is moving forward to begin the first phase of a plan to create a

recycled water infrastructure for its biggest park, the 22-acre Ken Mercer Community Sports Park.

In mid to late 2015, the project will be in construction and by summer, the 86 million gallons of water needed annually to maintain the Sports Park will be recycled!

By the summer of 2016 recycled water should be available in most of the Hacienda business park.



Water Conservation When it's Raining

Conservation is the New Norm

Pleasanton residents and businesses stepped up to the plate and reduced water consumption by a whopping 33% over the same summer period in 2013. As of October 20, we have saved 1.393 billion gallons of water in calendar year 2014, compared to the same period last year!

Over the summer, the conservation effort was obvious throughout Pleasanton; the majority of lawns – from parks to residential homes – were browning in patches from water stress. Meanwhile, approximately 300 garden-dedicated residents signed up to pick up recycled water from the free Residential Recycled Water Fill Station program hosted by the Dublin San Ramon Services District, some making three trips a day to pick up more recycled water to keep their yards green!

So, as we head into the traditional “rainy” season in California, how do we adjust our water conservation efforts? Well, because plant metabolism slows and begins a dormant period, most won't need supplemental water from November into the long, dry periods of spring. As a result, under the City's Stage Three water conservation ordinance, October

also marks a change in permissible watering frequency not to exceed one day per week (as opposed to two days in the summer season) on outdoor landscaping, through March.

In the short-term, even if this winter and spring are really wet with a substantial snowpack, we can expect that some level of conservation effort will be required in 2015. This is because the State's reservoirs, particularly Lake Oroville, the reservoir *our* water supply relies so heavily upon, is so depleted that it is only at 30% of capacity.

In the long-term, being water efficient simply needs to be a way of life in California. Natural fluctuations in the water supply are normal, and with Climate Change underway, the fluctuations towards water shortage are projected to become even *more* frequent. The California Energy Commission projects the Sierra snowpack to decline 25-40% by 2050 due to climate change effects.

For more information, or to learn more ways to reduce the water usage in your home or business please call the City of Pleasanton Water Conservation Hotline at (925) 931-5504 or visit PleasantonWaterConservation.com.

New Membership Program at Firehouse Arts Center

Become a member of the Firehouse Arts Center! The Firehouse Arts Center is more than just your intimate hometown theater; it's your local connection to the world of literary, visual and performing arts. As a member, you'll enjoy a variety of exclusive member benefits, while experiencing all that the Firehouse Arts Center has to offer. Choose from one of three membership packages on the Firehouse Arts Center website at firehousearts.org!

FIREHOUSE
ARTS CENTER™

setting the
ARTS on FIRE™



Price: \$50

- 15% discount at select downtown merchants
- 4 - Free drink vouchers good at any show
- Firehouse sticker
- Subscription to bi-monthly firehouse newsletter
- Recognition in program for annual Member Thank You Dinner
- 2 for 1 emails for day of show tickets (certain shows apply)



Price: \$125

All of the benefits of the Cast Members Level PLUS:

- 10% Discount off ALL ticket purchases
- Firehouse bag
- 2 - Additional drink vouchers (6 total)
- Invitation to wine & cheese reception prior to start of season



Price: \$200

All of the benefits of the Cast Member and Director Level PLUS:

- Firehouse acrylic tumbler
- 2 - Additional drink vouchers (8 total)
- Invitation for 2 for the Annual Member Thank You Dinner (Dinner served in cabaret style in the theater)
- Meet and greet with select artists

Membership valid for one year from purchase date.

Pleasanton Today

May 8, 2015

The City of Pleasanton Newsletter

www.cityofpleasantonca.gov

Coming in 2016: Bernal Park Phase II



Synthetic sports fields and oak woodland rendering for Phase II of Bernal Community Park.

The vision for the City's Bernal Property is set forth in the Bernal Property Phase II Specific Plan which was ratified by voters through Measure P in 2006. Following up on the completion of Phase I of the Community Park portion of the property in September 2009, construction agreements have been approved for the 16-acre Phase II of the Community Park that will feature three lighted multi-purpose synthetic fields, field grandstands, group picnic areas, children's play equipment, drinking fountains, a two-lane access road and parking lot, a restroom and storage building and site furnishings.

Immediately adjacent to the sports fields will be the approximately 40-acre Oak Woodland or "Grand Meadow" wooded open space area that will feature walkways, granite benches, site furniture, a boardwalk feature, significant native tree plantings and interpretative signage. In being mindful about water conservation, a decision was made for shrubs and other plantings included in the original sports park design to be deferred or irrigated with recycled water. Construction is scheduled to begin in May 2015 and to be completed in the spring of 2016.



Pleasanton City Hall landscape with thirsty grass, before.



New drought-tolerant and California native landscape at Pleasanton City Hall.

Water Conservation: Adapting to the New Norm

As California enters a fourth year of drought it's important to understand the significance of this particular drought. It's a historical drought, one for the record books according to researchers from the University of Minnesota who say it's the worst California has experienced in more than 1,200 years according to an analysis of tree ring and soil moisture data. For point of reference, it hasn't been this dry here since Charlamagne was ruler of the western world! Meanwhile, our dry, dusty state has just concluded its hottest winter ever.

The projections for the water supply throughout California are dismal, prompting the State Water Resources Control Board to adopt expanded emergency water conservation regulations. Under a mandate by Governor Jerry Brown, all Californians must reduce water consumption by 25% over their 2013 usage to safeguard the State's remaining water supply.

In order to align with the Governor's mandate, effective **May 15, 2015** the City of Pleasanton will reenact Stage 3 water restrictions and excess water use penalties that were temporarily suspended in January for a 90-day period. This means that all Pleasanton residents and businesses must continue to reduce water consumption by 25% over their 2013 usage. Those patrons who use 30 units or less in a two-month billing period will be exempt from both the 25% reduction mandate AND any penalties.

As a result of your efforts, we cut water use by 27.8% last year, and were among the best savings in the State. The good habits that we acquired last year must be continued again this season and perhaps into the long-term future. This collective effort has made Pleasanton a model for many other California cities that are now launching educational campaigns about water conservation.

Cities that do not meet this mandated 25% reduction will be subject to fines of up to \$10,000 per day — money that could be better used for services such as library and recreation, youth and senior programs, and maintaining our existing infrastructure.

In an effort to lead by example, the entire grass lawn surrounding City Hall at 123 Main Street was removed last year and replaced with a high efficiency irrigation system, mulch, and landscaping with drought-tolerant California native plants. The conversion was partially funded with a generous grant from StopWaste, which also provided technical assistance on the project.

Be sure to visit pleasantonwaterconservation.com for the most current information on the drought, the current restrictions, free services such as water audits, rebates, and a breakdown of existing fines and surcharges. To speak to a water conservation specialist, please contact the City's Water Conservation Hotline at (925) 931-5504.

Recycled Water = Green Parks

Pleasanton's Recycled Water Project is expected to break ground in early summer and once complete, is estimated to save 450,000,000 gallons of drinking water! This 18-month project will replace potable water with recycled water to irrigate some of the largest water consuming landscapes in town.

This recycled water pipeline will service more than 130 current irrigation meters along its distribution system, winding from Dublin San Ramon Services District's recycled water treatment facility off Johnson Drive through major sections of Hacienda Business Park, and southward to the Ken Mercer Sports Park and Tennis and Community Park.

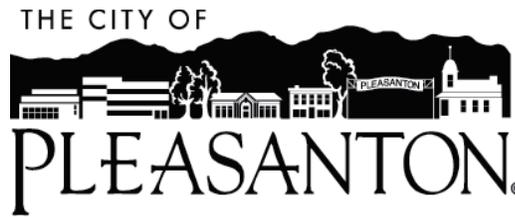
The drought might have made brown the "new green," but with the help of recycled water, our major playing fields *can* remain green. California's historic and continuing drought greatly affected the quality of park field playing conditions last summer and fall with the exception of Val Vista

Park, the first park to convert to the use of recycled water for irrigation.

The project's funding will rely on the State Water Board's drought relief low-interest financing for water recycling projects. Last year, the Board approved \$800 million in financial incentives of one percent loans to assist California water and wastewater agencies to accelerate the production of these drought-proof water supply systems.



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PRESS RELEASE

FOR IMMEDIATE RELEASE

August 26, 2015

Contact: Tracy Dunne
(925) 931-5044
tdunne@cityofpleasantonca.gov

SAVE THE DATE

What To Do With That Brown Lawn

- WHO:** The City of Pleasanton Water Conservation Division
Local Landscape Designer, Kat Weiss
- WHAT:** Workshop on “What To Do With That Brown Lawn”
- WHERE:** City of Pleasanton Operation Services Center
3333 Busch Road, Pleasanton, CA
- WHEN:** Saturday, September 12, 2015
10:00 AM – 12:00 PM
- WHY:** Many people have been struggling with how to keep their lawns green and healthy during this drought. This workshop will feature such topics as:
- Sustainable and beautiful alternatives to “lawnscares”
 - Efficient and easy irrigation system changes
 - How to sheet mulch

The workshop is free, though due to limited seating, please call the HOTLINE at 925.931.5504 to reserve a spot or visit www.PleasantonWaterConservation.com

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APPENDIX M

UWMP Adoption Resolution

DRAFT

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UWMP Adoption Resolution will be included with final report

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