



FINAL - JUNE 2016

DUBLIN SAN RAMON SERVICES DISTRICT

# 2015 Urban Water Management Plan



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# Final 2015 Urban Water Management Plan

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Prepared for

**Dublin San Ramon Services District**

**June 2016**



406-12-15-42



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Project Manager  
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June 7, 2016

Date

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QA/QC Review  
James P. Connell, PE

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June 7, 2016

Date

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# Table of Contents

## Executive Summary

ES.1 Introduction .....	ES-1
ES.2 Water Code Requirements .....	ES-1
ES.3 Legislative Changes from 2010 UWMP .....	ES-2
ES.4 Plan Organization .....	ES-2
ES.5 Plan Review and Adoption.....	ES-3

## Chapter 1. Introduction and Overview

1.1 Introduction .....	1-1
1.2 Importance and Extent of DSRSD’s Water Management Planning Efforts.....	1-1
1.3 Changes from 2010 UWMP.....	1-1

## Chapter 2. Plan Preparation

2.1 Basis for Preparing a Plan.....	2-1
2.2 Regional Planning .....	2-1
2.3 Individual or Regional Planning and Compliance.....	2-2
2.4 Fiscal or Calendar Year and Units of Measure .....	2-2
2.5 Coordination and Outreach .....	2-3
2.5.1 Wholesale and Retail Coordination.....	2-3
2.5.2 Coordination with Other Agencies and the Community .....	2-3
2.5.2.1 Coordination with Other Agencies.....	2-3
2.5.2.2 Coordination with the Community .....	2-4
2.5.3 Notice to Cities and Counties.....	2-5

## Chapter 3. System Description

3.1 General Description.....	3-1
3.2 Service Area .....	3-1
3.3 Water Supply .....	3-2
3.3.1 Zone 7 Water Supply .....	3-2
3.3.2 Recycled Water.....	3-2
3.4 Water System Description .....	3-3
3.4.1 Potable Water System Facilities and Pressure Zones.....	3-3
3.4.2 Recycled Water System Facilities.....	3-3
3.4.3 Emergency Interties .....	3-3
3.5 Service Area Climate .....	3-3
3.6 Service Area Population and Demographics.....	3-4
3.6.1 Water Service Area Population.....	3-4
3.6.2 Demographic Factors.....	3-5



# Table of Contents

---

## Chapter 4. System Water Use

4.1 Recycled Versus Potable and Raw Water Demand.....	4-1
4.2 Water Uses by Sector.....	4-1
4.3 Distribution System Water Losses.....	4-5
4.4 Estimating Future Water Savings.....	4-5
4.5 Water Use for Lower Income Households.....	4-6
4.6 Climate Change.....	4-6

## Chapter 5. SB X7-7 Baselines and Targets

5.1 Updating Calculations from 2010 UWMP.....	5-2
5.2 Baseline Periods.....	5-2
5.3 Service Area Population.....	5-3
5.4 Gross Water Use.....	5-3
5.5 Baseline Daily Per Capita Water Use.....	5-4
5.6 2015 and 2020 Targets.....	5-4
5.7 2015 Compliance Daily Per Capita Water Use (GPCD).....	5-5
5.8 Regional Alliance.....	5-6

## Chapter 6. System Supplies

6.1 Purchased or Imported Water.....	6-1
6.1.1 DSRSD Water Supply Contract with Zone 7.....	6-1
6.1.2 Zone 7 Water Supply Sources.....	6-3
6.1.2.1 Imported Surface Water Supply.....	6-3
6.1.2.1.1 State Water Project.....	6-4
6.1.2.1.1.1 SWP Table A Amount.....	6-4
6.1.2.1.1.2 Article 21 Water (Interruptible or Surplus Water).....	6-5
6.1.2.1.1.3 Article 56d Water (Turnback Pool Water) and Multi-Year Pool Demonstration Program (Water Pool Program).....	6-6
6.1.2.1.1.4 Lower Yuba River Accord.....	6-6
6.1.2.1.2 Byron Bethany Irrigation District.....	6-6
6.1.2.2 Local Surface Water Runoff.....	6-6
6.1.2.3 Local Storage.....	6-7
6.1.2.3.1 Lake Del Valle.....	6-7
6.1.2.3.2 Livermore Valley Groundwater Basin.....	6-7
6.1.2.3.3 Chain of Lakes.....	6-8
6.1.2.4 Non-Local Storage.....	6-9
6.2 Groundwater.....	6-10
6.2.1 Groundwater Basin Description.....	6-10
6.2.2 Groundwater Management.....	6-11
6.2.2.1 Groundwater Quantity.....	6-12
6.2.2.1.1 Artificial Recharge.....	6-12
6.2.2.1.2 Current Sustainable Yield and Groundwater Pumping Quotas.....	6-12
6.2.2.2 Groundwater Quality.....	6-13
6.2.2.3 Groundwater Sustainability.....	6-15
6.2.3 Historical Groundwater Production.....	6-16



## Table of Contents

6.3 Surface Water.....	6-16
6.4 Stormwater .....	6-17
6.5 Wastewater and Recycled Water .....	6-17
6.5.1 Recycled Water Coordination .....	6-18
6.5.2 Wastewater Collection, Treatment, and Disposal .....	6-19
6.5.3 Recycled Water System.....	6-21
6.5.4 Recycled Water Beneficial Uses.....	6-22
6.5.5 Actions to Encourage and Optimize Future Recycled Water Use .....	6-24
6.6 Desalinated Water Opportunities.....	6-26
6.7 Exchanges or Transfers .....	6-27
6.8 Future Water Projects.....	6-27
6.8.1 Zone 7’s Future Water Projects .....	6-28
6.8.1.1 California WaterFix .....	6-28
6.8.1.2 Desalination .....	6-29
6.8.1.3 Potable Reuse Options.....	6-29
6.8.2 DSRSD Long-Term Alternative Water Supply Study.....	6-30
6.9 Summary of Existing and Planned Sources of Water .....	6-32
6.10 Climate Change Impacts to Supply .....	6-32

## Chapter 7. Water Supply Reliability Assessment

7.1 Water Supply Reliability Policies .....	7-1
7.2 Water Quality Constraints.....	7-2
7.2.1 Potable Water Supply from Zone 7 .....	7-3
7.2.1.1 Imported Water: State Water Project .....	7-3
7.2.1.2 Groundwater Supply.....	7-5
7.2.1.3 Local Storage .....	7-5
7.2.1.4 Non-Local Storage.....	7-5
7.2.2 Recycled Water.....	7-6
7.3 Supply Reliability by Type of Year.....	7-6
7.3.1 Zone 7 Water Supply Evaluation .....	7-6
7.3.2 Basis of Water Year .....	7-7
7.4 Supply and Demand Assessment .....	7-9
7.4.1 Normal Year .....	7-10
7.4.2 Single Dry Year .....	7-10
7.4.3 Multiple Dry Year.....	7-11
7.5 Regional Supply Reliability.....	7-13

## Chapter 8. Water Shortage Contingency Planning

8.1 Stages of Action .....	8-1
8.2 Prohibitions on End Uses .....	8-3
8.3 Penalties, Charges, Other Enforcement of Prohibitions.....	8-6
8.4 Consumption Reduction Methods .....	8-6
8.5 Determining Water Shortage Reductions.....	8-7
8.6 Revenue and Expenditure Impacts .....	8-8



# Table of Contents

- 8.7 Resolution or Ordinance ..... 8-8
- 8.8 Catastrophic Supply Interruption ..... 8-8
  - 8.8.1 Unavailable SWP Water ..... 8-9
  - 8.8.2 Unavailable Zone 7 Water ..... 8-9
  - 8.8.3 Regional Electric Power Failure ..... 8-9
  - 8.8.4 Earthquake ..... 8-10
  - 8.8.5 Emergency Water Supply for Dougherty Valley ..... 8-10
- 8.9 Minimum Supply Next Three Years ..... 8-10
- 8.10 2015/2016 State of Community Drought Emergency ..... 8-11

## Chapter 9. Demand Management Measures

- 9.1 Water Conservation Program Overview ..... 9-1
- 9.2 Demand Management Measures ..... 9-2
  - 9.2.1 Water Waste Prevention Ordinances ..... 9-2
  - 9.2.2 Metering ..... 9-3
  - 9.2.3 Conservation Pricing ..... 9-3
  - 9.2.4 Public Education and Outreach ..... 9-5
  - 9.2.5 Programs to Assess and Manage Distribution System Real Loss ..... 9-8
  - 9.2.6 Water Conservation Program Coordination and Staffing Support ..... 9-8
- 9.3 Other Demand Management Measures ..... 9-9
  - 9.3.1 Direct Conservation Assistance ..... 9-9
  - 9.3.2 Enhanced Rebate Programs ..... 9-9
  - 9.3.3 Expanded Recycled Water Use ..... 9-10
- 9.4 Planned Implementation to Achieve Water Use Targets ..... 9-10
- 9.5 Members of the California Urban Water Conservation Council ..... 9-11

## Chapter 10. Plan Adoption, Submittal, and Implementation

- 10.1 Inclusion of All 2015 Data ..... 10-1
- 10.2 Notice of Public Hearing ..... 10-1
- 10.3 Public Hearing and Adoption ..... 10-2
- 10.4 Plan Submittal ..... 10-2
- 10.5 Public Availability ..... 10-3
- 10.6 Plan Implementation ..... 10-3
- 10.7 Amending an Adopted UWMP ..... 10-3



# Table of Contents

## List of Tables

Table 2-1. Retail Only: Public Water Systems (DWR Table 2-1).....	2-1
Table 2-2. Plan Identification (DWR Table 2-2).....	2-2
Table 2-3. Agency Identification (DWR Table 2-3).....	2-2
Table 2-4. Retail: Water Supplier Information Exchange (DWR Table 2-4).....	2-3
Table 3-1. Monthly Average Climate Data Summary .....	3-4
Table 3-2. Retail: Population – Current and Projected (DWR Table 3-1).....	3-5
Table 4-1. Historical Water Use by Customer Type .....	4-2
Table 4-2. Retail: Demands for Potable and Raw Water – Actual (DWR Table 4-1).....	4-3
Table 4-3. Retail: Demands for Potable and Raw Water – Projected (DWR Table 4-2).....	4-4
Table 4-4. Retail: Total Water Demands (DWR Table 4-3).....	4-4
Table 4-5. Retail: 12-Month Water Loss Audit Reporting (DWR Table 4-4).....	4-5
Table 4-6. Retail Only: Inclusion in Water Use Projections (DWR Table 4-5).....	4-5
Table 4-7. Projected Water Demands for Lower Income Households .....	4-6
Table 5-1. Baselines and Targets Summary (DWR Table 5-1).....	5-5
Table 5-2. 2015 Compliance (DWR Table 5-2).....	5-6
Table 6-1. Sustainable Groundwater Management Act Implementation Steps and Deadlines .....	6-15
Table 6-2. Groundwater Basin Prioritization for Sustainable Groundwater Management Act .....	6-16
Table 6-3. Retail: Groundwater Volume Pumped (DWR Table 6-1).....	6-16
Table 6-4. Retail: Wastewater Collected Within Service Area in 2015 (DWR Table 6-2).....	6-20
Table 6-5. DSRSD’s 2015 Wastewater Treatment and Discharge, AF .....	6-21
Table 6-6. Retail: Wastewater Treatment and Discharge within Service Area in 2015 (DWR Table 6-3).....	6-21
Table 6-7. Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area (DWR Table 6-4).....	6-24
Table 6-8. Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual (DWR Table 6-5).....	6-24



# Table of Contents

Table 6-9. Retail: Methods to Expand Future Recycled Water Use (DWR Table 6-6).....	6-26
Table 6-10. Retail: Expected Future Water Supply Programs (DWR Table 6-7).....	6-28
Table 6-11. Retail: Water Supplies – Actual (DWR Table 6-8).....	6-32
Table 6-12. Retail: Water Supplies – Projected (DWR Table 6-9).....	6-32
Table 7-1. Retail: Basis of Water Year Data (DWR Table 7-1).....	7-8
Table 7-2. Basis of Water Year Data for Various Zone 7 Water Supplies .....	7-9
Table 7-3. Zone 7’s Water Supply Reliability, AFA .....	7-9
Table 7-4. Retail: Normal Year Supply and Demand Comparison (DWR Table 7-2).....	7-10
Table 7-5. Single Dry Year Supplies, AFA .....	7-10
Table 7-6. Single Dry Year Demands, AFA.....	7-11
Table 7-7. Retail: Single Dry Year Supply and Demand Comparison (DWR Table 7-3).....	7-11
Table 7-8. Multiple Dry Year Supplies, AFA.....	7-11
Table 7-9. Multiple Dry Year Demands, AFA .....	7-12
Table 7-10. Retail: Multiple Dry Years Supply and Demand Comparison (DWR Table 7-4).....	7-12
Table 8-1. Retail: Stages of Water Shortage Contingency Plan (DWR Table 8-1).....	8-2
Table 8-2. DSRSD’s Water Shortage Contingency Plan.....	8-4
Table 8-3. Retail Only: Restrictions and Prohibitions on End Uses (DWR Table 8-2).....	8-5
Table 8-4. Retail Only: Stages of Water Shortage Contingency Plan – Consumption Reduction Methods (DWR Table 8-3).....	8-7
Table 8-5. Retail: Minimum Supply Next Three Years (DWR Table 8-4).....	8-11
Table 9-1. DSRSD Water Rates.....	9-4
Table 9-2. DSRSD 2015 Wastewater Rates .....	9-5
Table 10-1. Retail: Notification to Cities and Counties (DWR Table 10-1).....	10-1

## List of Figures

Figure 3-1. Current Water Service Area .....	3-6
Figure 5-1. DSRSD Historical and Projected Per Capita Water Use and SB X7-7 Targets .....	5-7



## Table of Contents

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### List of Appendices

- Appendix A: Legislative Requirements
- Appendix B: DWR 2015 UWMP Tables
- Appendix C: DWR 2015 UWMP Checklist
- Appendix D: Required Notices
- Appendix E: Water Audit
- Appendix F: SB X7-7 Verification Forms
- Appendix G: DSRSD/Zone 7 Water Supply Contracts and Agreements
- Appendix H: Recycled Water Ordinances and Policy
- Appendix I: DSRSD Long-Term Water Supply Alternatives
- Appendix J: Zone 7 and DSRSD Water Supply Reliability Policies
- Appendix K: Water Shortage Contingency Plan Ordinances
- Appendix L: Emergency Response Plan Policy and Action Plans
- Appendix M: 2015/2016 State of Community Drought Emergency
- Appendix N: Water Conservation Program Information
- Appendix O: UWMP Adoption Resolution

### List of Acronyms and Abbreviations

AB	Assembly Bill
Act	Urban Water Management Act
ACWA	Association of California Water Agencies
ACWD	Alameda County Water District
ADWF	Average Dry Weather Flow
AF	Acre-Feet
AFA	Acre-Feet Per Year
AMI	Advanced Metering Infrastructure
AWWA	American Water Works Association
BARDP	Bay Area Regional Desalination Project
BARR	Bay Area Regional Reliability Partnership
BBID	Byron Bethany Irrigation District
BMP	Best Management Practice
Cal Water	California Water Service Company
CCCSD	Central Contra Costa Sanitary District
CCWD	Contra Costa Water District
CDoF	California Department of Finance
CEQA	California Environmental Quality Act
CFS	Cubic Feet Per Second
CII	Commercial, Industrial and Institutional



## Table of Contents

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CIMIS	California Irrigation Management Information System
CIP	Capital Improvement Program
COL	Chain of Lakes
CUWCC	California Urban Water Conservation Council
CWC	California Water Code
Delta	Sacramento-San Joaquin Delta
DERWA	DSRSD-EBMUD Recycled Water Authority
DLD	Dedicated Land Disposal
DMMs	Demand Management Measures
DPH	California Department of Public Health
DPR	Direct Potable Reuse
DSRSD/District	Dublin San Ramon Services District
DVWTP	Del Valle Water Treatment Plant
DWR	Department of Water Resources
DWR Guidebook	2015 Urban Water Management Plans Guidebook for Urban Water Suppliers
EBDA	East Bay Dischargers Authority
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
ERP	Emergency Response Plan
ETo	Reference Evapotranspiration
FCI	Federal Bureau of Prison's Federal Correctional Institution at Dublin
FDCs	Flow Duration Controls
General Order	General Water Reuse Order No. 96-011
GPCD	Gallons Per Capita Per Day
GPQ	Groundwater Pumping Quota
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
IPR	Indirect Potable Reuse
LAVWMA	Livermore-Amador Valley Water Management Agency
M&I	Municipal and Industrial
MCL	Maximum Contaminant Level
MFUV	Microfiltration and Ultraviolet Disinfection Facilities
MG	Million Gallons
mg/L	Milligrams Per Liter
MGD	Million Gallons Per Day
MGDP	Mocho Groundwater Demineralization Plant
MIB	2-methylisoborneol
MOU	Memorandum of Understanding
MWQI Program	Municipal Water Quality Investigations Program
NAICS	North American Industry Classification System
NMP	Nutrient Management Plan
NPDES	National Pollutant Discharge Elimination System



## Table of Contents

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PAC	Powdered Activated Carbon
Parks RFTA	U.S. Army Reserve's Parks Reserve Forces Training Area
PCE	Tetrachloroethylene
PPWTP	Patterson Pass Water Treatment Plant
RWQCB	Regional Water Quality Control Board
RWTF	Recycled Water Treatment Facilities
SB	Senate Bill
SB X7-7	Senate Bill Seven of the Senate's Seventh Extraordinary Session of 2009
SBA	South Bay Aqueduct
SCVWD	Santa Clara Valley Water District
SFUV	Sand 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
SWRCB	State Water Resources Control Board
T&O	Taste-and-Odor
TDS	Total Dissolved Solids
TOC/DOC	Total and Dissolved Organic Carbon
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
West Yost	West Yost Associates
WSE	Water Supply Evaluation
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant
Yuba Accord	Lower Yuba River Accord

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## EXECUTIVE SUMMARY

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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, Dublin San Ramon Services District's (District or DSRSD) water customers have responded positively to the call for water conservation and the District 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 District has met its interim 2015 per capita water use target and is well positioned to meet the final 2020 water use target per capita water demand.

### ES.2 WATER CODE REQUIREMENTS

The Urban Water Management Planning Act (UWMP Act) requires water suppliers that provide over 3,000 acre-feet per year (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 UWMP Act has been modified over the years in response to the State's water shortages, droughts and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as SB X7-7. This act required agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020.

The primary objective of the UWMP Act is to direct "urban water suppliers" to develop an UWMP which provides a framework for long-term water supply planning and documents how urban water suppliers are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future water demands.

In 2015, the District supplied approximately 7,445 acre-feet (AF) of potable water to 21,407 potable water customers located within its water service area in the City of Dublin and in the Dougherty Valley area of the City of San Ramon. The District also provided approximately 2,578 AF of recycled water to 376 recycled water customers within its water service area. The District is therefore considered an urban water supplier and is required to submit an UWMP. This



## Executive Summary

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2015 UWMP describes the District'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 District's 2015 and 2020 water use targets, verifies the District's compliance with the interim 2015 water use target, and describes the District's implementation plan for meeting the District's final 2020 water use target.

The District's 2015 UWMP (or Plan) has been prepared in accordance with the UWMP Act, as defined by the California Water Code, Division 6, Part 2.6, Sections 10610 through 10656 (Urban Water Management Planning), and the Water Conservation Act of 2009 (WC Act, also known as SB X7-7), as defined by California Water Code, Division 6, Part 2.55, Section 10608 (Sustainable Water Use and Demand Reduction). A copy of the relevant sections of the Water Code are included in Appendix A 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 UWMP Act are described in Chapter 1. Some highlighted changes include:

- Demand Management Measures: Address the nature and extent of each water demand management measure implemented over the past 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.



## Executive Summary

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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 Assessment
- Chapter 8: Water Shortage Contingency Planning
- Chapter 9: Demand Management Measures
- Chapter 10: Plan Adoption, Submittal and Implementation

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

### ES.5 PLAN REVIEW AND ADOPTION

The UWMP Act requires the water supplier to coordinate the preparation of its Plan with other appropriate agencies, including other water suppliers that share a common source, water management agencies, and relevant public agencies. These agencies, as well as the public, participated in the coordination and preparation of this 2015 UWMP. The coordination and outreach are described in Chapter 2.

A public hearing to discuss the Draft 2015 UWMP was held on May 17, 2016.

Public hearings provide an opportunity for the District's water customers and the general public to become familiar with the Plan and to ask questions about its water supply and the District'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 District's office, at local public libraries and on the District's website (<http://www.dsrds.com/>).

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 District Board of Directors on June 7, 2016. A copy of the adoption resolution is provided in Appendix O.



## Executive Summary

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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 locations:

- District office at 7051 Dublin Boulevard, Dublin, California;
- City of Dublin Public Library at 200 Civic Plaza, Dublin, California; and
- Dougherty Station Public Library at 17017 Bollinger Canyon Road, San Ramon, California.

A copy of the adopted Plan will also be available for review and download on the District's website: <http://www.dsrds.com/>.

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 the cities (City of Dublin and City of San Ramon) and counties (Alameda County and Contra Costa County) within which the District provides water supplies within 30 days after adoption of the amendment(s).

# CHAPTER 1

## Introduction and Overview

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This chapter provides an introduction and overview of the Dublin San Ramon Services District (DSRSD or District) 2015 Urban Water Management Plan (UWMP) including the importance and extent of DSRSD’s water management planning efforts, changes since the preparation of DSRSD’s 2010 UWMP, and organization of DSRSD’s 2015 UWMP. This 2015 UWMP has been prepared jointly by DSRSD 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 DSRSD’S WATER MANAGEMENT PLANNING EFFORTS

The purpose of the UWMP is to provide a planning tool for DSRSD for developing and delivering municipal water supplies to DSRSD’s water service area located in the East Bay’s Livermore-Amador Valley. DSRSD provides water service to the City of Dublin and the Dougherty Valley portion of the City of San Ramon. To reduce the demand for potable water, DSRSD has committed itself to participate in water conservation and recycling activities. Since 1999, DSRSD has augmented its potable water supply with recycled water for landscape irrigation at numerous sites in the City of Dublin and the Dougherty Valley area. To continue to meet the water needs of the community, DSRSD carefully manages its available water resources. DSRSD’s 2015 UWMP is a comprehensive guide for planning for a safe and adequate water supply.

### 1.3 CHANGES FROM 2010 UWMP

The Urban Water Management Planning Act has been modified over the years in response to the State’s water shortages, droughts and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor’s call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as Senate Bill Seven of the Senate’s Seventh Extraordinary Session of 2009 (SB X7-7). This act required agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020.



There have been several additions and changes to the California Water Code since DSRSD'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 DSRSD'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.
- Senate Bill (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 DSRSD'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.
    - DSRSD has opted not to report on passive water savings.
- SB 1036 (Pavley 2014)
  - CWC 10631.2 (a) and (b): Voluntary Reporting of Energy Intensity
    - Provides for an urban water supplier to include certain energy-related information, including, but not limited to, an estimate of the amount of the energy used to extract or divert water supplies.
    - DSRSD has opted to not report on energy intensity in this 2015 UWMP.



- CWC 10632: Defining Water Features
  - Commencing with the UWMP update due July 1, 2016, for purposes of developing the water shortage contingency analysis, requires urban water suppliers to analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.
  - See Chapter 8 of this 2015 UWMP for a discussion of DSRSD’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 (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 “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 Assessment
- 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 DSRSD’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: Water Audit
- Appendix F: SB X7-7 Verification Forms



- Appendix G: DSRSD/Zone 7 Water Supply Contract
- Appendix H: Recycled Water Ordinances and Policy
- Appendix I: DSRSD Long-Term Water Supply Alternatives
- Appendix J: Zone 7 and DSRSD Water Supply Reliability Policies
- Appendix K: Water Shortage Contingency Plan Ordinances
- Appendix L: Emergency Response Plan Policy and Action Plans
- Appendix M: 2015/2016 State of Community Drought Emergency
- Appendix N: Water Conservation Program Information
- Appendix O: UWMP Adoption Resolution

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

## CHAPTER 2 Plan Preparation



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

As shown in Table 2-1, in 2015, DSRSD provided water supplies to 21,407 potable water customers (connections), and supplied 7,445 AF of potable water. In addition, DSRSD supplied 2,578 AF of recycled water to 376 recycled water customers (connections). Therefore, DSRSD is required to prepare an UWMP. DSRSD’s last UWMP, the 2010 UWMP, was adopted by the District’s Board of Directors 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
CA0110009	Dublin San Ramon Services District	21,407	7,445
<b>TOTAL</b>		<b>21,407</b>	<b>7,445</b>
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

As described in Section 2.3 below, DSRSD has prepared this 2015 UWMP on an individual reporting basis, not part of a regional planning process. However, DSRSD routinely coordinates with the Zone 7 Water Agency (Zone 7, the region’s water wholesaler) and the region’s other water retailers (City of Pleasanton, City of Livermore and California Water Service Company (Cal Water) Livermore District) on water supply 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 Update and for Zone 7’s 2015 UWMP. Zone 7 also provided assistance to DSRSD 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 DSRSD’s water service area (see Table 2-2). As described below in Section 2.5, DSRSD has notified and coordinated with appropriate regional agencies and constituents, including Zone 7 (the region’s water wholesaler) and the City of Pleasanton, the 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**

DSRSD is a water retailer.

DSRSD’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.

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

Table 2-3 summarizes DSRSD’s reporting methods and units 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 (select from Drop down)	
Unit	AF



## 2.5 COORDINATION AND OUTREACH

This section includes a discussion of the District’s inter-agency coordination and coordination with the general public. The UWMP Act requires the District to coordinate the preparation of its Plan with other appropriate agencies and all departments within the District, including other water suppliers that share a common source, water management agencies, and relevant public agencies. The District coordinated the preparation of its Plan with Zone 7 (the region’s water wholesaler) and the City of Pleasanton, 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.

### 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 District is one of four water retailers that purchase water on a wholesale basis from Zone 7. As noted in Table 2-4, the District notified Zone 7 of the development of its 2015 UWMP and provided Zone 7 with a copy of the draft Plan. In addition, the District has participated in Zone 7’s development of its respective UWMP by the District’s water demand projections and providing comments on Zone 7’s Draft UWMP. The District, 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.
Zone 7 Water Agency (Zone 7)

### 2.5.2 Coordination with Other Agencies and the Community

The District 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, DSRSD routinely coordinates with Zone 7 (the region's water wholesaler) and the City of Pleasanton, the City of Livermore, and Cal Water Livermore District (the region's other water retailers) on water supply and water conservation matters. In addition to water service, DSRSD provides wastewater collection and treatment services for the City of Dublin, City of Pleasanton, U.S. Army Reserve's Parks Reserve Forces Training Area (Parks RFTA), Federal Bureau of Prison's Federal Correctional Institution at Dublin (FCI), Santa Rita Jail, and the southern portion of San Ramon. Land use planning and development approvals within DSRSD's boundaries are the responsibility of Zone 7, the City of Dublin, City of San Ramon, Alameda County, and Contra Costa 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.

Copies of agency notices are included in Appendix D.

#### 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.*

DSRSD has actively encouraged community participation in water management activities and specific water-related projects. DSRSD'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. DSRSD'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, DSRSD 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. During the public comment period, the Draft UWMP update was made available at DSRSD's office and at the City of Dublin and City of San Ramon public libraries, as well as on DSRSD's website.

Public hearing notices are included in Appendix D.



#### 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 served with water by the District, 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.

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

#### 3.1 GENERAL DESCRIPTION

DSRSD was formed in 1953 under the Community Services District Act, Government Code Sections 61000-61802, and was originally known as the Parks Community Services District. In 1963, the name was changed to Valley Community Services District. The initial water system was constructed by the Volk-McClain Company, which drilled wells for DSRSD along Dublin Boulevard. DSRSD originally supplied water to San Ramon until East Bay Municipal Utility District (EBMUD) took over water service in 1967.

As the need for additional sources of water became apparent, DSRSD first entered into an agreement with Zone 7 in 1963 to acquire additional treated water supplies. DSRSD's most recent contract with Zone 7 went into effect on August 23, 1994 and has a 30-year term (until 2024). Discussion of the terms of the supply contract is provided in Chapter 6 of this UWMP. Other water retailers served by Zone 7 include the City of Livermore, the City of Pleasanton, and the Cal Water Livermore District.

Commercial and residential growth in the region since 1963 has required continuous increases in the capacity of Zone 7's treatment, pumping, storage, and distribution facilities, along with the expansion of DSRSD's water service area and water distribution system. Additional growth is anticipated in the region. DSRSD, in cooperation with Zone 7, has acquired additional water supplies to provide for this growth. These supplies include additional water from Zone 7 (including a water entitlement transfer for Dougherty Valley), groundwater, and recycled water. Current and projected water supplies are described in greater detail in Chapter 6 of this UWMP.

#### 3.2 SERVICE AREA

DSRSD's service area is located in the East (San Francisco) Bay's Livermore-Amador Valley near the Interstate 580/680 interchange. Currently, DSRSD is responsible for providing both potable and recycled water to its original service area in Dublin, as well as approved development in Eastern Dublin, Western Dublin, and the Dougherty Valley area of the City of San Ramon in Contra Costa County. DSRSD's water service area also includes the Parks RFTA, which officially became part of the water system in 1999, the FCI, and Alameda County's Santa Rita Jail.

Wastewater collection and treatment services are also provided by DSRSD for the City of Dublin, City of Pleasanton, Parks RFTA, FCI, Santa Rita Jail, and the southern portion of San Ramon. DSRSD owns and operates a wastewater treatment plant in Pleasanton that has a capacity of 17 million gallons per day (MGD).



DSRSD currently (2015) supplies potable water to approximately 21,407 municipal connections (residential, commercial, construction, and landscape irrigation customers) in the City of Dublin, California, and the Dougherty Valley in San Ramon, California. DSRSD also supplied recycled water to 377 customers (connections) in the City of Dublin and Dougherty Valley by the end of 2015.

DSRSD's water service area is shown in Figure 3-1.

### 3.3 WATER SUPPLY

As described above, DSRSD provides potable water (purchased from Zone 7) and recycled water to its customers. These supplies are described briefly below. Additional discussion on DSRSD's water supplies is provided in Chapters 6 and 7.

#### 3.3.1 Zone 7 Water Supply

Zone 7 supplies treated potable water to DSRSD. Until 1980, a portion of DSRSD's water came from DSRSD-owned wells; however, these wells have since been abandoned. Zone 7 currently provides 100 percent of DSRSD's potable water. Treated potable water enters DSRSD's distribution system from five metered turnouts from the Zone 7 transmission system.

The oldest turnout, No. 1, is located at the intersection of Dougherty Road and the abandoned Southern Pacific Railroad right-of-way. Turnout No. 2 was added in 1985, at the same time the Zone 7-owned Dougherty Reservoir was constructed, and is located at the intersection of Amador Valley Boulevard and Stagecoach Road. Turnout No. 3 (Parks RFTA Turnout) is in the vicinity of the southern end of Arnold Road, and is equipped with a pressure reducing valve which opens only during low pressure emergency events. Turnout No. 4 is the former Santa Rita turnout in eastern Dublin. Turnout No. 5 is located in the vicinity of Freisman Road and El Charro Road, in Livermore.

Turnout Nos. 1, 2, 4, and 5 are equipped with fluoridation facilities, which fluoridate water delivered from Zone 7 prior to entering DSRSD's system. Turnout No. 3 is not equipped with fluoridation facilities as it is only used during emergency events.

#### 3.3.2 Recycled Water

To reduce the demand for potable water, DSRSD promotes water recycling and is a member of the WaterReuse Association. In 1995, DSRSD and EBMUD, through a joint powers agreement, formed the DSRSD-EBMUD Recycled Water Authority (DERWA). DERWA serves as a wholesaler to deliver recycled water to DSRSD and EBMUD, who in turn deliver the recycled water to their respective service areas. DERWA's mission is to provide a safe, reliable, and consistent supply of recycled water and to maximize the amount of recycled water delivered. DERWA's San Ramon Valley Recycled Water Project (SRVRWP) provides a backbone distribution system that delivers recycled water to both DSRSD and EBMUD distribution systems. DSRSD's recycled water treatment facilities delivers recycled water to the SRVRWP. In 1998, DSRSD began constructing its major recycled water infrastructure. Recycled water is produced at DSRSD's wastewater treatment plant at the Recycled Water Treatment Facility (RWTF). The RWTF produces recycled water that meets the California Title 22 requirements for unrestricted reuse.



Since 1999, DSRSD has augmented its potable water supply with recycled water for landscape irrigation at numerous sites in the City of Dublin and the Dougherty Valley area. As new areas are developed, DSRSD has expanded its recycled water treatment, storage, and distribution facilities to serve these areas. In 2012, DSRSD extended its recycled water distribution system into Central Dublin to deliver recycled water supplies to four schools and three parks in Central Dublin. In 2014 and 2015, DSRSD completed conversions of 44 irrigation accounts in Central and Eastern Dublin and extended recycled water pipelines across Interstate 680 to connect another 40 sites in Western Dublin.

Further discussion of DSRSD's recycled water efforts is provided in Chapter 6 of this UWMP.

### 3.4 WATER SYSTEM DESCRIPTION

#### 3.4.1 Potable Water System Facilities and Pressure Zones

The original DSRSD potable water distribution system in Central Dublin consisted of four pressure zones. This system has continued to expand as development construction has occurred in Eastern Dublin, Western Dublin, and Dougherty Valley. Additional pressure zones with different service elevations have been installed to serve newly developed areas. The entire DSRSD potable water distribution system currently contains approximately 277.5 miles of potable water pipelines.

#### 3.4.2 Recycled Water System Facilities

DSRSD began constructing its major recycled water infrastructure in 1998. The system was expanded into Eastern Dublin and Dougherty Valley as development in those areas occurred, and in 2015, was expanded into Western Dublin. The entire DSRSD recycled water distribution system currently includes 56 miles of recycled water pipelines.

#### 3.4.3 Emergency Interties

DSRSD currently has six potable water pipeline interties (three with EBMUD, two with City of Pleasanton and one with City of Livermore). Each emergency intertie was added as DSRSD's potable water system expanded in order to create an opportunity for interconnection with adjacent agencies. The 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. Each agency participating in an intertie can obtain water from the other during an emergency.

### 3.5 SERVICE AREA CLIMATE

The climate of DSRSD's service area is best described as Mediterranean, characterized by hot, dry summers and cool winters. Precipitation in the area averages about 14.2 inches per year.

Water use within the DSRSD's service area is dependent on various climate factors such as temperature, precipitation, and evapotranspiration (ET<sub>o</sub>). Climate data, including temperature and precipitation estimates, were obtained for Livermore, California, which is located approximately 10 miles to the east of DSRSD's service area. The period of record was 1971 to 2015.



ET describes the combined water lost through evaporation from the soil and surface-water bodies and plant transpiration. In general, the ETo is given for turf grass, and then corrected for a specific crop type. Local ETo data was obtained from the California Irrigation Management Information System (CIMIS) monitoring station in Pleasanton, California (Station #191), which is located just south of DSRSD’s service area.

The historical climate characteristics affecting water management in the DSRSD’s service area is shown in Table 3-1.

**Table 3-1. Monthly Average Climate Data Summary**

Month	Standard Monthly Average ETo, inches <sup>(a)</sup>	Average Total Rainfall, inches <sup>(b)</sup>	Average Temperature, degrees Fahrenheit <sup>(b)</sup>	
			Max	Min
January	1.50	2.97	56.8	36.7
February	2.08	2.47	61.2	39.4
March	3.63	2.15	65.2	41.3
April	4.89	1.00	70.5	43.6
May	6.25	0.44	76.4	47.6
June	6.93	0.11	83.1	51.7
July	7.37	0.02	89.0	54.2
August	6.51	0.04	88.2	54.0
September	4.89	0.22	86.0	52.5
October	3.36	0.67	77.7	47.7
November	1.90	1.54	66.3	41.1
December	1.34	2.56	57.5	37.0
Totals	50.65	14.18	73.2	45.6

<sup>(a)</sup> Source: California Irrigation Management Information System (CIMIS) data for Station #191: Pleasanton (downloaded January 5, 2016)  
<sup>(b)</sup> Source: Western Regional Climate Center data for DWR for Livermore, California (01/01/1903 to 12/31/2014) (downloaded March 1, 2016)

### 3.6 SERVICE AREA POPULATION AND DEMOGRAPHICS

#### 3.6.1 Water Service Area Population

As described above, DSRSD provides water service to the City of Dublin and the Dougherty Valley in the City of San Ramon, California. Since the early 1980s, the population in DSRSD’s service area has roughly tripled and growth is expected to continue. DSRSD’s current (2015) service area population of 81,873 includes 55,844 people in the City of Dublin and 26,029 people in Dougherty Valley. The 2015 City of Dublin population is based on California Department of Finance (CDoF) data. The 2015 Dougherty Valley population is based on data obtained from the City of San Ramon on the number of residential units within Dougherty Valley and the household size within occupied housing units within Dougherty Valley based on 2010 U.S. Census data (3.32 people per occupied housing unit). Additional discussion of DSRSD’s historical and 2015



service area population, for purposes of determining DSRSD’s SB X7-7 baseline and target per capita water use and 2015 compliance, is provided in *Chapter 5 SB X7-7 Baselines and Targets*

Projections of future population within the DSRSD’s service area have been made based on the projected number of new housing units within planned new developments and are summarized in Table 3-2. Buildout of the City of Dublin is projected to occur by 2035, while buildout of Dougherty Valley is projected to occur by 2020. Overall, the population is expected to increase by 30 percent (24,737 people) between 2015 and buildout in 2035.

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

Population Served	2015	2020	2025	2030	2035	2040(opt)
	81,873	92,549	97,236	101,923	106,610	106,610
NOTES: 2015 population for City of Dublin from California Department of Finance. 2015 population for Dougherty Valley from City of San Ramon data based on number of housing units and average people per housing unit. Projected population based on projected buildout population for City of Dublin and Dougherty Valley.						

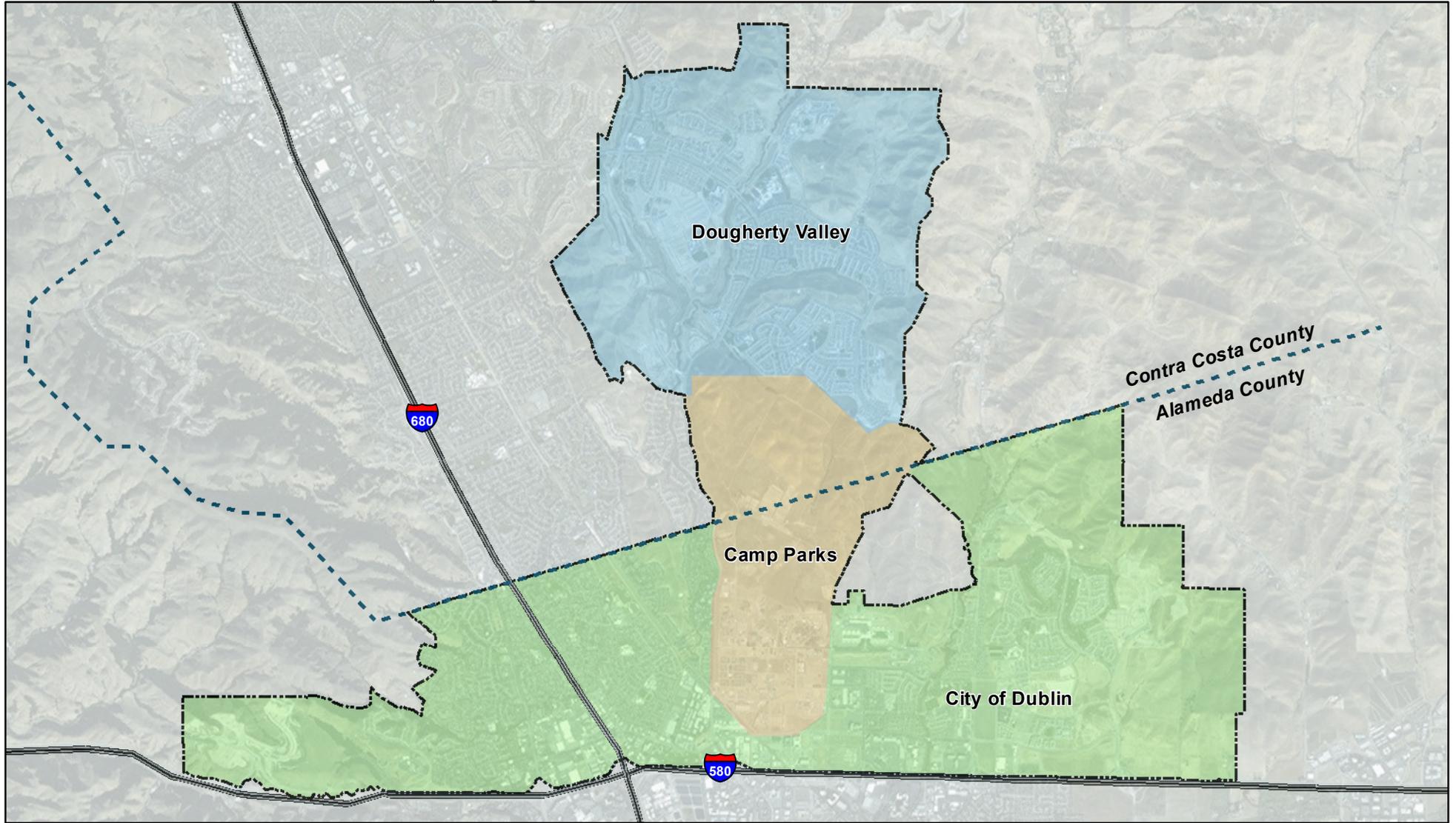
### 3.6.2 Demographic Factors

DSRSD’s service area serves a highly desirable area due to its close proximity to major employment centers in the East San Francisco Bay Area. Land use planning within the DSRSD service area is undertaken by the City of Dublin and the City of San Ramon. Land use planning within the City of Dublin is guided by the *City of Dublin General Plan (2014)*. Planning in the Dougherty Valley area is guided by the *City of San Ramon General Plan (2015)* and *Dougherty Valley Specific Plan (2006)*.

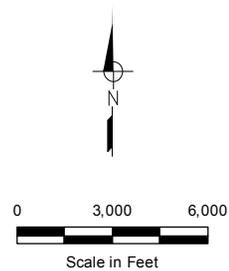
The City of Dublin has experienced strong housing growth since 1990. The City of Dublin’s housing stock increased by 126 percent from 1990 to 2010. In 2011 and 2012, growth slowed due to the statewide economic downturn; however, in 2013, the City’s population increased by over 7 percent, making the City one of the fastest growing cities in the California in 2013.

In 2000, the people of Dublin approved Measure M, which established an urban limit line in the Western Extended Planning Area of the City of Dublin’s General Plan for a period of 30 years. During this period, the City is restricted in approving uses or extensions of city services, facilities, and roads for urban development west of the urban limit line. DSRSD’s service area is coterminous with the City of Dublin’s city limit. The restriction of services to the Western Extended Planning Area will end in 2030. DSRSD shows no water demand for that area for 2035 because the City of Dublin has no planned development for that area after 2030. DSRSD will review ability to provide water service to that area when the City of Dublin adopts a General Plan that includes that area.

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- Symbology**
- Water Service Area
  - City of Dublin
  - Dougherty Valley
  - Camp Parks



**Figure 3-1**  
**DSRSD**  
**Current Water Service Area**

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This chapter describes and quantifies the DSRSD's past, current, and projected potable and recycled water use. Water demand projections are based on the projected growth within DSRSD's service area. Accurately tracking and reporting current water demands allows DSRSD to properly analyze the use of their water resources and conduct good resource planning for the future.

#### 4.1 RECYCLED VERSUS POTABLE AND RAW WATER DEMAND

DSRSD provides both potable water and recycled water to customers within its water service area. Potable water is water that is safe to drink and which typically has had various levels of treatment and disinfection. DSRSD purchases potable water supplies from the Zone 7 Water Agency.

Recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again. As discussed in Chapter 6, DSRSD owns and operates a RWTF at its wastewater treatment plant for and participates with EBMUD in a joint powers authority, DERWA, which operates the SRVRWP. The SRVRWP provides recycled water that meets Title 22 disinfected tertiary recycled water requirements to landscape irrigation customers of DSRSD and EBMUD.

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

#### 4.2 WATER USES BY SECTOR

This section describes DSRSD's past, current and projected water use by water use sector 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. DSRSD uses the same definitions for each sector as outlined in the DWR Guidebook:

- **Single-family residential:** A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.
- **Multi-family residential:** Multiple dwelling units contained within one building or several buildings within one complex.
- **Commercial:** A water user that provides or distributes a product or service (CWC 10608.12(d)).
- **Industrial:** A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development (CWC 10608.12(h)).
- **Institutional (and governmental):** A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions (CWC 10608.12(i)).



- **Landscape:** Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.
- **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.

DSRSD’s past water use (for 2005 and 2010) by water use sector is reported in Table 4-1. These are the same values reported in DSRSD’s 2010 UWMP.

**Table 4-1. Historical Water Use by Customer Type**

Water Use Type	2005 Actual Volume, AF	2010 Actual Volume, AF
Single Family	5,084	4,566
Multi-Family	998	1,226
Commercial	1,576	835
Industrial	0	0
Institutional/ Governmental	763	798
Landscape	1,206	1,376
Agricultural	0	0
Other	0	0
Potable System Losses	507	463
<b>Total Potable Water Use</b>	<b>10,134</b>	<b>9,264</b>
Recycled Water- Metered	423	1,264
Recycled Water- WWTP Use	465	465
<b>Total Recycled Water Use</b>	<b>888</b>	<b>1,729</b>
<b>Total Water Use</b>	<b>11,022</b>	<b>10,993</b>
Source: DSRSD 2010 UWMP, Table 3-5.		

Table 4-2 reports DSRSD’s actual water use for the year 2015. There are no existing or projected uses for saline barriers, groundwater recharge, conjunctive use, or raw water within the DSRSD’s service area.



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

Use Type	2015 Actual		
	Additional Description <i>(as needed)</i>	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	3,618
Multi-Family		Drinking Water	1,418
Commercial		Drinking Water	699
Institutional/Governmental		Drinking Water	105
Landscape		Drinking Water	488
Other	Group quarters	Drinking Water	464
Other	Construction	Drinking Water	15
Other	Fireline meters	Drinking Water	1
Other	Ranch owner	Drinking Water	2
Other	Unmetered sales	Drinking Water	94
Other	Supplemental water for recycled water demand	Drinking Water	9
Other		Drinking Water	111
Losses		Drinking Water	421
<b>TOTAL</b>			<b>7,445</b>
NOTES: Volumes are in AF.			
SOURCE: Consumption by Account Type and Fee Code (01/01/2015 through 12/31/2015) provided by DSRSD.			

Water demand projections in this report are based on water demand projections developed for DSRSD’s Water Master Plan (2016) based on land use projections within DSRSD’s service area. The water demand projections are compliant with DSRSD’s 2020 SB X7-7 target (see *Chapter 5 SB X7-7 Baselines and Targets*). Table 4-3 reports the projected water demands through the year 2040.



**Table 4-3. Retail: Demands for Potable and Raw Water – Projected (DWR Table 4-2)**

Use Type	Additional Description (as needed)	Projected Water Use <i>Report To the Extent that Records are Available</i>				
		2020	2025	2030	2035	2040-opt
Single Family		6,647	7,074	7,398	7,698	7,698
Multi-Family		2,605	2,772	2,900	3,017	3,017
Commercial		1,285	1,367	1,430	1,488	1,488
Institutional/Governmental		193	205	215	223	223
Landscape		897	954	998	1,038	1,038
Other	Group quarters	853	908	950	988	988
Other	Construction	28	30	31	33	33
Other	Fireline meters	1	1	1	1	1
Other	Ranch owner	3	3	3	4	4
Other	Unmetered sales	173	184	192	200	200
Other	Supplemental water for recycled water demand	16	17	18	19	19
Other		203	216	226	235	235
Losses		774	823	861	896	896
<b>TOTAL</b>		<b>13,678</b>	<b>14,554</b>	<b>15,223</b>	<b>15,840</b>	<b>15,840</b>

NOTES: Volumes are in AF. Projected demands based on land use projections as documented in the DSRSD's Water Master Plan (2016).

Table 4-4 summarizes the actual and projected potable water demands reported in Tables 4-2 and 4-3, and the recycled water demands reported in Table 6-6 (see *Chapter 6 System Supplies*).

**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>	7,445	13,678	14,554	15,223	15,840	15,840
Recycled Water Demand* <i>From Table 6-4</i>	2,579	3,905	4,117	4,203	4,203	4,203
<b>TOTAL WATER DEMAND</b>	<b>10,024</b>	<b>17,583</b>	<b>18,671</b>	<b>19,426</b>	<b>20,043</b>	<b>20,043</b>

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.

DSRSD uses the American Water Works Association (AWWA) method to annually evaluate its distribution system losses. For the 2015 calendar year, DSRSD’s water losses were estimated to be approximately 421 AF, or approximately 5.6 percent. A copy of DSRSD’s 2015 Water Audit worksheet is provided in Appendix E.

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 January 1, 2015.

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

Reporting Period Start Date	Volume of Water Loss*
01/2015	421
<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 DSRSD's 2015 Water Audit is provided in Appendix E.	

### 4.4 ESTIMATING FUTURE WATER SAVINGS

The water use projections presented in Table 4-4 are based on land use projections within DSRSD water service area within the City of Dublin and the Dougherty Valley area of the City of San Ramon and are described in DSRSD’s Water Master Plan (2016). Additional water savings from codes, standards, ordinances, or transportation and land use plans, also known as passive savings, can decrease the water use for new and future customers. However, as shown in Table 4-6 below, these potential passive savings have not been included in DSRSD’s water use projections.

**Table 4-6. 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



#### 4.5 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 4-3 and 4-4 include water use for single family and multifamily residential housing needed for low-income households, as identified in the City of Dublin’s and the City of San Ramon’s Housing Elements. A lower income household is defined as a household that has an income below 80 percent of the Area Median Income, adjusted for family size. According to the City of Dublin Housing Element (2015-2023) adopted in November 2014, the percent of City of Dublin households with incomes below 80 percent of the Area Median Income was 17 percent in 2010<sup>1</sup>. According to the City of San Ramon General Plan 2035 adopted in April 2015, the percent of City of San Ramon households with incomes below 80 percent of the Area Median Income was 16 percent in 2010<sup>2</sup>.

Therefore, based on the 2010 housing data for the cities of Dublin and San Ramon, it is estimated that approximately 17 percent of DSRSD’s water demands are attributed to low income households. Table 4-7 presents these projected water demands for single family and multi-family households.

**Table 4-7. Projected Water Demands for Lower Income Households**

Water Use Sector	Water Demands for Low Income Households <sup>(a)</sup> , AFA				
	2020	2025	2030	2035	2040
Single Family	1,127	1,199	1,254	1,305	1,305
Multi-Family	442	470	492	511	511
<b>Total</b>	<b>1,568</b>	<b>1,669</b>	<b>1,746</b>	<b>1,816</b>	<b>1,816</b>

<sup>(a)</sup> Based on data from City of Dublin and City of San Ramon Housing Elements indicating that 16 to 17 percent of households in DSRSD service area are classified as low income.

As indicated in Table 4-6, the water demands for the lower income households are included in DSRSD’s water demand projections.

#### 4.6 CLIMATE CHANGE

DSRSD’s water demand and use patterns may be impacted by climate change. Increased irrigation demand is anticipated to occur with temperature rise, increased evaporative losses due to warmer temperature, and a longer growing season. 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 DSRSD’s water supplies are described in *Chapter 6 System Supplies*.

<sup>1</sup> Appendix C Table C-8: Households by Income Category – 2010, City of Dublin Housing Element 2015-2015, adopted November 18, 2014 (Resolution 197-14).

<sup>2</sup> Chapter 11 Housing, Table 11-5: San Ramon Households by Income Category (2010), City of San Ramon General Plan 2035, adopted by San Ramon City Council April 28, 2015.

## CHAPTER 5

### SB X7-7 Baselines and Targets

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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.

DSRSD’s compliance with SB X7-7 was first addressed in DSRSD’s 2010 UWMP. DSRSD’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 Guidebook indicates that there were significant discrepancies between the 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 DSRSD’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. DSRSD 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). DSRSD has achieved compliance with its 2015 interim target, as discussed below, and is well positioned to achieve its 2020 final target. Regional Alliance baselines and targets are discussed in Section 5.8.

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



#### 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 DSRSD submitted its 2010 UWMP. Therefore, DSRSD updated population, baselines, and targets for this 2015 UWMP to reflect 2010 U.S. Census data. The following sections describe these updates.

#### 5.2 BASELINE PERIODS

SB X7-7 requires each urban water retailer to determine their baseline daily per capita water use, measured in gallons per capita per day (Baseline Gallons Per Capita Per Day (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. In 2008, DSRSD delivered 595.2 million gallons (MG) of recycled water, which was approximately 15 percent of DSRSD's total retail water delivery in 2008. Therefore, DSRSD may select a range of 10 to 15 years for its base period. SB X7-7 also requires each urban water retailer to determine a 5-year baseline per capita water demand, which DWR calls the Target Confirmation, calculated over a continuous 5-year period ending no earlier than December 31, 2007 and no later than December 31, 2010.

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

- 10-year Baseline Period: 1996 to 2005
- 5-year Baseline Period: 2003 to 2007

These baseline periods are listed in SB X7-7 Table 1 in Appendix F. It should be noted that the 10-year and 5-year periods are the same as reported in DSRSD'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 DSRSD’s service area population including 2000 and 2010 U.S. Census data. Population reported in DSRSD’s 2010 UWMP did not include 2010 U.S. Census data because the full Census data set was not available until 2012.

DSRSD’s water service area includes both the City of Dublin (in Alameda County) and the Dougherty Valley area of San Ramon (in Contra Costa County).

For the City of Dublin service area, DSRSD is a Category 1 water provider in accordance with Methodology 2 of DWR’s *Methodologies* document. Population estimates have been determined based on the CDoF’s population estimates for the City of Dublin.

For the Dougherty Valley service area, DSRSD is a Category 2 water provider in accordance with Methodology 2 of DWR’s *Methodologies* document. Population estimates have been determined using a per-housing unit methodology based on data provided by the City of San Ramon (3.32 persons per housing unit) which is based on 2010 U.S. Census data.

Historical service area population during the 10- and 5-year baseline periods is shown in SB X7-7 Table 3 in Appendix F. The revised population estimates were consistently less (by about 4 to 12 percent) than the population estimates used for the SB X7-7 analysis in DSRSD’s 2010 UWMP.

### 5.4 GROSS WATER USE

Annual gross water use is the water that enters DSRSD’s distribution system over a 12-month period (calendar year) with certain exclusions. This section discusses DSRSD’s annual gross water use for each year in the baseline periods, as well as 2015, in accordance with Methodology 1 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*



DSRSD's gross water use is based on the metered quantity of water purchased by DSRSD from Zone 7. Annual gross water use for the baseline periods and 2015 are summarized in SB X7-7 Table 4 in Appendix F. The values reported in Appendix F are the same as documented in DSRSD's 2010 UWMP.

### **5.5 BASELINE DAILY PER CAPITA WATER USE**

As indicated above, 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, DSRSD has used updated service area population data for this 2015 UWMP. DSRSD's baseline daily per capita use has been calculated as follows:

- 10-year Base Daily Per Capita Water Use
  - 211 GPCD (for the period from 1996 to 2005)
  - This value is 7 GPCD greater than the value calculated in the 2010 UWMP (204 GPCD)
- 5-year Base Daily Per Capita Water Use
  - 199 GPCD (for the period from 2003 to 2007)
  - This value is 14 GPCD greater than the value calculated in the 2010 UWMP (185 GPCD)

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

### **5.6 2015 AND 2020 TARGETS**

SB X7-7 requires a statewide average 20 percent reduction of urban per capita water use by the year 2020. Therefore, DSRSD 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 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 2010 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 F (SB X7-7 Tables 7A and 7E). The calculated 2020 target using Method 1 is 169 GPCD. The 2020 target using Method 3 is 124 GPCD. Methods 2 and 4 require specific data which were not available, so those two methods were not considered. Target Method 1 results in the highest allowable SB X7-7 final (2020) target (169 GPCD by 2020), and would therefore be most favorable to DSRSD.

The 2015 interim targets for each of the target methods are calculated based on the midpoint of DSRSD’s 10-year Base Daily Per Capita Water Use and the 2020 targets calculated for each of the respective target methods. The interim 2015 target is the midpoint between DSRSD’s 10-Year Base Daily Per Capita Water Use (211 GPCD) and the final 2020 target (169 GPCD). Therefore, DSRSD’s interim 2015 target is 190 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 7F in Appendix F, DSRSD’s maximum 2020 target is 189 GPCD (95 percent of DSRSD’s 5-year base daily per capita water use of 199 GPCD). DSRSD’s Method 1 2020 target of 169 GPCD complies with the minimum reduction.

DSRSD’s revised interim and final targets are summarized in Table 5-1.

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

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	1996	2005	211	190	169
5 Year	2003	2007	199		
*All values are in Gallons per Capita per Day (GPCD)					

For this 2015 UWMP, DSRSD has selected Target Method 1, as was used in the 2010 UWMP. The recalculated interim 2015 target of 190 GPCD is 7 GPCD higher than the interim 2015 target included in the 2010 UWMP (183 GPCD). The recalculated final 2020 target of 169 GPCD is 6 GPCD higher than the final 2020 target included in the 2010 UWMP (163 GPCD). DSRSD 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 (GPCD)**

DSRSD 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 5-2, DSRSD’s urban per capita water use in 2015 was 81 GPCD, which is well below the 2015 interim water use target of 190 GPCD. Therefore, DSRSD 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 F.



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

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*				
81	190	0	0	0	0	81	81	Yes	

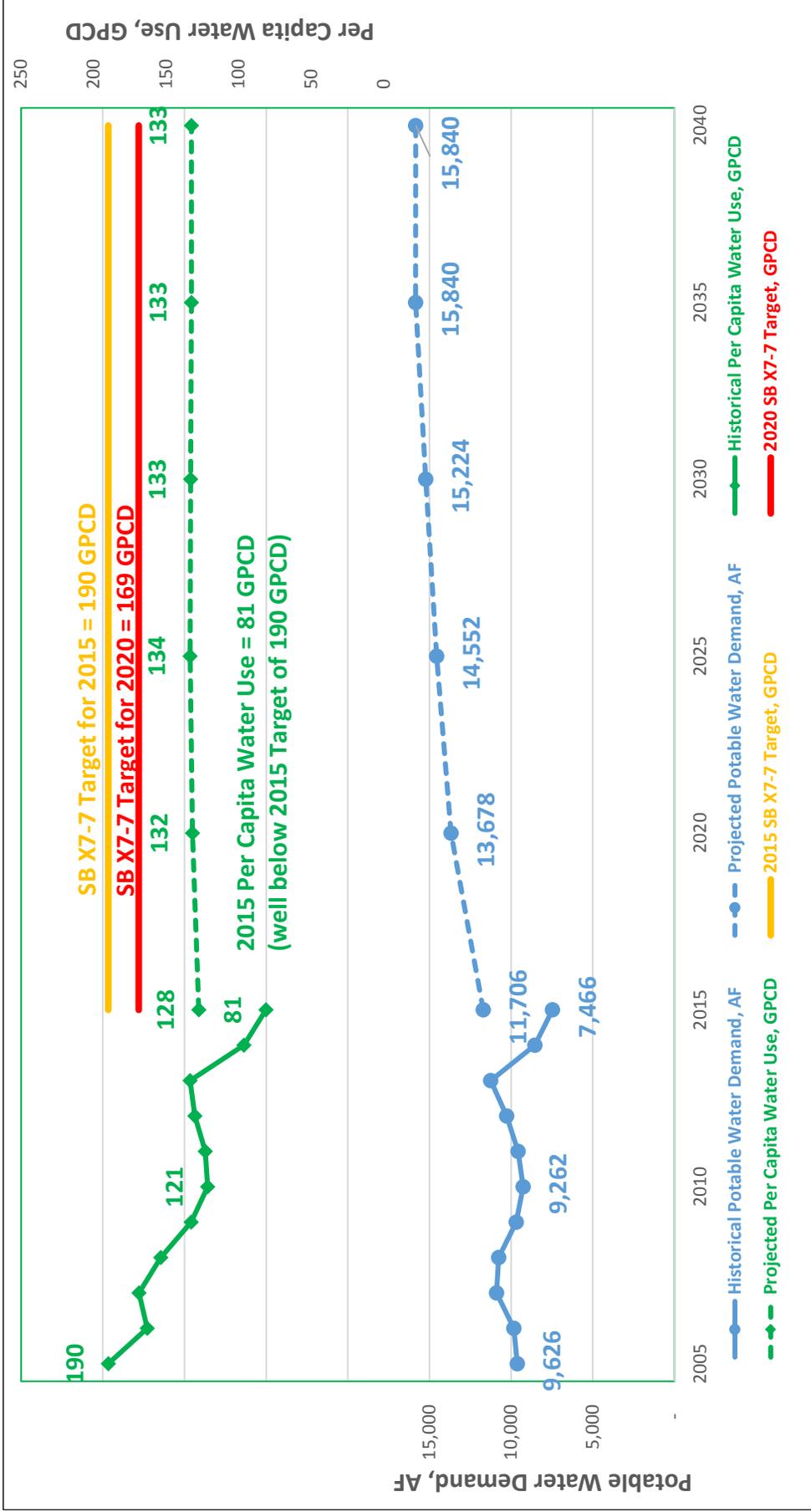
*\*All values are in Gallons per Capita per Day (GPCD)*

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. DSRSD 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 DSRSD’s service area was significantly reduced as compared to recent years as a result of increased water conservation efforts by DSRSD and its customers in response to the severe drought conditions statewide.

DSRSD’s compliance with SB X7-7 is also demonstrated on Figure 5-1 which shows the District’s historical and projected annual potable water use (in AF) and per capita water use (in GPCD) in comparison to the SB X7-7 2015 and 2020 targets. As shown, in addition to the District’s 2015 per capita water use being well below the SB X7-7 2015 target, the District’s projected future per capita potable water use is also well below the SB X7-7 2020 target.

**5.8 REGIONAL ALLIANCE**

DSRSD has chosen to comply with the requirements of SB X7-7 on an individual basis, and did not participate in a regional alliance. Because DSRSD was able to achieve compliance with SB X7-7 on an individual basis, the Regional Alliance compliance per capita water demand was not calculated.



**Figure 5-1**  
**DSRSD Historical and Projected**  
**Per Capita Water Use and SB X7-7**  
**Targets**

Dublin San Ramon Services District  
 2015 Urban Water Management Plan

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## CHAPTER 6 System Supplies



This chapter describes the water supplies currently available to DSRSD, as well as future anticipated water supplies. DSRSD 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; and
- Recycled water supplies produced at DSRSD's RWTF.

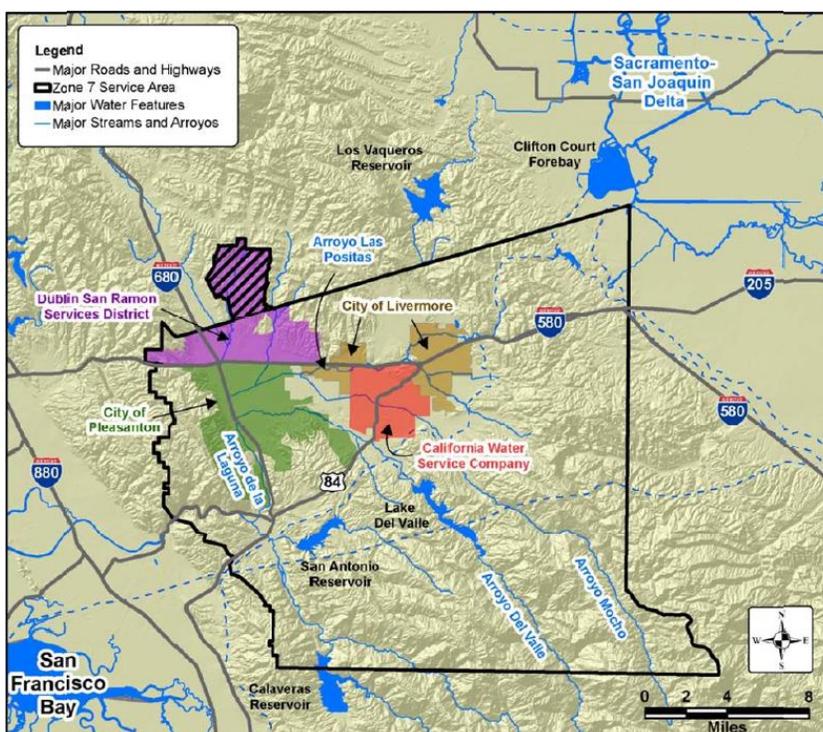
These sources, along with the other projected future supplies, and the potential for desalinated water, potable reuse and exchanges or transfers are described in this chapter.

### 6.1 PURCHASED OR IMPORTED WATER

DSRSD currently receives 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 State Water Project 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, DSRSD is limited in developing other water supply sources.

#### 6.1.1 DSRSD Water Supply Contract with Zone 7

Zone 7 and DSRSD entered into the current contract for a Municipal and Industrial Water Supply on August 23, 1994. The contract has a 30-year term (expiring in 2024) and is intended to ensure an equitable, reliable, and high quality water service for DSRSD's customers. It provided the water supply for existing DSRSD customers and set the stage upon which DSRSD would be able to provide service to future customers. The current contract is expected to be renegotiated and renewed in 2024. Some of the key provisions of the current contract include the following:





- **Service Area:** DSRSD has sole discretion to expand its service area. However, Zone 7 water cannot be used outside of the Zone 7 territory unless Zone 7 finds that providing water to such areas is in its best interest.
- **Water Supply:** DSRSD shall purchase from Zone 7 all water required by DSRSD for use within DSRSD's service area, except that DSRSD may extract groundwater per the contract provisions or obtain water from "Other Sources" as defined in the contract<sup>1</sup>.
- **Water Quality:** Zone 7 will endeavor to provide water that is aesthetically acceptable to all retailers and will blend the different sources of water available to it within its operational capabilities so as to provide water of approximately equal quality to all customers.
- **Groundwater Pumping:** DSRSD's Groundwater Pumping Quota was maintained at 645 acre-feet per year (AFA) of withdrawals from the Livermore Valley Main Basin. Zone 7 pumps this groundwater from the Main Basin on DSRSD's behalf. Withdrawals from the fringe basin are unlimited and can be used at DSRSD's discretion.
- **Carryover of Pumping Quota:** The contract provides for a limited carryover of unused pumping quota from one year to another.
- **Transfer of Pumping Quota:** The four retailers served by Zone 7 can voluntarily transfer their pumping quotas between or among themselves.
- **Recycled Water:** Recycled water is considered to be an "Other Source" of water that DSRSD can use at will.
- **Delivery Schedule:** DSRSD shall submit in writing to Zone 7 a preliminary water delivery schedule indicating the anticipated quantity of treated water required by DSRSD during each month of the succeeding five calendar years and the anticipated peak day treated demand from Zone 7 for each such year. Zone 7 shall review such schedule, and after consultation with DSRSD, shall approve such schedule in a timely manner or make revisions as necessary to make such deliveries.

In February 2000, the contract was amended to expand DSRSD's service area to include the Dougherty Valley area and special provisions were added regarding supplying water to Dougherty Valley. A copy of the water supply contract and amendment is provided in Appendix G.

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

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<sup>1</sup> Water from "Other Sources" includes: a) water received for fire flow or fire storage requirements or other emergency purposes; b) water necessary to meet DSRSD's treated water needs as a result of Zone 7's non-compliance with state and federal drinking water requirements; c) water necessary to meet DSRSD's requirements should Zone 7 be unable to deliver the quantity of treated water necessary to satisfy the requirements of DSRSD; d) water from other sources even if Zone 7 is able to meet DSRSD's demands if DSRSD pays Zone 7 "for obligated fixed costs of Zone 7 associated with the quantity of water the Contractor will obtain from other sources"; e) groundwater extracted within Zone 7's boundary, but outside the Main Basin, provided said extraction does not cause an adverse impact on the Main Basin; f) the source water is recycled water from DSRSD's or another contractor's treated wastewater.



#### 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 State Water Project (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 and Cawelo Water District; and
- Future local storage in the Chain-of-Lakes.

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 prepared an updated Water Supply Evaluation<sup>2</sup> (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 UWMP<sup>3</sup>.

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 over 80 percent of the treated water supplied to its customers on an annual average basis, either directly or after storage.

The current drought has severely impacted delivery of most surface water supplies in California, and the 2014 SWP cutbacks of Table A 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, the 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). Zone 7 maintained that they had adequate water supply in 2015 to meet normal demands. DSRSD restricted water use in response to statewide water conservation mandates, which allowed for reduced pumping from the groundwater basin in anticipation of another year of drought.

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<sup>2</sup> Water Supply Evaluation Update, Zone 7, February 2016.

<sup>3</sup> Zone 7 2015 Urban Water Management Plan, March 31, 2016.



#### 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 South Bay Aqueduct (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.

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 above-ground storage, SWP water is stored in the local groundwater basin, or stored remotely in Kern County groundwater banks by Zone 7. 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. However, use of this transfer water requires that the transferred water be available from the SWP downstream of the Banks Pumping Plant to be foregone by the transferors, which is why this water was not available in 2014 (see further discussion in Section 6.1.2.4).



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 staff 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 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 recently extended through 2030, with an option to extend through 2039.

Per Zone 7’s 2015 UWMP, Zone 7 is assuming that 2,000 AFA will be available from BBID in average years and multiple dry years. No BBID supply is assumed to be available in single dry years.

#### 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 Chain of Lakes. 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 Del Valle Water Treatment Plant (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 ten municipal supply wells located in four wellfields: the Chain of Lakes (COL), Hopyard, Mocho<sup>4</sup>, 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 42.3 MGD. Of the total pumping capacity, 10.8 MGD is intended primarily for use in emergency and drought conditions. Therefore, under normal operating conditions, Zone 7 plans on a peak capacity of 31.5 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 Zone 7's 2011 WSE.

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<sup>4</sup> The Mocho 4 well located in the Mocho Wellfield is operated by Zone 7 for DSRSD.



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, Zone 7's WSE Update 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 Water District) 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 [Metropolitan]) 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 State Water Project 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 five 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 five 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 Plan<sup>5</sup> that is used to manage the basin. Each year, Zone 7 prepares an Annual Report for the Groundwater Management Program.

DSRSD does not itself extract groundwater as a water supply. By contract, Zone 7 conducts this groundwater pumping operation as part of providing water supply services to DSRSD. This groundwater supply is then blended with water from Zone 7's other water supply sources and delivered to DSRSD. In accordance with their water supply agreement, Zone 7 pumps DSRSD's groundwater supply from local storage, as described in Section 6.1.2.3 (Local Storage). Zone 7 does not have a groundwater pumping quota and it can only pump groundwater it has recharged from its other supplies.

DSRSD'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 the Livermore Valley Basin (Basin 2-10) as either in overdraft or expected to be in overdraft.

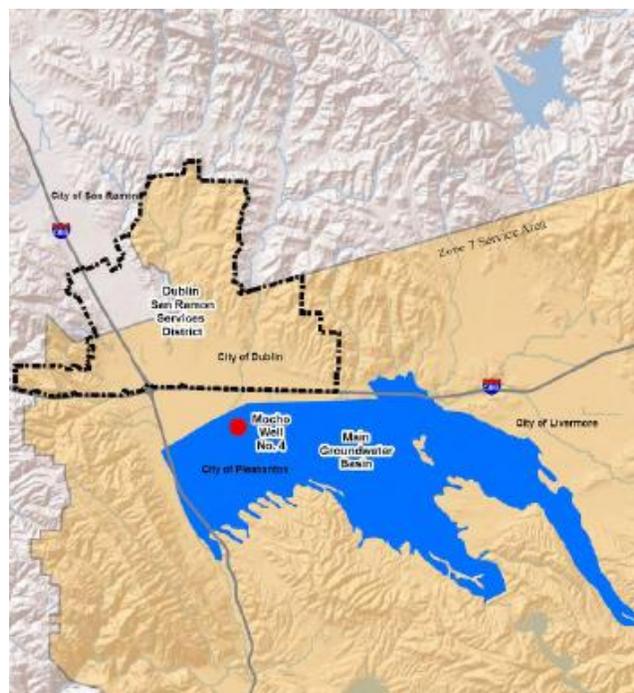
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<sup>5</sup> Groundwater Management Plan for Livermore-Amador Valley Groundwater Basin, prepared for Zone 7 Water Agency, prepared by Jones & Stokes, September 2005.  
(<http://www.water.ca.gov/urbanwatermanagement/2005uwmps/AlamedaZone7/GMP%202005%20Submittal%20-%20Complete.pdf>)



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

Currently, the DSRSD groundwater supply is pumped by Zone 7 for DSRSD from a Zone 7 installed well in the Mocho well field, Mocho No. 4. This well was constructed on DSRSD property (previously Parks RFTA property) under a 2002 agreement between DSRSD and Zone 7 whereby DSRSD provided Zone 7 with access, Zone 7 paid all of the costs for the well, pump and building, and DSRSD has the annual option of requesting that Zone 7 pump and provide DSRSD's GPQ at a cost of only power, chemical and some other incidental charges. Groundwater from Mocho No. 4 is blended with water from other Zone 7 water supplies and is delivered to DSRSD to meet its total water demand.



In addition to groundwater from the Main Basin, DSRSD may extract water in addition to the 645 AFA Main Basin groundwater pumping quota (GPQ) from areas outside the Main Basin (the fringe subbasin). Water can be pumped from the Fringe Basin as long as this groundwater extraction does not have adverse effects on the Main Basin. In the past, DSRSD pumped water from the fringe subbasin when it owned wells along Dublin Boulevard. However, pumping from the fringe subbasin was abandoned in 1980 due to water quality issues and pumping costs.

### 6.2.2 Groundwater Management

DSRSD, the Cal Water Livermore District, and the cities of Livermore and Pleasanton, 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). DSRSD's GPQ is 645 AFA. In accordance with its agreement with Zone 7, DSRSD may obtain groundwater in excess of its GPQ if it pays a recharge fee to Zone 7.



#### 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 is available for Zone 7 operational storage. Zone 7's goal is to maintain 128,000 AF of groundwater in the Main Basin 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. Pleasanton 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 AF annually on average, which means that Zone 7 can pump an equivalent 9,200 AF annually 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 or 1,000 mg/L, whichever is lower
- Nitrate (as NO<sub>3</sub>): 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 water year 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 NO<sub>3</sub>), 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/Nutrient Management Plans 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 2014. 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 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 GSAs within two years	<ul style="list-style-type: none"> <li>• June 30, 2017</li> </ul>
Step Two	Agencies in basins deemed high- or medium-priority must adopt GSPs within five to seven years, depending on whether a basin is in critical overdraft	<ul style="list-style-type: none"> <li>• January 31, 2020 for critically overdrafted basins</li> <li>• January 31, 2022 for high- and medium-priority basins not currently in overdraft</li> </ul>
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"> <li>• January 31, 2040 for critically overdrafted basins</li> <li>• January 31, 2042 for high- and medium-priority basins not currently in overdraft</li> </ul>

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 <sup>(a,b)</sup>	Basin Number	Basin Name	Overall Basin Ranking Score	Overall Basin Priority
92	2-10	Livermore Valley	17.3	Medium
<sup>(a)</sup> CASGEM Groundwater Basin Prioritization Results, run version May 26, 2014.				
<sup>(b)</sup> 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 Production

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, 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, DSRSD has a GPQ of 645 AFA in the Livermore Valley Main Groundwater Basin (Main Basin), which Zone 7 pumps on DSRSD’s behalf as part of its water contract. Therefore, DSRSD itself does not pump any groundwater, as shown in Table 6-3.

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

<input checked="" type="checkbox"/>	Supplier does not pump groundwater. The supplier will not complete the table below.
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### 6.3 SURFACE WATER

As described above, DSRSD receives 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

In 1989, Congress passed amendments to the Clean Water Act requiring states to address the increasing problem of stormwater pollution entering storm drains. The State of California requires a National Pollutant Discharge Elimination System (NPDES) permit to regulate stormwater discharges.

The City of Dublin's Stormwater Program is a mandated program under the federal Clean Water Act. The City, along with 75 other municipalities and agencies in the Bay Area, is a co-permittee under the Municipal Regional Stormwater NPDES Permit (also known as the MRP), which is administered by the San Francisco Bay Regional Water Quality Control Board. The purpose of the Stormwater Program is to eliminate pollutants, such as motor oil, dirt, pesticides, litter, pet waste and other contaminants from entering the storm drain system. Pollutants such as these flow from yards, parking lots, and streets sending contaminated water, also known as urban runoff, untreated into local creeks, groundwater, and the San Francisco Bay where it harms fish and other wildlife.

The MRP requires the municipalities in the Bay Area, including the City of Dublin, to place conditions on development projects to incorporate site design measures, source controls, treatment measures, and, on larger projects, flow duration controls (FDCs). The City has developed a stormwater requirements checklist which all development projects are required to submit to the City with permit applications. Also, a Stormwater Management Maintenance Agreement is required for all projects incorporating stormwater treatment, hydromodification management measures, or trash capture devices. This agreement runs with the land and must be recorded with the Alameda County Recorder's Office.

Rainfall in the San Francisco Bay Area is highly variable and seasonal, with most precipitation occurring between November and May and very little occurring from late spring to fall. Rainfall naturally infiltrates pervious surfaces, replenishing groundwater basins. Stormwater runoff that is not currently infiltrated naturally is captured in minor streams or within the Zone 7 flood control channels and diverted to Alameda Creek eventually draining to San Francisco Bay.

In August 2015, DSRSD produced a Long Term Alternative Water Supply Study to consider regional and local supply alternatives which included stormwater and grey water capture. In the study, DSRSD identifies uncaptured stormwater as a potential untreated supply for groundwater recharge and as a viable treated supply for potable and non-potable water use. However, currently DSRSD 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 SRVWP. The SRVWP 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 began also using recycled water from DERWA facilities under contract with DERWA.



Wastewater produced from the Dougherty Valley area of San Ramon are conveyed north to Central Contra Costa Sanitary District's (CCCSO) wastewater treatment plant. Wastewater flows are transported via the San Ramon Interceptor located within the Iron Horse Trail corridor.

#### 6.5.1 Recycled Water Coordination

DSRSD began its recycled water program in the early 1990's by adopting Resolution No. 42-92 in August 1992. The resolution set priorities and policies for the use and promotion of recycled water service within and outside DSRSD's water service area. The policies were intended to assist DSRSD achieve the following objectives:

- Promote, produce, sell and deliver recycled water to retail and wholesale customers;
- Manage the San Ramon Valley Recycled Water Program on an equitable and self-supporting basis;
- Work with others to develop ordinances and guidelines to encourage the use of recycled water;
- Develop local regulations and standards to ensure the safe and beneficial use of recycled water; and
- Conduct public information and customer service programs to ensure that the public has an appropriate understanding of recycled water, including the benefits of using recycled water.

DSRSD then adopted the "Water Recycling Business Plan Framework" in 1993, to establish the DSRSD Recycled Water Enterprise. Since that time, recycled water has been an important part of water planning at DSRSD. In that same year, the City of Dublin certified an environmental impact report (EIR) for the *Eastern Dublin General Plan Amendment and Specific Plan*. The DSRSD service plan for eastern Dublin is predicated upon the use of recycled water for landscape irrigation as summarized in the EIR and subsequent annexation documentation. Potable water supply requests to Zone 7 by DSRSD for Eastern Dublin under the "Contract between Zone 7 and DSRSD for a Municipal & Industrial Water Supply," are the net of the eastern Dublin total water demands less the recycled water to be provided by DSRSD.

DSRSD and EBMUD formed a joint powers authority, the DERWA, in 1995. DERWA's mission is to provide a safe, reliable, and consistent supply of recycled water, and to maximize the amount of recycled water delivered for non-potable use. DERWA operates the SRVRWP, a multi-phased project to supply recycled water from DSRSD's RWTF to portions of DSRSD's and EBMUD's service areas.

In 1995, DSRSD became committed to also providing recycled water to Dougherty Valley. The DSRSD service plan for Dougherty Valley is also predicated upon the use of recycled water for landscape irrigation. The amount of potable water purchased for Dougherty Valley is the net of the Dougherty Valley total water demands less the recycled water to be provided by DSRSD.



In April 1998, DSRSD adopted Ordinance No. 280 which established a Recycled Water Use Zone within DSRSD's service area, consisting of all areas then receiving potable water services and those additional areas designated for such service. In April 2004, this ordinance was repealed and replaced by Ordinance No. 301 which formally established the rules and regulations governing the use of recycled water within DSRSD's service area. In November 2010, when DSRSD recodified its code, DSRSD incorporated Ordinance No. 301 into the DSRSD Code and added DSRSD Code Section 3.20.110, Duty to connect—Recycled water (included in Appendix H), which requires that new development in DSRSD's water service area connect to recycled water for appropriate irrigation uses. DSRSD also adopted a policy (Policy P300-10-3) regarding the provision of recycled water service both within and outside the District (included in Appendix H).

As discussed above, DSRSD and EBMUD formed a joint powers authority in 1995 to operate the SRVRWP, a multi-phased project to supply recycled water from DSRSD's RWTF to portions of DSRSD's and EBMUD's service areas. The SRVRWP operates a backbone recycled water distribution system that includes sixteen miles of transmission mains, two tanks, and four pump stations. DSRSD and EBMUD each constructed separate distribution systems within their respective areas to convey recycled water from the SRVRWP backbone to existing and new irrigation customers in portions of Dublin, San Ramon, Blackhawk and Danville. The program serves golf courses, parks, planted common areas managed by homeowner associations, roadway medians and greenbelts, and other landscaped areas. The City of Pleasanton began using recycled water from the recycled water treatment facilities in 2014 under contract with DERWA, and will be expanding use in the future.

#### 6.5.2 Wastewater Collection, Treatment, and Disposal

DSRSD owns and operates a regional wastewater treatment plant (WWTP), which treats wastewater from Dublin, South San Ramon, and Pleasanton. Wastewater from the Dougherty Valley (San Ramon) portion of DSRSD's water service area is collected and treated at CCCSD's wastewater treatment plant located in Martinez, California.

DSRSD's wastewater treatment plant includes conventional secondary treatment facilities, as well as tertiary and advanced recycled water treatment facilities. DSRSD's 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 average dry weather flow (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 Pleasanton influent by contract.

In DSRSD's RWTF (also known as the Jeffrey G. Hansen Water Recycling Plant), 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 current 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 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 Tri-Valley 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 the Livermore-Amador Valley Water Management Agency (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 East Bay Dischargers Authority (EBDA) system for dechlorination and discharge through a deepwater outfall to the San Francisco Bay.

Table 6-4 summarizes the information on the collection of wastewater generated within the DSRSD’s water service area in 2015. The volume of wastewater collected from South San Ramon and the City of Pleasanton are not included in the City of Dublin’s volume of wastewater stated in Table 6-2 because those areas are located outside of DSRSD’s water service area. The wastewater produced from Dougherty Valley was estimated using Dougherty Valley’s 2015 population and an average daily wastewater flow of 60 gallons per person per day.

**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)
DSRSD (City of Dublin)	Metered	6,422	DSRSD	DSRSD WWTP	No	No
DSRSD (Dougherty Valley)	Estimated	1,749	CCCSD	CCCSD WWTP	No	No
<b>Total Wastewater Collected from Service Area in 2015:</b>		<b>8,171</b>				

NOTES: Volumes are in AF.



DSRSD’s wastewater service area is larger than the DSRSD’s water service area because the total wastewater volume also includes influent from South San Ramon and the City of Pleasanton. Table 6-5 identifies the total wastewater treated by DSRSD in 2015, which includes treated wastewater that originated outside of the DSRSD water service area. The recycled water discharged outside of the water service area includes recycled water delivered by DSRSD to EBMUD and the City of Pleasanton.

**Table 6-5. DSRSD’s 2015 Wastewater Treatment and Discharge, AF**

Discharge Location Name or Identifier	Discharge Location Description	Does this Plant Treat Wastewater Generated Outside of Service Area?	Treatment Level	Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
LAVWMA & EBDA	Deepwater outfall to San Francisco Bay	Yes	Tertiary	10,649	7,494	2,579	576

Note: Wastewater volumes are estimated; wastewater treated equals the total influent minus the reclaimed effluent.

DSRSD’s WWTP is physically located in the City of Pleasanton’s water service area. Therefore, as shown in Table 6-6, DWR Table 6-3 has not been completed<sup>6</sup>.

**Table 6-6. 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	Treatment Level	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
<input checked="" type="checkbox"/> No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.										
<b>Total</b>							0	0	0	0

NOTES: DSRSD’s WWTP is located in the City of Pleasanton’s service area and therefore its data is included in the City of Pleasanton’s 2015 UWMP.

### 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 State Water Resources Control Board (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.

<sup>6</sup> Since DSRSD’s WWTP is physically located in the City of Pleasanton, DWR Table 6-3 has not been completed in this 2015 UWMP for DSRSD. However, DWR Table 6-3 in Pleasanton’s 2015 UWMP will include the 2015 wastewater treatment and discharge data for the DSRSD WWTP (as shown in Table 6-5 above).



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.

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.

DSRSD monitors recycled water uses and files reports with regulatory agencies: the California Department of Public Health (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.

In addition, the City of Pleasanton began using recycled water from the recycled water treatment facilities in 2014, and will be expanding its use in the future. The City of Pleasanton ties into the DERWA system near the corner of the DSRSD Dedicated Land Disposal (DLD) site adjacent to Stoneridge Drive near the WWTP.

#### 6.5.4 Recycled Water Beneficial Uses

Prior to 1999, recycled water was used in the DSRSD water service area only for compaction, dust control, and sewer cleaning. In 1999, DSRSD began delivering recycled water to the Dublin Sports Grounds for landscape irrigation. Through subsequent connection to the SRVRWP backbone, DSRSD's recycled water distribution system expanded to serve newly developed areas in Dougherty Valley and the eastern portion of Dublin.

Recycled water use in DSRSD's service area has increased significantly in the last two years. In 2013, DSRSD completed its first major retrofit of "purple" recycled water pipes in Central Dublin to provide drought-resistant irrigation at parks and schools. Consistent with the District's commitment to secure funding from outside sources, state and federal grants paid about 25 percent



of the project's \$3.9 million cost. The Central Dublin project distributes more than 40 million gallons of recycled water per year, increasing water reliability and saving enough imported water to serve more than 300 households. Recycled water pipes were installed in the residential area near Amador Valley Boulevard and Davona Drive and then connected to the main supply line that runs along the Iron Horse Trail. The project also included retrofitting existing potable water irrigation systems at the parks and schools.

In 2014/2015, DSRSD expanded its recycled water distribution system into West Dublin, and large irrigation sites throughout DSRSD's service area continue to be permanently converted from potable water to recycled water for landscape irrigation (33 sites were converted in 2015).

Where recycled water distribution mains are adjacent to construction sites, DSRSD allows temporary connection to the distribution main so that construction contractors may obtain recycled water for construction use. Other minor uses include car wash and pressure washing.

Also, in response to the on-going drought, DSRSD also made recycled water available to the public for residential landscaping. The District's Residential Recycled Water Fill Station provided about 2.3 million gallons of free recycled water to about 500 residents in 2014. With hundreds of people coming to pick up water daily, the District expanded the original station at the treatment plant and opened a second location in Dublin in June 2015. In 2015, about 28 million gallons of free recycled water was provided to over 3,500 participants. The program demonstrated the value of the District's investments in recycled water to the community and received the 2014 Technological Innovation and Achievement Award from the California Association of Sanitation Agencies and the 2014 Water Recycling Outreach/Education Program of the Year from Water Reuse California. Water agencies across California have opened fill stations based on the DSRSD model.

Recycled water use for agricultural irrigation and industrial reuse are not feasible because the cities that DSRSD serve do not have nor do they anticipate such uses. However, there are plans to evaluate the potential for future potable reuse as described further in Section 6.8 below.

Table 6-7 summarizes the amount of recycled water being used in 2015 for each direct beneficial use, as well as projected volumes and uses into the future. The 2015 projected estimates of recycled water use from the DSRSD's 2010 UWMP is compared to the actual 2015 recycled water use in Table 6-8.



**Table 6-7. 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							
Name of Agency Operating the Recycled Water Distribution System:		DERWA							
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	2,136	3,364	3,561	3,791	3,941	3,941	
Golf course irrigation		Tertiary	254	254	254	254	254	254	
Commercial use		Tertiary	5	8	8	8	8	8	
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	184	279	294	150	0	0	
<b>Total:</b>			<b>2,579</b>	<b>3,905</b>	<b>4,117</b>	<b>4,203</b>	<b>4,203</b>	<b>4,203</b>	
<i>*IPR - Indirect Potable Reuse</i>									
NOTES: Volumes are in AF; Projected demand totals were received from DSRSD and beneficial use breakdowns (for landscape and commercial) are based on 2015 use ratio, with reduction in construction use as service area approaches buildout.									

**Table 6-8. 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)	722	2,136
Golf course irrigation	213	254
Commercial use	1,493	5
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	184
<b>Total</b>		<b>2,482</b>
<b>Total</b>		<b>2,579</b>

NOTES: Volumes are in AF.

### 6.5.5 Actions to Encourage and Optimize Future Recycled Water Use

The capacity of DSRSD facilities limits the production of recycled water. Current recycled water production and delivery to both DSRSD and EBMUD is limited to 12.7 MGD, the combined capacity of the RWTF's SFUV (9.7 MGD) and MFUV (3.0 MGD) facilities. A planned future expansion will increase the SFUV capacity to 16.5 MGD.



Contract rights also limit production of recycled water. In 2008, the SRVRWP's peak day demand for recycled water exceeded the amount of secondary effluent collected from the DSRSD wastewater collection system. DSRSD entered into an agreement with the City of Pleasanton in 2002, which was most recently amended in January 2014, allowing utilization of secondary effluent collected from the Pleasanton wastewater collection system. With the most recent amendment, DSRSD shall have the right to utilize any secondary effluent from the City not being used or needed for the production of recycled water for use or delivery by the City's Recycled Water Program.

To further increase water supplies in the DSRSD service area, DERWA and DSRSD are pursuing the following alternative water supplies starting the summer of 2012 through at least 2018:

- Extend the existing recycled water agreement with the City of Pleasanton;
- Divert secondary effluent from the LAVWMA pipeline that conveys the Livermore WWTP effluent to the LAVWMA pumping station;
- Install ground water wells in the fringe basin to meet peak irrigation demands; and
- Utilize potable water to meet peak irrigation demands.

In addition, DSRSD has a 2004 Memorandum of Understanding (MOU) in place with Zone 7 to renovate an abandoned gravel quarry to provide up to 1,200 AF of seasonal recycled water storage to meet peak demands.

DSRSD has been aggressive in encouraging and requiring the use of recycled water. DSRSD's recycled water ordinance and policy requires, except for small isolated areas, all new irrigation systems serving parks, streetscapes, commercial landscaping and common area landscaping for multifamily complexes to use recycled water. It also requires new development to use recycled water for irrigation except under specific conditions. Compliance is required if an applicant is to receive potable water service from DSRSD.

DSRSD has undertaken a proactive outreach program to encourage public acceptance of recycled water. As described in Chapter 9 of this UWMP, on-going outreach includes newsletters, videos, speakers, brochures, special events, school programs, and meetings with focus groups.

Furthermore, DSRSD policies related to recycled water use, including District Ordinance No. 301, include provisions that all new development areas must include dual distribution piping for recycled water deliveries, where feasible. The policy also includes provisions that would allow existing potable water irrigation customers to voluntarily convert to recycled water.

Recycled water is considered part of DSRSD's water enterprise for customer service and financial operations. New development applicants who use recycled water for irrigation realize significant savings in capacity reserve fees (formerly known as connection fees) because they do not pay Zone 7 fees for recycled water connections. Recycled water connections represent no potable water demand to Zone 7. These applicants also usually need smaller potable water meters, thereby reducing their DSRSD and Zone 7 water connection fees for potable water.



The above mentioned incentives are sufficient in encouraging customers to use recycled water where they can. DSRSD are working with developers to explore different uses for recycled water including landscape irrigation, recirculating use for cooling systems, and toilet flushing. DSRSD anticipates that the financial incentives discussed above will result in significant increases in recycled water use in the future.

DSRSD’s actions to encourage the use of recycled water are summarized in Table 6-9.

**Table 6-9. 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
Expand Recycled Water Facilities	Increase treatment capacity and storage; Extend distribution system	2015	1,624
Ordinance No. 301	Require all new landscape irrigation systems to use recycled water	2004	0
Recycled Water Policy P300-10-3	Policy to promote the use of recycled water both within and outside the District	2015	0
Public Outreach	Newsletters, videos, brochures, special events, school programs, and meetings with focus groups	2015	0
Financial Incentives	Reduced connection fees for recycled water accounts	2015	0
<b>Total</b>			<b>1,624</b>
NOTES: Volumes are in AF. The expected increase in recycled water for all actions is included in the "Expand Recycled Water Facilities" total.			

## 6.6 DESALINATED WATER OPPORTUNITIES

According to DSRSD’s contract with Zone 7, DSRSD cannot plan to pursue opportunities to develop desalinated water supplies. DSRSD defers to Zone 7 in pursuing desalinated water opportunities.

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 (CCWD), 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 to 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 6.8.1.2.

#### 6.7 EXCHANGES OR TRANSFERS

According to DSRSD's contract with Zone 7, DSRSD generally cannot pursue water exchanges or transfers unless Zone 7 is unable to meet current demands<sup>7</sup>. Therefore, DSRSD defers to Zone 7 in maintaining its current water transfer supplies and seeking water transfer opportunities.

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 Byron Bethany Irrigation District long-term water transfer contract and is described in Zone 7's 2015 UWMP.

#### 6.8 FUTURE WATER PROJECTS

DSRSD's current water supply contract with Zone 7 provides that DSRSD shall purchase from Zone 7 all water required by DSRSD for use within DSRSD's service area, except that DSRSD may extract groundwater per the contract provisions or obtain water from "Other Sources" as defined in the contract. However, as noted earlier in this chapter, in response to the on-going drought and the uncertainty in the future reliability of SWP supplies, in 2015 DSRSD undertook a study to investigate potential long-term alternative water supply sources. Both Zone 7's potential future supplies and DSRSD's potential future supplies are described below, but because they are still conceptual in nature, they have not been included in Table 6-10.

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<sup>7</sup> See discussion of specific contract restrictions in Section 6.1.1 and in contract provided in Appendix G.



**Table 6-10. Retail: Expected Future Water Supply Programs (DWR Table 6-7)**

<input checked="" 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.
Page 6-27	Provide page location of narrative in the UWMP
NOTES: See Section 6.8 for a description of potential future supplies being investigated by Zone 7 and DSRSD.	

### 6.8.1 Zone 7's Future Water 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 and 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 BDCP/Delta Fix)
- Potable Reuse Options
- Desalination

Each of these water supply options are described 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 SFPUC)
- Chain of Lakes pipeline (from Cope Lake to the Del Valle Water Treatment Plant)
- Los Vaqueros Emergency/Drought Storage
- 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.

#### 6.8.1.1 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 State Water Resources Control Board on a petition for a new point of diversion, and preliminary design. The latest 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>.

#### 6.8.1.2 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>.

#### 6.8.1.3 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 they leverage 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 (IPR) 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 RWTF 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 is a recommendation of the Tri-Valley Water Reliability Policy Roundtable, made up of policy makers from each of the Tri-Valley agencies.

#### 6.8.2 DSRSD Long-Term Alternative Water Supply Study

According to DSRSD's current water supply contract with Zone 7, generally, DSRSD may not pursue new water supply sources<sup>8</sup>. However, due to the recent cutbacks of water delivered by the SWP and the uncertainty of the future unreliability of SWP supplies, DSRSD is investigating alternative sources of water. DSRSD conducted a high level study, the *Long-Term Alternative Water Supply Study (2015)*, to consider regional and local supply alternatives. Supplies considered include increased conservation, stormwater and grey water capture, potable reuse, bay desalination, regional interties and water exchanges, and groundwater. For each of these options selected for analysis, cost estimates were developed, including assumptions and other cost criteria that should be considered in the future. The project options were also compared against the policy framework goals to determine the degree to which each contributes to goals. These policy level framework goals include the following:

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<sup>8</sup> See discussion of specific contract restrictions in Section 6.1.1 and in contract provided in Appendix G.



- Reducing potable demand,
- Increasing reuse,
- Increasing water supply reliability and decreasing water supply variability,
- Increasing reliance on sources under local control, and
- Reducing source concentration risk.

After initial assessment and information from the potential partners and DSRSD staff, the potential options were screened to focus on those with the most potential for new supplies and implementation. The four portfolios recommended for further analysis represent various combinations of the water supply options. The portfolios and their options that were carried forward for evaluation in the *Long-Term Alternative Water Supply Study (2015)* are listed below:

- **Portfolio 1: Prioritizing Supply Diversification**
  - 1a: Enhanced Conservation
  - 1b: Recycled Water Direct to Customers
  - 1c: Rainwater and Greywater
  - 1d: Residential Turf Replacement
- **Portfolio 2: Maximizing IPR and Meeting the Concentration Risk Goal**
  - 2a: Indirect Potable Reuse with Groundwater Recharge
  - 2b: Indirect Potable Reuse with Reservoir Augmentation
  - 2c: Direct Potable Reuse
- **Portfolio 3: Maximizing Desalination and Meeting the Concentration Risk Goal**
  - 3: Bay Desalination
- **Portfolio 4: Maximizing Desalination and Meeting the Reliability Goal**
  - 4: North-of-Delta Transfer

The *Long-Term Alternative Water Supply Study (2015)* was meant as an overview assessment of potential future alternative water supplies for DSRSD. One of the recommendations of the study is that feasibility assessment work be initiated with a series of meetings with other local and regional agencies in an effort to develop partnerships for evaluating IPR and/or bay desalination. Scoping for a Feasibility Study for IPR and/or bay desalination should be done in collaboration with agency partners, which may potentially include Zone 7 Water Agency, ACWD, SFPUC, Santa Clara Valley Water District (SCVWD), CCCSD, and EBMUD.

A copy of the *Long-Term Alternative Water Supply Study (2015)* is provided in Appendix I.



### 6.9 SUMMARY OF EXISTING AND PLANNED SOURCES OF WATER

Table 6-11 summarizes the actual water supplies for the DSRSD. Table 6-12 summarizes the future projected water supplies for the DSRSD.

**Table 6-11. 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	7,445	Drinking Water	
Recycled Water	From DSRSD RWTF	2,579	Recycled Water	
<b>Total</b>		<b>10,024</b>		<b>0</b>

NOTES: Volumes are in AF. Purchased water from Zone 7 includes Main Basin groundwater pumped on behalf of DSRSD.

**Table 6-12. Retail: Water Supplies – Projected (DWR Table 6-9)**

Water Supply	Additional Detail on Water Supply	Projected Water Supply Report To the Extent Practicable									
		2020		2025		2030		2035		2040 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Purchased or Imported Water	Zone 7	13,678		14,554		15,223		15,840		15,840	
Recycled Water		3,905		4,117		4,203		4,203		4,203	
<b>Total</b>		<b>17,583</b>	<b>0</b>	<b>18,671</b>	<b>0</b>	<b>19,426</b>	<b>0</b>	<b>20,043</b>	<b>0</b>	<b>20,043</b>	<b>0</b>

NOTES: Volumes are in AF; DSRSD's GPQ of 645 AF is pumped by Zone 7 on DSRSD's behalf, and this amount is included in the purchased Zone 7 supply.

### 6.10 CLIMATE CHANGE IMPACTS TO SUPPLY

There is evidence 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 State Water Project has been and will continue to be the largest source of Zone 7's, and hence DSRSD'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 more need for flood control storage, and making it more difficult to refill reservoir flood control space during late spring or early summer and potentially reducing the amount 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 Salt Management Plan, groundwater recharge operations and Chain-of-Lakes 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 for their WSE Update.

## CHAPTER 7

# Water Supply Reliability Assessment

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

### 7.1 WATER SUPPLY RELIABILITY POLICIES

The current reliability of DSRSD's potable water supply is largely dependent upon 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 in 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.

DSRSD's potable water supply reliability and vulnerability is directly related to seasonal and climatic shortage that impact Zone 7's water supplies. Over 80 percent of Zone 7's water supply comes from surface water, primarily the State Water Project, which is subject to legal and environmental issues surrounding the San Francisco Bay Delta.

In October 2015, the DSRSD Board of Directors adopted a Water Supply, Storage, Conveyance, Quality and Conservation Policy (Policy P300-15-1) to provide guidance for addressing on-going and future water supply challenges (see Appendix J).

DSRSD's policy includes the following provisions:

1. To meet continuously the water demands of existing customers and the needs of new development planned by the Cities of Dublin and San Ramon.
2. To maintain a safe, secure, and reliable water supply and water storage system so that the water supplied continuously meets full customer demands in no less than 85 percent of calendar years, and that 75 percent of water supplied continuously meets demands in no less than 99 percent of calendar years.
3. To diversify the sources of water supply so that no less than 60 percent of total demand (potable and recycled) is satisfied by local and regional water supplies, and that no more than 40 percent of total water supply (potable and recycled) comes from any one physical source.



4. To take measures to meet continuously the recycled water demands of DERWA 100 percent of time, which may include acquiring additional wastewater effluent supplies and/or off-season wastewater effluent storage.
5. Given the uncertainty of consistent water deliveries from the State Water Project, explore in partnership with other Tri-Valley agencies the development of an expanded or additional local water facility to supplement the groundwater basin when flows from the State Water Project are jeopardized.
6. To diversify the transmission system so that there are at least two independent conveyance systems for each water supply source to serve DSRSD's customers, and each conveyance system in concert with local storage facilities has the capacity to convey 70 percent of maximum day demands for extended periods of time.
7. To actively promote water conservation for commercial and residential customers, with a long-term goal of a permanent system-wide average annual residential potable use of no more than 70 GPCD.
8. To enhance the quality of the District's water supply.
9. With the exception of brine produced from recycling production, to discharge no treated wastewater to the Bay.
10. To seek grant opportunities and project partners so that the costs to District customers for implementing these policy objectives are acceptable.
11. To ensure that the ultimate beneficiaries of the water supply equitably participate in the funding of the costs associated with the acquisition and delivery of the water supply into the District service area.
12. These policy objectives can best be met through collaboration with the other Tri-Valley water agencies and cities, and regional water agencies.

## 7.2 WATER QUALITY CONSTRAINTS

In order for the DSRSD to expand its water supply and capability in the future, water quality and climate constraints on water sources will need to be evaluated. All of the DSRSD's water sources receive full treatment in accordance with Federal and State standards. Each year the DSRSD 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 local wells.

Purchased water from the SWP is Zone 7's largest water source, providing over 80 percent of the treated water supplied to its customers on an annual average basis<sup>1</sup>. 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

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<sup>1</sup> Source: Zone 7 2015 UWMP, March 2016.



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, more of Zone 7's (and DSRSD's) water comes from local sources.

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. Because of the variety of Zone 7's water sources and the location of DSRSD's turnouts relative to Zone 7's distribution system, DSRSD receives a higher proportion of groundwater from Zone 7's supplies during the dry season, when Zone 7 pumps water from the Main Basin.

Overall, DSRSD's water supply reliability is not significantly impacted by water quality issues. However, DSRSD is interested in potable water quality parameters related to aesthetic issues, such as taste, odor and hardness. Taste and odor can come from TDSs and the 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 DSRSD's service area are described in further detail below.

#### 7.2.1 Potable Water Supply from Zone 7

The treated potable water that DSRSD receives from Zone 7 is blended from various sources. It meets all federal and state drinking water requirements. The quality of water delivered to DSRSD depends on the various supplies available and Zone 7's treatment processes. 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.

##### 7.2.1.1 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 diverted 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 moves 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 are:



- *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. Ozonation, a more effective treatment process, is in Zone 7's Capital Improvement Program. 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 (DBPs) is dependent upon the amount of TOC/DOC. Zone 7's WTPs have been able to manage high TOC/DOC by increasing coagulant dosages. However, this operational change results in greater sludge production and limits plant production. Ozone will reduce coagulant and chlorine demands, thus reducing typical chlorination DBPs, but will create other ozonation DBPs such as bromate.
- *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 ozonation facilities can help address settled water turbidity and reduce impacts on WTP production.
- *Salinity or 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 Patterson Pass Water Treatment Plant (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 (Alameda County Water District, 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.



#### 7.2.1.2 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 Regional Water Quality Control Board in 2004.

As part of the SMP, in 2009, Zone 7 completed construction of a wellhead demineralization facility at DSRSD's well site in the Mocho well fields. The demineralization facility uses a reverse osmosis membrane-based treatment system, which removes and exports concentrated minerals and salts from the Main Basin. The facility can treat up to 7.7 MGD of groundwater. After the mineral concentrate is removed, 6.1 MGD of demineralized water can be blended with other groundwater and surface water supplies for delivery to customers. Demineralization has improved the quality of water delivered to DSRSD.

#### 7.2.1.3 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 Chain of Lakes. The Chain of Lakes will also be used for groundwater recharge.

The key constraint on the use of the Chain of Lakes for storage is the duration of the mining activities, which affects when the remainder of the Chain of Lakes 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.

#### 7.2.1.4 Non-Local Storage

In addition to local storage, Zone 7 also has storage contracts with two non-local groundwater-banking districts in Kern County: the Semitropic Water Storage District (Semitropic) and Cawelo Water District. 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.

#### 7.2.2 Recycled Water

The recycled water that DSRSD distributes comes from DSRSD's RWTF, which is 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. DSRSD 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. DSRSD's water service area is over the fringe basin of the Livermore-Amador Valley, which is not used for potable water supplies; thus, its recycled water distribution is not constrained by its impact to groundwater supplies. For all of these reasons, DSRSD does not expect recycled water quality issues to impact its ability to reliably deliver recycled water to its customers.

### 7.3 SUPPLY RELIABILITY BY TYPE OF YEAR

In this section, the various supplies of water available to DSRSD 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 DSRSD'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.

#### 7.3.1 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 Chain of Lakes 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 and 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).

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. It should be noted that a portion of the water demand during the normal year includes the storage of water supply for use in dry years. Based on the existing and planned future water supply assumptions made by Zone 7, Zone 7 does not anticipate any difficulty in meeting projected water demands under normal conditions, single dry years, and multiple-dry years; however, as noted above, Zone 7 expects that a portfolio of future supply alternatives, including the California WaterFix, will be needed to meet future supply shortfalls. If the California WaterFix is delayed, alternative water supplies such as potable reuse or desalination will be needed to meet water supply needs.

The results of the Zone 7 projected water supply analysis are in Chapter 7 of Zone 7's 2015 UWMP.

#### 7.3.2 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.



DSRSD’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 DSRSD’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 detail in Zone 7’s 2015 UWMP, are summarized 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>
		<b>Volume Available</b>	<b>% of Average Supply</b>
Average Year			100%
Single-Dry Year			
Multiple-Dry Years 1st Year			
Multiple-Dry Years 2nd Year			
Multiple-Dry Years 3rd Year			
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.			

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 broken down by source and the total percentage of water supply expected if there was 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
<b>From Storage</b>					
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
<b>From Storage</b>					
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

Source: Zone 7 2015 UWMP, Tables 7-12, 7-13, 7-14a, 7-14b and 7-14c.

## 7.4 SUPPLY AND DEMAND ASSESSMENT

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



### 7.4.1 Normal Year

As described in Chapter 6, DSRSD’s Normal Year supplies are anticipated to be as follows:

- Purchased supplies from Zone 7 are assumed to provide 100 percent of DSRSD’s potable water demand (this includes the 645 AFA of local groundwater from the Livermore Valley Basin pumped by Zone 7 on DSRSD’s behalf), and
- About 3,904 AFA of recycled water within its service area by 2020 with a gradual increase to approximately 4,203 AFA by 2030.

As described in Chapter 4, DSRSD’s Normal Year demands have been projected based on anticipated growth within DSRSD’s service area and are consistent with DSRSD’s SB X7-7 per capita water use targets.

As shown in Table 7-4, DSRSD’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)	17,583	18,671	19,426	20,043	20,043
Demand totals (autofill from Table 4-3)	17,583	18,671	19,426	20,043	20,043
Difference	0	0	0	0	0
NOTES: Volumes are in AF; table references refer to DWR table numbers.					

### 7.4.2 Single Dry Year

Purchased supplies from Zone 7 in Single Dry Years are assumed to be 75 percent of Normal Year supplies. DSRSD’s Single Dry Year recycled water supplies are assumed to be the same as Normal Year supplies. DSRSD’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	10,258	10,915	11,417	11,880	11,880
Recycled Water Supplies	3,904	4,117	4,203	4,203	4,203
Total Supply	14,162	15,032	15,620	16,083	16,083



DSRSD’s Single Dry Year potable water demands are assumed to be 75 percent of Normal Year demands (25 percent reduction in water use). It is assumed that DSRSD 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. DSRSD’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 Water Demands	10,258	10,915	11,417	11,880	11,880
Recycled Water Demands	3,904	4,117	4,203	4,203	4,203
Total Demand	14,162	15,032	15,620	16,083	16,083

As shown in Table 7-7, DSRSD’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	14,162	15,032	15,620	16,083	16,083
Demand totals	14,162	15,032	15,620	16,083	16,083
Difference	0	0	0	0	0
NOTES: Volumes are in AF.					

### 7.4.3 Multiple Dry Year

Purchased supplies from Zone 7 in Multiple Dry Years are assumed to be 85 percent of Normal Year supplies. DSRSD’s Multiple Dry Year recycled water supplies for the first, second, and third years are assumed to be the same as Normal Year supplies. DSRSD’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	11,626	12,371	12,939	13,464	13,464
Recycled Water Supplies	3,904	4,117	4,203	4,203	4,203
Total Supply	15,530	16,488	17,142	17,667	17,667



DSRSD’s Multiple Dry Year potable water demands are assumed to be 85 percent of Normal Year demands (15 percent reduction in water use). It is assumed that DSRSD 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. DSRSD’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 Water Demands	11,626	12,371	12,939	13,464	13,464
Recycled Water Demands	3,904	4,117	4,203	4,203	4,203
Total Demand	15,530	16,488	17,142	17,667	17,667

As shown in Table 7-10, DSRSD’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	15,530	16,488	17,142	17,667	17,667
	Demand totals	15,530	16,488	17,142	17,667	17,667
	Difference	0	0	0	0	0
Second year	Supply totals	15,530	16,488	17,142	17,667	17,667
	Demand totals	15,530	16,488	17,142	17,667	17,667
	Difference	0	0	0	0	0
Third year	Supply totals	15,530	16,488	17,142	17,667	17,667
	Demand totals	15,530	16,488	17,142	17,667	17,667
	Difference	0	0	0	0	0
NOTES: Volumes are in AF.						



#### 7.5 REGIONAL SUPPLY RELIABILITY

DSRSD's potable water supply is from Zone 7, which contracts with a number of agencies for its water supplies and storage. DSRSD's recycled water supply is treated at DSRSD's RWTF and wholesaled to DSRSD through DERWA. Each Zone 7 and DSRSD source is affected by limitations related to legal, environmental, water quality, and/or climatic issues. DSRSD'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 important part of DSRSD's Strategic Plan. Zone 7's primary water source is imported surface water (over 80 percent). To minimize demand placed on Zone 7 sources, DSRSD has 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.

Additionally, DSRSD continues to expand its recycled water system to the extent practical. It has adopted DSRSD Code Section 3.20.110, "Duty to connect—Recycled water" and adopted a recycled water policy to promote the use of recycled water within its service area (Appendix H). Compliance with Code Section 3.20.110 is required if an applicant is to receive potable water service from DSRSD. The District also offers various financial incentives for connection to recycled water.

Because Zone 7 is DSRSD's sole potable water supplier, its efforts to maximize resources and minimize imports are relevant to DSRSD's water supply reliability. Zone 7 evaluates and pursues new water supply options, including potable reuse, which would maximize reuse of locally-generated wastewater. Zone 7 also continues to support the expansion of recycled water use for 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 (BARR), which brings together nine Bay Area water agencies aiming to improve regional supply reliability.

Zone 7's 2015 UWMP presents an ultimate water supply picture which includes the California WaterFix, desalination and potable reuse. However, if the California WaterFix does not proceed as planned, the Tri-Valley will need additional water supplies to ensure future reliability. Zone 7's water supply plan, as presented in Zone 7's 2015 UWMP, will result in over half of Zone 7's water supply coming from imported water supplies. This does not meet the District's policy that no less than 60 percent of the District's total water demand comes from local and regional water supplies (see DSRSD Reliability Policy Item 3 in Section 7.1). DSRSD encourages all Tri-Valley water agencies to continue collaborating on various ways to diversify their water-supply portfolios. Specifically, DSRSD has proposed that by 2040 the Tri-Valley region decrease its dependence on Delta water from 80 percent to 55 percent, and increase the amount of local and regional sources of water from 20 percent to 45 percent.

## Chapter 7

### Water Supply Reliability Assessment

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As described in *Chapter 6 System Supplies*, DSRSD is investigating alternative sources of water due to the recent and projected cutbacks of water delivered by the SWP. The *Long-Term Alternative Water Supply Study (2015)* was meant as an overview assessment of potential future alternative water supplies for DSRSD. One of the recommendations of the study is that feasibility assessment work be initiated with a series of meetings with other local and regional agencies in an effort to develop partnerships for evaluating potable reuse and/or desalination. Scoping for a Feasibility Study for potable reuse and/or desalination should be done in collaboration with agency partners, which may potentially include Zone 7 Water Agency, ACWD, SFPUC, SCVWD, CCCSD, and EBMUD.

## CHAPTER 8

### Water Shortage Contingency Planning

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DSRSD's Water Shortage Contingency and Drought 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.

In June 2009, DSRSD Board of Directors adopted Ordinance No. 323 (DSRSD's Emergency Response Plan (ERP)) to update both its water conservation program and its program for managing DSRSD water supplies during any water shortage condition declared by DSRSD Board of Directors. The ordinance also established regulations and restrictions on the delivery and consumption of water and penalties for ordinance violations during a declared water shortage. This ordinance addressed both catastrophic water supply interruptions and drought conditions. During water emergencies, DSRSD Ordinance No. 323 authorized the DSRSD General Manager to declare a water emergency and initiate implementation of the ERP. The ERP provides DSRSD with a standardized response and recovery protocol to prevent, minimize, and mitigate injury and damage resulting from emergencies or disaster of natural or man-made origins. DSRSD updates the ERP periodically to ensure that newly developed parts of its service area and the associated infrastructure are taken into account. A copy of Ordinance No. 323 is provided in Appendix K.

In February 2016, also in coordination with the preparation of this 2015 UWMP, DSRSD convened a work group made up of representatives from DSRSD, the City of Pleasanton, the City of Livermore, and Zone 7 Water Agency to review the respective Tri-Valley water agency Water Shortage Contingency Plans in an attempt to make the prohibitions and restrictions implemented by the Tri-Valley water agencies more consistent. The benefit of this consistency is to provide for more consistent messaging of water conservation needs and programs to residents and businesses within the Tri-Valley area. As a result of this work group, DSRSD's Water Shortage Contingency Plan has been revised as described in this chapter.

On November 13, 2015, California Governor Edmund G. Brown Jr. issued Executive Order B-36-15 calling for the State of Community Drought Emergency and an extension of urban water use restrictions until October 31, 2016. It should be noted that since 2014, the DSRSD Board of Directors has had a declared State of Community Drought Emergency. Specific actions which have been taken by the District in response to the on-going drought conditions are described in Section 8.10 of this chapter.

#### 8.1 STAGES OF ACTION

The revised DSRSD Water Shortage Contingency Plan contains four stages of action as follows:

- Stage 1 – Minimal Reduction
  - Voluntary
  - Expected reduction up to 20 percent
- Stage 2 – Moderate Reduction
  - Voluntary or mandatory
  - Expected reduction up to 20 percent



- Stage 3 – Severe Reduction
  - Mandatory
  - Expected reduction up to 35 percent
- Stage 4 – Critical Reduction
  - Mandatory
  - Expected reduction up to 50 percent

A water shortage condition occurs when the supply of potable water available to DSRSD cannot meet ordinary water demands for human consumption, sanitation, fire protection, and other beneficial uses. During non-emergency times, when DSRSD anticipates or identifies that water supplies (as a result of climatic conditions, regulatory changes, legal mandates, environmental regulations, or any other cause) may not be adequate to meet the normal water supply needs of its customers, DSRSD Board of Directors may determine that a water shortage exists and consider a resolution to declare a water shortage condition and associated stage for water conservation.

Table 8-1 identifies the water supply conditions associated with each stage of action.

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

Stage	Complete Both	
	Percent Supply Reduction <sup>1</sup> <i>Numerical value as a percent</i>	Water Supply Condition <i>(Narrative description)</i>
1	Up to 20%	Minimal Reduction
2	Up to 20%	Moderate Reduction
3	Up to 35%	Severe Reduction
4	Up to 50%	Critical Reduction

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

During times of emergency, the DSRSD General Manager is authorized to declare a water emergency and implement the provisions in the ERP, including appropriate action plans to address imminent water supply shortages. When an imminent water supply interruption occurs, the DSRSD General Manager may declare the necessary stage for water conservation.



#### 8.2 PROHIBITIONS ON END USES

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

Under DSRSD's Water Shortage Contingency Plan, Stage 1 water conservation is voluntary. Stage 2 water conservation may also be voluntary, as deemed appropriate by the DSRSD Board of Directors. The Board declares these stages when it determines, with reasonable probability, that the water supply may not be adequate to meet all demands in the current year or next few years. DSRSD may be able to deliver its customers' normal water demands but wants help from customers to ensure adequate supply. At these stages, DSRSD uses public outreach and customer service to encourage the best management practices in DSRSD's water conservation program, as described in Chapter 9. Because water reduction measures are voluntary, no penalties are applied.

In Stage 2, water conservation may be declared as voluntary or mandatory. Stage 2 water conservation may be declared to be mandatory if Stage 2 voluntary water conservation targets are not met and when, due to definable events, there is greater certainty water supplies will be inadequate to meet customer demands during the current year or upcoming year.

In Stages 3 and 4, water conservation is always mandatory. Stage 3 mandatory water conservation is declared when, due to definable events, there is firm certainty that the water supply will be inadequate to meet customers' demands in the current year. If Stage 3 mandatory water conservation is in effect and the reduction goal is not being met, or if a new definable event occurs that requires increasing the goal, DSRSD Board of Directors may declare Stage 4 mandatory water conservation. During times of imminent water supply interruption, the DSRSD General Manager is authorized to make a determination and declare an appropriate stage of water conservation in response to the emergency at hand. If water supplies are reduced by 50 percent for a single year, the DSRSD Board of Directors may declare Stage 4 water conservation and require the prohibitions and water consumption reduction measures described below to be mandatory.

Table 8-2 reports the consumption reduction measures and their associated stage according to DSRSD's WSCP. If a measure is declared mandatory for a lower level stage, it is also mandatory for higher stage levels. It should be noted that the District will select and implement specific measures on an as-needed basis depending on the supply conditions and targeted demand reductions. As described further in Section 8.10, the District may need to deviate from these defined stages and prohibitions in response to a Governor's declaration or other statewide mandates.

Table 8-3 reports the prohibitions that DSRSD places on end uses in each stage of its Water Shortage Contingency Plan according to DWR's prohibition categories.

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**Table 8-2. DSRSD'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			
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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**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?
1	Landscape - Restrict or prohibit runoff from landscape irrigation		No
1	Landscape - Limit landscape irrigation to specific times	Watering is allowed only between 9 pm and 6 am	No
1	Landscape - Other landscape restriction or prohibition	Sprinklers are to be turned off during and 48 hours following measurable precipitation	No
1	CII - Restaurants may only serve water upon request		No
1	CII - Other CII restriction or prohibition	Post water conservation messages on bathroom mirrors	No
1	Other - Require automatic shut of hoses		No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		No
1	Other	Use broom and bucket to wash private pavement	No
2	Landscape - Limit landscape irrigation to specific days	Limited to 3 nonconsecutive days per week	No
2	CII - Commercial kitchens required to use pre-rinse spray valves		No
2	Pools and Spas - Require covers for pools and spas		No
2	Other - Prohibit use of potable water for construction and dust control	No potable water for construction use when reasonable	Yes
2	Other	Use bucket to wash autos, boats, and buildings no more than once a month; Encourage use of commercial wash services that recycle water	No
3	Landscape - Limit landscape irrigation to specific days	Limited to 2 nonconsecutive days per week	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
3	Other water feature or swimming pool restriction	Must be equipped with a recirculating pump	Yes
3	Other water feature or swimming pool restriction	Require water theme parks to reclaim and recirculate their water	Yes
3	Other - Prohibit use of potable water for washing hard surfaces		Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water		Yes
4	Landscape - Prohibit certain types of landscape irrigation	No turf irrigation	Yes
4	Landscape - Other landscape restriction or prohibition	Hand water non-turf landscaping 1 day per week	Yes
4	CII - Other CII restriction or prohibition	Prohibit use of non-efficient washing machines	Yes
4	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	Prohibit any use of water for water theme parks	Yes

NOTES: All Stage 1 restrictions become enforced in Stage 2

## Chapter 8

### Water Shortage Contingency Planning

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#### 8.3 PENALTIES, CHARGES, OTHER ENFORCEMENT OF PROHIBITIONS

Section 10632(a)(6) of the California Water Code requires a water supplier to penalize or charge for excessive water use, where applicable. When mandatory water use reduction is declared at any of the above stages, the DSRSD Board of Directors will adopt a progressive schedule of fines to be levied against customers and users for successive violations of mandatory water use restrictions established in Stages 2, 3 and 4.

District Code Section 4.10.030(C) defines the regulations for water use during any type of water shortage. This provision authorizes DSRSD General Manager to prescribe and enforce rules governing water allocation and use of water. It also provides DSRSD General Manager with guidelines for allocating water supply during shortages.

Additionally, water customers and users are subject to District Code Title 1, Chapter 1.30, Enforcement, of the DSRSD Code, which provides general penalties, remedies for violations, penalties of increasing severity, and imposition of costs. Violations may be punishable as misdemeanors or infractions, depending on the severity of the violation. The DSRSD General Manager is authorized to apply penalties as he or she deems appropriate, including flow restriction, submetering, and discontinuance of water service, until the violation is corrected. DSRSD may also seek damage and/or remedies, including fees or fines and the amount of costs incurred by DSRSD to investigate and correct the violation.

#### 8.4 CONSUMPTION REDUCTION METHODS

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. California Water Code Section 10632(a)(5) requires the water supplier to provide consumption reduction methods in the most restrictive stages of a water shortage. DSRSD will use the consumption reduction methods proposed in Table 8-4.



**Table 8-4. 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	Residential Water Survey Program; Large Landscape Audit Support Services Program
All	Provide Rebates for Landscape Irrigation Efficiency	Commercial Irrigation Equipment Rebate Program
All	Provide Rebates for Turf Replacement	
1	Expand Public Information Campaign	
1	Provide Rebates on Plumbing Fixtures and Devices	Offer rebates on low flow rinse nozzles, high efficiency washing machines, ultra-low flush toilet replacement program
1	Reduce System Water Loss	Obligation to fix leaks, breaks, or other malfunctions
1	Implement or Modify Drought Rate Structure or Surcharge	District has drought rates for Stages 1, 2, 3 and 4 (see Chapter 9 Section 9.2.3)
2	Decrease Line Flushing	District will perform line flushing only in critical areas of the distribution system

## 8.5 DETERMINING WATER SHORTAGE REDUCTIONS

California Water Code 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.

DSRSD’s water supply from Zone 7 is metered at the turnouts and water delivered to customers is metered at the connection points.

Meters at each Zone 7 turnout are read daily to provide DSRSD with overall water consumption information. If DSRSD initiates a water shortage stage during a drought, actual reductions in water use can be determined on a daily basis. In addition, in 2014, DSRSD introduced a new customer portal on its website called AquaHawk Alerting. AquaHawk is a free service that enables customers to view their consumption over a period of time and to set their own leak alerts and water consumption thresholds. The system also analyzes a customer’s water consumption, and if usage indicates a water leak or other issue, the customer is notified. More than 40 percent of the District’s water customers are using AquaHawk.

Additionally, DSRSD personnel can monitor customers’ water use in real time and can identify those customers that consume more than normal amounts of water. Customers who use excessive water relative to their neighbors are contacted and are sent conservation notices and related information.



#### 8.6 REVENUE AND EXPENDITURE IMPACTS

Section 10632 (a)(7) of the California Water Code 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.

DSRSD has a water rate structure which charges a bimonthly fixed service charge and a bimonthly water quantity use charge. The bimonthly water quantity use charge is based on the actual quantity of water used. Water rates are also tiered, so that higher water rates apply to greater water use, providing an incentive to conserve. In addition, DSRSD maintains a rate stabilization fund to avoid spikes in customer water rates caused by fluctuating operational costs.

To ensure that DSRSD can cover operating expenses during any type of water shortage, DSRSD Board of Directors have established rates for each water shortage stage in accordance with DSRSD Ordinance 323. The water rate is effective the date that the stage is declared and applicable for the duration of the stage. DSRSD may also incur costs in enforcing mandatory water use reduction measures. DSRSD may recover enforcement costs, including labor costs and materials, from the water customer or user in violation, in accordance with DSRSD Code and Ordinance 323.

DSRSD water customers also pay Zone 7 water rates. Zone 7 maintains a drought contingency fund, which is a rate stabilization fund that can be utilized during drought situations to minimize impacts on water rates as a result of drought conditions.

#### 8.7 RESOLUTION OR ORDINANCE

As a requirement of the UWMPs, DSRSD is required to develop a water shortage contingency resolution or ordinance for submittal with the UWMP. Appendix K includes the District's current Ordinance No. 323. The District will adopt the revised Water Shortage Contingency Plan presented in this chapter. A copy of the resolution will be provided in Appendix K.

#### 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.

Water supplies may be interrupted in the future due to a regional power outage, a natural disaster such as an earthquake, or an accidental pipeline break. Per District Policy No. P300-12-1, under emergency conditions in which immediate actions must be taken to protect lives and property, respond to emergencies, and to restore essential services for public health and safety, the District's designated Emergency Manager (General Manager or designee) may proclaim a District State of Emergency and activate the DSRSD ERP. The ERP includes action plans that are to be used in response to such events and incidents; Action Plan 9 (AP 9) specifically addresses the actions to be taken if there is a water supply interruption. The District's ERP policy and Action Plan 9 are included in Appendix L. Below are several situations that DSRSD has considered in its planning.



#### 8.8.1 Unavailable SWP Water

DSRSD analyzed conditions in which no water was available from the SWP. This could occur if the South Bay Aqueduct 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 was 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/or water 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 DSRSD. 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, DSRSD might enact any of the stages of water shortage conditions discussed in Section 8.1.

#### 8.8.2 Unavailable Zone 7 Water

DSRSD's turnouts are fed by two major pipelines from Zone 7. One pipeline has been out of service two times in the recent past, once due to scheduled maintenance and once due to a pipeline break. If one or both pipelines were out of service for a significant period, DSRSD would need to receive water from its emergency interties with EBMUD, the City of Pleasanton, or any future emergency interties.

DSRSD currently has six emergency pipeline interties (three with EBMUD, two with the City of Pleasanton and one with the City of Livermore). The 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. These connections would allow either agency to obtain water from the other agency during an emergency. DSRSD is currently exploring an emergency intertie with the City of Livermore.

Depending on the availability of water from these sources, DSRSD might need to enact various water shortage stages discussed in Section 8.1 to deal with a shortfall.

#### 8.8.3 Regional Electric Power Failure

If electrical power was not available for a prolonged period of time, DSRSD would continue to receive water from a number of sources. DSRSD could receive treated water (by gravity flow) stored in Zone 7's clearwells located at the water treatment plants, gravity flow from potable and recycled water storage reservoirs owned and operated by DSRSD, and water from its emergency interties with the City of Pleasanton and EBMUD. Also, a significant number of Zone 7's production wells and other DSRSD and Zone 7 pump stations are equipped with backup diesel generators. Therefore, even if electrical power fails, backup power supplies are available to distribute water supplies.



At two emergency interconnect locations with EBMUD (on Alcosta Boulevard, San Ramon), EBMUD's water system is at a higher pressure than DSRSD's and water would naturally flow into DSRSD's system. Pleasanton's system is at a lower pressure and portable booster pumps would be required to utilize the Pleasanton interties. Water from these sources would enter DSRSD's Pressure Zone 1 and would be pumped, through existing pump stations with emergency power generating equipment, into the higher elevations of DSRSD's service area. Again, DSRSD might need to enact various water shortage stages discussed in Section 8.1, depending on the availability of supplies during a power outage.

#### 8.8.4 Earthquake

Water system infrastructure, including treatment plants, pump stations, storage tanks, and pipelines, can be damaged during a strong earthquake. DSRSD'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. Some facilities may be expected to be damaged as the result of a strong earthquake; however, multiple turnouts from the Zone 7 supply system and DSRSD water distribution pipelines have been looped so that damaged portions of the DSRSD system can be quickly isolated and repaired. DSRSD's design criteria also requires water system looping in neighborhoods to ensure water service reliability. In addition, as discussed previously, DSRSD has five emergency interties (three with EBMUD and two with the City of Pleasanton) to provide water during an emergency. Again, DSRSD may need to enact various water shortage stages discussed in Section 8.1, depending on timing and degree of recovery.

#### 8.8.5 Emergency Water Supply for Dougherty Valley

Water stored in the Main Basin can be used for meeting demands in Dougherty Valley during emergency conditions. Operationally, Zone 7 is planning to store water in the Main Basin for use in the Dougherty Valley. This annual storage will allow Zone 7 to meet demands in the Dougherty Valley which do not match the diversion pattern of the Berrenda Mesa water entitlement transfer. No carryover of water stored annually in the Main Basin for Dougherty Valley will be allowed from year to year. Nevertheless, Main Basin groundwater will be available for use in Dougherty Valley during emergency conditions.

Under conditions that interrupt delivery of water from the State Water Project, Zone 7 and its retailers with access to groundwater must meet customer demand with groundwater and any water in Lake Del Valle available for Zone 7 use.

### 8.9 MINIMUM SUPPLY NEXT THREE YEARS

In Table 8-5, the minimum potable water supply available during each of the next three years is estimated based on the driest three-year historic sequence for DSRSD's water supply (Chapter 7, Section 7.3). The estimated minimum water supply available is equivalent to DSRSD's average water supply multiplied by percentage of average supply available during the multiple-dry year scenarios (Table 7-2). DSRSD's estimated average water supply is approximately 11,244 AF and is based on year 2013.



DSRSD’s recycled water supply is not subject to climatic limitations. Therefore, it is unaffected by the historic driest three-year water supply. Recycled water supplies are not included in Table 8-5.

**Table 8-5. Retail: Minimum Supply Next Three Years (DWR Table 8-4)**

	2016	2017	2018
Available Water Supply	9,670	8,759	9,254
NOTES: Volumes are in AF and includes potable water system only.			

**8.10 2015/2016 STATE OF COMMUNITY DROUGHT EMERGENCY**

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 are 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.

On May 19, 2015, DSRSD Board of Directors declared that a State of Community Drought Emergency existed since February 2014 and would continue to prevail because the ordinary demands of water consumers in DSRSD’s service area could not be met without causing insufficient water for human consumption, sanitation, and/or fire protection as a result of the drought restrictions on the available water supply. The updated Drought Response Action Plan adopted on May 19, 2015 was to run through February 29, 2016.

In addition, in May 2015, DSRSD issued Water Use Limitations Urgency Ordinance No. 336<sup>1</sup> which adopted water use limitations during the drought emergency, and Water Shortage Enforcement Ordinance No. 337<sup>2</sup> which adopted penalties and provisions for the enforcement of water use limitations. These ordinances were taken into effect immediately, superseded any other

<sup>1</sup> Urgency Ordinance No. 336 (May 2016) repealed Urgency Ordinance No. 333 (May 2014).

<sup>2</sup> Urgency Ordinance No. 337 (May 2015) repealed Urgency Ordinance No. 334 (May 2014) and Urgency Ordinance No. 335 (August 2014).

## Chapter 8

### Water Shortage Contingency Planning

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DSRSD ordinance or regulation, and were to remain in effect until the Community Drought Emergency ended.

In February 2016, the Board approved the continuation of the State of Community Drought Emergency through October 31, 2016 and endorsed an updated Drought Response Action Plan for 2016 to be effective from March 1, 2016 through October 31, 2016. In March 2016, the Board adopted Urgency Ordinance No. 338<sup>3</sup> to revise the water use limitations during the Community Drought Emergency.

Copies of Urgency Ordinance Nos. 337 and 338, and the Drought Response Action Plan for 2016, are included in Appendix M.

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<sup>3</sup> Urgency Ordinance No. 338 (March 2016) repealed Urgency Ordinance No. 336 (May 2015).

## CHAPTER 9

### Demand Management Measures

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This chapter describes DSRSD’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 were required to document a water supplier’s progress in implementing fourteen specific DMMs. In 2014, Assembly Bill 2067 simplified, clarified, and updated reporting requirements for DMMs. Starting with this 2015 UWMP, focus has turned away from detailed descriptions of each of the fourteen DMMs and has turned to key water conservation measures that are being implemented to achieve compliance with SB X7-7. For retail agencies, the number of DMMs has been reduced from fourteen to six (plus an “other” category). A narrative description of the status 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

DSRSD has long been committed to reducing the demand for potable water through water conservation. The District has continued to be a leader in developing and promoting water conservation programs, particularly in response to the on-going drought statewide. The District’s customers have responded positively to these programs, resulting in savings exceeding water use reduction goals. From June 2015 through January 2016, DSRSD’s cumulative water savings was 37 percent as compared to 2013 water use, exceeding DSRSD’s conservation standard of 12 percent by 25 percent<sup>1</sup>.

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<sup>1</sup> January 2016 Supplier Conservation Compliance, SWRCB Water Conservation webpage ([http://www.waterboards.ca.gov/water\\_issues/programs/conservation\\_portal/conservation\\_reporting.shtml](http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml)), data as of February 22, 2016.



The following describes the primary elements of the District'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 June 1991, DSRSD instituted Ordinance No. 242 to prevent water waste by establishing regulations and restrictions on the delivery and consumption of water, and penalties for violations. In November 1991, DSRSD adopted Ordinance No. 244 amending the prohibitions included in Ordinance No. 242 and defining prohibitions on the use of water during water shortage emergencies. These two ordinances established four water conservation stages, prohibitions and mandatory requirements, and suggested water conserving guidelines for each conservation stage.

In June 2009, DSRSD adopted Ordinance No. 323 which repealed Ordinance Nos. 242 and 244, established an updated water conservation program and a program for management of its water supplies during any water shortage condition declared by the DSRSD Board of Directors, and established regulations and restrictions on the delivery and consumption of water and penalties for ordinance violations during a declared water shortage condition. Additional discussion on the specific prohibitions for declared water shortage conditions is provided in *Chapter 8 Water Shortage Contingency Planning*. A copy of Ordinance No, 323 is provided in Appendix K.

As described in *Chapter 8 Water Shortage Contingency Planning*, in May 2015, the DSRSD Board of Directors declared a State of Community Drought Emergency which was recently extended through October 2016, consistent with Governor's November 2015 Executive Order extending the statewide emergency water conservation regulation through October 2016. Specific water conservation measures and water use restrictions were implemented in response to the drought emergency and remain in effect through October 2016 (see Appendix M). DSRSD will continue to measure the effectiveness of its conservation programs by the reduction in water use compared to pre-drought conditions.



Implementation of this DMM is on-going and expected to help the DSRSD 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 connections within DSRSD are metered and all customer sectors are billed based on metered consumption. For residential customers, DSRSD currently uses an inclining block rate structure with three tiers up to and greater than 34 units (3,400 cubic feet or 25,432 gallons) of consumption. Commercial customers (including institutional and master metered multi-family customers) have seasonal metered rates. Potable water irrigation customers have a special metered rate. When DSRSD declares a water shortage, potable water rates increase for all customers in stages to encourage water conservation and recover revenue needed to operate the water system with declining water sales. For additional information on DSRSD's water rate structure, see *Section 9.2.3 Conservation Pricing* below.

In 2004, DSRSD completed a residential water meter replacement program. It identified 5,600 residential and 162 commercial meters that needed to be replaced due to excessive wear. As of August 2004, all designated meters had been replaced. Since the 2004 program, replacement of the remaining residential and commercial meters is an on-going process as determined by the cumulative throughput through the meter and/or the age of the meter. DSRSD replaces approximately 600 meters per year due to meter failure or meters reaching their operational limit.

DSRSD monitors the effectiveness of its meter replacement program by tracking the number of meters replaced per year. Meter replacements are on-going as determined by meter throughput and age.

Also, as described further in Section 9.2.4 below, in 2014, DSRSD implemented an advanced metering infrastructure (AMI) system including a new customer portal on its website called AquaHawk Alerting. AquaHawk is a free service that enables customers to view their consumption over a period of time and to set their own leak alerts and water consumption thresholds. The system also analyzes a customer's water consumption, and if usage indicates a water leak or other issue, the customer is notified. More than 40 percent of the District's water customers are using AquaHawk.

Implementation of this DMM is expected to help the DSRSD achieve its water use targets by providing accurate water use information to the customer and the DSRSD.

#### 9.2.3 Conservation Pricing

DSRSD has practiced conservation pricing since 1992. As discussed above, all customer sectors are billed for water service based on actual metered consumption. DSRSD's current water rates are summarized in Table 9-1. As shown, the consumption charges increase with the declared water shortage stage. The District moved from Stage 2 to Stage 1 rates effective November 1, 2015. Normal rates are in effect when no water shortage has been declared.



**Table 9-1. DSRSD Water Rates<sup>(a)</sup>**

<b>Table A. Consumption Charges for All Customers</b> (these rates do not change during a declared water shortage)					
Zone 7 Cost of Water (applies to all potable water customers), \$/unit <sup>(c)</sup>	\$3.29				
Recycled Water, \$/unit	\$3.79				
Power Charge (applies only to service locations where water must be pumped due to elevation), \$/unit	\$0.28				
<b>Table B. Consumption Charges for Potable Water Customers</b>					
	Normal	DSRSD Board of Directors Declared Water Shortage Stage <sup>(b)</sup>			
		Stage 1	Stage 2	Stage 3	Stage 4
<b>Residential Customers</b>					
Tier 1 (1-10 units), \$/unit	\$0.54	\$0.60	\$0.68	\$0.94	\$1.38
Tier 2 (11-34 units), \$/unit	\$1.13	\$1.42	\$1.76	\$2.27	\$3.68
Tier 3 (over 34 units), \$/unit	\$1.51	\$1.96	\$2.95	\$4.23	\$5.82
<b>Commercial Customers (includes Industrial, Multi-Family and Institutional)</b>					
Winter (Nov-Apr)—all units, \$/unit	\$1.08	\$1.18	\$1.30	\$1.64	\$2.06
Summer (May-Oct)—all units, \$/unit	\$1.30	\$1.51	\$1.81	\$2.28	\$3.24
Potable Irrigation Customers—all units, \$/unit	\$1.51	\$1.96	\$2.95	\$4.23	\$5.82
<b>Table C. Fixed Charges for All Customers</b>					
Bimonthly charge based on size of meter (these rates do not change during a declared water shortage)	Size of Meter (inches)	Bimonthly Fixed Charge			
	5/8"	\$34.31			
	3/4"	\$51.48			
	1"	\$85.79			
	1-1/2"	\$171.53			
	2"	\$274.45			
	3"	\$600.40			
	4"	\$1,715.34			
	6"	\$3,430.68			
	8"	\$6,003.68			
	10"	\$9,434.36			
<sup>(a)</sup> "Water Rates" on the DSRSD web site, <a href="http://www.dsrdsd.com/your-account/rates-fees/water-rates">http://www.dsrdsd.com/your-account/rates-fees/water-rates</a> . Rates shown are effective January 1, 2016. Total water bill is sum of applicable charges in Table A + Table B + Table C.					
<sup>(b)</sup> See Chapter 8 for additional information on DSRSD's Water Shortage Contingency Plan.					
<sup>(c)</sup> 1 unit of water = 100 cubic feet = 748 gallons.					

Wastewater service for single-family residences is based on an annual rate (billed annually with property taxes) and multi-unit dwellings are based on a bimonthly rate per dwelling unit (billed bimonthly with water service charges). Commercial (businesses) and institutional customers are billed for wastewater service on a uniform rate structure based on business type and units of water usage, which further promotes water conservation by these customers (see Table 9-2).



**Table 9-2. DSRSD 2015 Wastewater Rates<sup>(a)</sup>**

Type of Customer	Wastewater Rate Per Period or Unit (as shown)
Single-family Dwellings Single-family home or townhouse Condominium Duplex Single-family home with second dwelling unit	Billed Annually with Property Taxes \$382.38/year \$260.34/year \$764.76/year \$601.92/year
Multi-Unit Dwellings	\$36.59/bimonthly per dwelling unit (Billed bimonthly with water service charges)
Businesses and Institutions	Rate Per Unit of Water Use <sup>(b)</sup> (Billed bimonthly with water service charges)
Bakery	\$6.13
Commercial Laundry	3.76
Restaurant (full service)	5.00
Restaurant (fast food)	4.45
Auto Steam Cleaning	7.94
Grocery with Garbage Disposal	6.39
Mortuary	6.77
Commercial All Others	2.91
School (submetered)	2.37
School (not submetered)	3.25
Institutional All Others	3.42
Industrial	Billed based on volume (per million gallon), biological oxygen demand (BOD)(per million pound), suspended solids (per million pound) and per connection (each)
<sup>(a)</sup> "Wastewater Rates" on the DSRSD web site, <a href="http://www.drsrd.com/your-account/rates-fees/wastewater-rates">http://www.drsrd.com/your-account/rates-fees/wastewater-rates</a> . Rates shown are effective July 1, 2015. <sup>(b)</sup> 1 unit of water = 100 cubic feet = 748 gallons	

DSRSD evaluates the effectiveness of conservation rates by tracking changes in unit water use resulting from rate increases.

Implementation of this DMM is expected to help the DSRSD 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

In promoting water conservation, DSRSD seeks to foster sustainable changes in behavior, not just temporary responses to drought. An annual outreach plan identifies key messages pertaining to wise water use and the value of recycled water in conserving potable water. The plan specifies tactics designed to reach residential, commercial, industrial and institutional (CII), and media audiences.



Bimonthly bills provide historical data on consumption and explain volume-based pricing tiers and water shortage rates. Bill inserts and a customer newsletters often feature water conservation topics and encourage customers to visit DSRSD’s website for information on current conditions and progress toward conservation goals (the latter is updated the first of each month). The web site also features information about rebates, free water-saving devices, tips for efficient water use, instructions for optimizing irrigation, and an interactive landscape planning tool, *Water-Wise Gardening in the Tri-Valley*.

In 2014, DSRSD introduced a new customer portal on its website called AquaHawk Alerting. AquaHawk is a free service that enables customers to view their consumption over a period of time and to set their own leak alerts and water consumption thresholds. The system also analyzes a customer’s water consumption, and if usage indicates a water leak or other issue, the customer is notified. More than 40 percent of the District’s water customers are using AquaHawk and more than 90 percent of customers are in compliance with the implemented water use restrictions.

DSRSD displays conservation information and gives coupons for free water-saving devices at community events such as the St. Patrick’s Day parade. It conducts an annual workshop on drought-tolerant gardening or another event with a water conservation theme during Dublin Pride Week. In 2010, it updated signage and produced a brochure and web page about new landscaping in its dry climate demonstration garden (open to the public). Magnetic signs on meter readers’ trucks and other DSRSD vehicles reinforce conservation messages.

DSRSD distributes restroom mirror stickers (“conserve, report leaks”) to commercial and institutional customers and table signs (“water served on request”) to restaurants. DSRSD is providing incentives to schools and other selected institutional customers to retrofit urinals to use Ecoblue Cube.

DSRSD spreads key conservation messages through contact with the media (news releases, proactive contact with reporters) and opinion leaders (speaker’s bureau for business and community groups and homeowners’ associations). DSRSD donates subscriptions of *National Geographic Water for Tomorrow* magazine to local public and school libraries and medical office waiting rooms. City and school libraries also received the video series *California’s Water*. Staff meets monthly with DSRSD’s wholesale supplier and neighboring retailers to coordinate regional outreach. Staff also serves on committees for industry groups including California Urban Water Conservation Council (CUWCC) and Association of California Water Agencies (ACWA). DSRSD offers public tours of the wastewater treatment plant where recycled water is produced.

In 2014 and 2015, DSRSD mounted a multi-pronged outreach effort to influence customers to cut outdoor watering in half during the summer of 2014. The campaign produced immediate and long-lasting results: summer water use dropped 30 percent compared to 2013, and customers continued conserving as the drought continued into 2015. Highlights of DSRSD’s drought outreach program include the following:

- Regional advertising via radio, TV, and newspapers, jointly developed and funded by the Tri-Valley’s five water agencies, coordinated with a Tri-Valley regional website and Facebook page;



- A letter to all water customers explaining limitations and enforcement measures, and targeted letters to the highest water users, homeowner associations, and new customers;
- Bill messages and inserts directing customers to extensive online resources on the District website, including the notice of mandatory restrictions and enforcement, how to report a violation, how to use the AquaHawk Customer Portal, a Water Shortage Rates calculator, enhanced rebates, gardening tips, how to get free recycled water for residential use, and weekly updates on progress toward water reduction goals;
- One hundred forty news stories by newspapers, blogs, and radio and television stations between July 1, 2014 and June 30, 2015 communicating key District messages about water use limitations, rate changes, free recycled water at the residential fill station, efforts to diversify water supplies, and the Tri-Valley’s conservation success;
- Nine presentations to community groups, homeowner associations, and neighborhood meetings;
- “I’m getting by with less water” tote bags provided to a local radio station to give away at 35 summer events to customers who shared ways they were conserving water;
- Customer-focused flyers for residents, schools, businesses and restaurants with water conserving tips relevant to them;
- Free mirror stickers for public restrooms that say, “Conserve, Make it your lifestyle: Don’t let the water run, report leaks to management; Thank you for using water wisely”;
- Free table tents for restaurants that say, “We’re happy to serve you water... just ask; We’re doing our part to use water wisely; Thanks for doing yours”;
- Free yard signs that say, “The Official California Yard, I’m helping out during the drought,” for residents who allowed their lawns to go golden;
- Free yard signs for recycled water users that say, “Recycled water keeps this garden green”;
- Magnetic signs on 15 District vehicles that say, “The drought is real, cut water use now” and “Grass guzzles water, rethink your landscape”; and
- More than 4,000 water-saving devices distributed to customers through events, walk-ins, and 224 “Green House Calls” cosponsored with the City of Dublin.

In 2015, DSRSD’s drought outreach efforts received the 2015 Huell Howser Best in Blue Award at ACWA’s 2015 Fall Conference.

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



#### 9.2.5 Programs to Assess and Manage Distribution System Real Loss

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

DSRSD completed its first water system audit in 1994. DSRSD's water distribution system is fairly new and the 1994 audit reflected this fact. Water losses associated with pipeline leaks accounted for only 0.5 percent of total water use in the system. Since 1994, annual water losses due to leaks have, on average, been less than one percent of the annual water use.

DSRSD has a Water Loss Program in place, which includes a residential water meter replacement program and a leak detection program. DSRSD engineering staff calculates and tracks unaccounted-for water on a monthly basis by comparing total potable water purchases with potable water sales.

In addition, DSRSD began an on-going Water Audit Program in 2005. The program uses the standard water audit technique developed by the AWWA to identify real losses and apparent losses in DSRSD's potable water system. As described in Chapter 4, DSRSD's water losses in 2015 were 5.6 percent. This percentage is down significantly from previous years (10.6 percent in 2004) and is relatively low when compared to other water utilities.

DSRSD 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. DSRSD tracks the effectiveness of this program based on reductions in water loss throughout the system.

Implementation of this DMM is expected to help DSRSD achieve its water use targets by identifying sources of water loss quickly so repairs can be made and losses minimized.

#### 9.2.6 Water Conservation Program Coordination and Staffing Support

The Assistant General Manager/District Engineer is the Water Conservation Manager for DSRSD and the Clean Water Program Specialist is the Water Conservation Coordinator. In addition, other departments throughout DSRSD devote a significant amount of time on water conservation such as the Public Information, Customer Services, and Engineering Divisions. Different DSRSD employees are responsible for the coordination and implementation of various DMMs and Best Management Practices (BMPs). DSRSD's Water Conservation Coordinator obtains periodic updates from staff members in order to prepare and submit biennial reports to the CUWCC. DSRSD will be submitting their next biennial report to the CUWCC in 2016.



DSRSD evaluates the effectiveness of this program by developing and maintaining effective working relationships among conservation staff.

In addition, DSRSD implements wholesale agency assistance programs. DSRSD purchases treated water from Zone 7, which serves as the water wholesaler in the Tri-Valley area, providing wholesale treated water supplies to DSRSD, the City of Pleasanton, the City of Livermore, and the Cal Water Livermore District. DSRSD and the other retailers work closely with Zone 7 in developing water demand projections and understanding water supply availability and reliability. Zone 7 also provides assistance to the water retailers with school education programs and rebate programs (see further discussion below).

DSRSD evaluates the effectiveness of this program by developing and maintaining effective working relationships between DSRSD and Zone 7 and with the other retailers in the Tri-Valley area.

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

### 9.3 OTHER DEMAND MANAGEMENT MEASURES

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

- Direct conservation assistance;
- Enhanced rebate programs; and
- Expanded recycled water use.

These programs are described below.

#### 9.3.1 Direct Conservation Assistance

DSRSD provides the following services to its customers to promote water conservation:

- Small device give-away programs (including kitchen/bathroom faucet aerators, low-flow showerheads, toilet leak detection tablets and hose nozzles);
- Landscape water audits; and
- Home water audit kits (Water Hero packets).

#### 9.3.2 Enhanced Rebate Programs

During the Drought Emergency, DSRSD is providing enhanced rebates in addition to the Zone 7 Water Agency Rebate Program. Enhanced rebates are available for the following:

- Converting lawn to a water-efficient landscape--residential projects may qualify for up to \$750 from Zone 7 and up to \$500 from DSRSD;
- Weather-based (“smart”) irrigation controllers;



- High-efficiency clothes washers;
- High-efficiency toilets and urinals; and
- Pool and spa covers.

Information on the rebate programs is available on DSRSD's website.

#### 9.3.3 Expanded Recycled Water Use

As described in Chapter 6, recycled water use in DSRSD's service area has increased significantly in the last two years. In 2013, the District completed its first major retrofit of "purple" recycled water pipes in Central Dublin to provide drought-resistant irrigation at parks and schools. Consistent with the District's commitment to secure funding from outside sources, state and federal grants paid about 25 percent of the project's \$3.9 million cost. The Central Dublin project distributes more than 40 million gallons of recycled water per year, increasing water reliability and saving enough imported water to serve more than 300 households. Recycled water pipes were installed in the residential area near Amador Valley Boulevard and Davona Drive and then connected to the main supply line that runs along the Iron Horse Trail. The project also included retrofitting existing potable water irrigation systems at the parks and schools.

In 2014/2015, DSRSD expanded its recycled water distribution system into West Dublin, and large irrigation sites throughout DSRSD's service area continue to be permanently converted from potable water to recycled water for landscape irrigation (33 sites were converted in 2015).

DSRSD also made recycled water available to the public for residential landscaping. The District's Residential Recycled Water Fill Station provided 2.3 MG of free recycled water to 500 residents in 2014. In 2015, 28 MG of free recycled water was distributed to 3,600 residents. With hundreds of people coming to pick up water daily, the District expanded the original station at the treatment plant and opened a second location in Dublin in June 2015. The program demonstrated the value of the District's investments in recycled water to the community and received the 2014 Technological Innovation and Achievement Award from the California Association of Sanitation Agencies and the 2014 Water Recycling Outreach/Education Program of the Year from WateReuse California. Water agencies across California have opened fill stations based on the DSRSD model.

#### 9.4 PLANNED IMPLEMENTATION TO ACHIEVE WATER USE TARGETS

Water conservation measures are a vital part of DSRSD's overall plan to achieve, reliable, high quality, and cost-effective water supply for its customers. DSRSD has implemented a number of water conservation measures that include, but are not limited to the following: public information outreach, plumbing retrofit kits, residential and landscape water use surveys, device incentive rebate programs, and water conservation partnerships. DSRSD continually monitors and assesses the success of its water conservation programs to determine if additional measures are needed to meet water conservation goals. As described in *Chapter 8 Water Shortage Contingency Planning*, in February 2016, DSRSD confirmed the need to extend its Drought Response Action Plan through October 2016. At that time, the need for a further extension of the action plan will be evaluated.



Additional information regarding DSRSD's Drought Response Action Plan and conservation activities and is provided in Appendix M and Appendix N, respectively.

#### **9.5 MEMBERS OF THE CALIFORNIA URBAN WATER CONSERVATION COUNCIL**

In 1991 (amended September 16, 1999), an 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 BMPs and make a cooperative effort to reduce the consumption of California's water resources. This MOU is administered by the CUWCC.

DSRSD has been a member of the CUWCC since 1991 and is an original signatory to the MOU Regarding Urban Water Conservation in California, which was adopted on September 17, 1991. DSRSD has been implementing various BMPs for water conservation since 1991, and has historically submitted biennial reports to the CUWCC since 1992. DSRSD will be submitting their next biennial report to CUWCC in 2016.

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# CHAPTER 10

## Plan Adoption, Submittal, and Implementation



This chapter provides information regarding the notification, public hearing and adoption of the 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 District 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 District provided 60-day notice of the preparation of its 2015 UWMP, and notice of the 2015 UWMP Public Hearing to the cities and counties which are part of the District’s water service area. These are 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 Dublin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
City of San Ramon	<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"/>
Contra Costa County	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
NOTES: This table lists only the cities and counties that DSRSD is required to notify. See text for list of other cities, agencies and stakeholders notified.		



In addition, the District also notified other adjacent cities, agencies and stakeholders including the following:

- Zone 7 Water Agency
- City of Livermore
- City of Pleasanton
- Cal Water Livermore District
- DERWA
- LAVWMA
- EBMUD
- Parks RFTA
- FCI Dublin

Public hearing notifications for adoption of the UMWP were published in the local newspaper (Valley Times) and on the District's website. Copies of the notices are included in Appendix D.

#### 10.3 PUBLIC HEARING AND ADOPTION

The District 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 District's outreach efforts are included in Appendix D.

A public hearing to discuss the Draft 2015 UWMP was held on May 17, 2016. The public hearing provided an opportunity for all District water customers and the general public to become familiar with the UWMP and ask questions about its water supply, in addition to the District'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 UWMP were made available for public inspection at the District's office and at the City of Dublin and the City of San Ramon public libraries, as well as on the District's website ([www.dsrds.com](http://www.dsrds.com)).

This 2015 UWMP was adopted by the District's Board of Directors on June 7, 2016. A copy of the adoption resolution is provided in Appendix O.

#### 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 WUEdata 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

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No later than 30 days after adoption, a copy of the adopted 2015 UWMP, including the Water Shortage Contingency Plan, will be provided to the cities (City of Dublin and City of San Ramon) and counties (Alameda County and Contra Costa County) to which the District provides water.

#### 10.5 PUBLIC AVAILABILITY

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

- District office at 7051 Dublin Boulevard, Dublin, California;
- City of Dublin Public Library at 200 Civic Plaza, Dublin, California; and
- Dougherty Station Public Library at 17017 Bollinger Canyon Road, San Ramon, California.

An electronic copy of this 2015 UWMP will also be available for review and download on the District's website ([www.dsrdsd.com](http://www.dsrdsd.com)).

#### 10.6 PLAN IMPLEMENTATION

Following adoption, 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 in the District's water service area between 2016 and 2020 that are subject to the California Environmental Quality Act (CEQA) and would demand an amount of water equivalent or greater than the amount of water required by a 500 dwelling unit project. Lastly, this 2015 UWMP will provide guidance and direction on development of new 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 District amends its 2015 UWMP, copies of amendments or changes to the plans will be submitted to DWR, the California State Library, the City of Dublin, the City of San Ramon, Alameda County and Contra Costa County, and other agencies and stakeholders within 30 days after adoption.

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# **APPENDIX A**

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## 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**

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DWR 2015 Urban Water Management Plan 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
CA0110009	Dublin San Ramon Services District	21,407	7,445
<b>TOTAL</b>		<b>21,407</b>	<b>7,445</b>

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 (select from Drop down)	
Unit	AF
NOTES:	

<b>Table 2-4 Retail: Water Supplier Information Exchange</b>
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The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
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Zone 7 Water Agency (Zone 7)
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NOTES:
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**Table 3-1 Retail: Population - Current and Projected**

Population Served	2015	2020	2025	2030	2035	2040(opt)
	81,873	92,549	97,236	101,923	106,610	106,610

NOTES: 2015 population for City of Dublin from California Department of Finance. 2015 population for Dougherty Valley from City of San Ramon data based on number of housing units and average people per housing unit. Projected population based on projected buildout population for City of Dublin and Dougherty Valley.

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

Use Type	2015 Actual		
	Additional Description <i>(as needed)</i>	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	3,618
Multi-Family		Drinking Water	1,418
Commercial		Drinking Water	699
Institutional/Governmental		Drinking Water	105
Landscape		Drinking Water	488
Other	Group quarters	Drinking Water	464
Other	Construction	Drinking Water	15
Other	Fireline meters	Drinking Water	1
Other	Ranch owner	Drinking Water	2
Other	Unmetered sales	Drinking Water	94
Other	Supplemental water for recycled water demand	Drinking Water	9
Other		Drinking Water	111
Losses		Drinking Water	421
<b>TOTAL</b>			7,445
<p>NOTES: Volumes are in AF.                      SOURCE: Consumption by Account Type and Fee Code (01/01/2015 through 12/31/2015) provided by DSRSD.</p>			

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

Use Type	Additional Description (as needed)	Projected Water Use <i>Report To the Extent that Records are Available</i>				
		2020	2025	2030	2035	2040-opt
Single Family		6,647	7,074	7,398	7,698	7,698
Multi-Family		2,605	2,772	2,900	3,017	3,017
Commercial		1,285	1,367	1,430	1,488	1,488
Institutional/Governmental		193	205	215	223	223
Landscape		897	954	998	1,038	1,038
Other	Group quarters	853	908	950	988	988
Other	Construction	28	30	31	33	33
Other	Fireline meters	1	1	1	1	1
Other	Ranch owner	3	3	3	4	4
Other	Unmetered sales	173	184	192	200	200
Other	Supplemental water for recycled water demand	16	17	18	19	19
Other		203	216	226	235	235
Losses		774	823	861	896	896
<b>TOTAL</b>		<b>13,678</b>	<b>14,554</b>	<b>15,223</b>	<b>15,840</b>	<b>15,840</b>

NOTES: Volumes are in AF. Projected demands based on land use projections as documented in the DSRSD's Water Master Plan (2016).

**Table 4-3 Retail: Total Water Demands**

	2015	2020	2025	2030	2035	2040 <i>(opt)</i>
Potable and Raw Water <i>From Tables 4-1 and 4-2</i>	7,445	13,678	14,554	15,223	15,840	15,840
Recycled Water Demand* <i>From Table 6-4</i>	2,579	3,905	4,117	4,203	4,203	4,203
<b>TOTAL WATER DEMAND</b>	10,024	17,583	18,671	19,426	20,043	20,043

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*
01/2015	421
* 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 DSRSD's 2015 Water Audit is provided in Appendix E.	

**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	211	190	169
5 Year	2003	2007	199		

\*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>					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*		
81	190	0	0	0	0	81	81	Yes

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

NOTES:

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

There is no wastewater collection system. The supplier will not complete the table below.  
 Percentage of 2015 service area covered by wastewater collection system *(optional)*  
 Percentage of 2015 service area population covered by wastewater collection system *(optional)*

Wastewater Collection		Recipient of Collected Wastewater				
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected from UWMP Service Area 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party? <i>(optional)</i>
DRSD (City of Dublin)	Metered	6,422	DRSD	DRSD WWTP	No	No
DRSD (Dougherty Valley)	Estimated	1,749	CCCSD	CCCSD WWTP	No	No
<b>Total Wastewater Collected from Service Area in 2015:</b>		8,171				

NOTES: Volumes are in AF.

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

No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.										
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number (optional)	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	2015 volumes			
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
							0	0	0	0
<b>Total</b>							0	0	0	0

NOTES: DSRSD's WWTP is located in the City of Pleasanton's service area and therefore its data is included in the City of Pleasanton's 2015 UWMP.

**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										
Name of Agency Operating the Recycled Water Distribution System: DERWA										
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)			2,136	3,364	3,561	3,791	3,941	3,941		
Golf course irrigation			254	254	254	254	254	254		
Commercial use			5	8	8	8	8	8		
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		184	279	294	150	0	0		
			<b>Total:</b>	<b>2,579</b>	<b>3,905</b>	<b>4,117</b>	<b>4,203</b>	<b>4,203</b>	<b>4,203</b>	<b>4,203</b>

\*IPR - Indirect Potable Reuse

NOTES: Volumes are in AF; Projected demand totals were received from DSRSD and beneficial use breakdowns (for landscape and commercial) are based on 2015 use ratio, with reduction in construction use as service area approaches buildout.

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

□	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.	
Use Type	2010 Projection for 2015	2015 Actual Use
Agricultural irrigation	0	0
Landscape irrigation (excludes golf courses)	722	2,136
Golf course irrigation	213	254
Commercial use	1,493	5
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>	184
<b>Total</b>	2,482	2,579
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
Expand Recycled Water Facilities	Increase treatment capacity and storage; Extend distribution system	2015	1,624
Ordinance No. 301	Require all new landscape irrigation systems to use recycled water	2004	0
Recycled Water Policy P300-10-3	Policy to promote the use of recycled water both within and outside the District	2015	0
Public Outreach	Newsletters, videos, brochures, special events, school programs, and meetings with focus groups	2015	0
Financial Incentives	Reduced connection fees for recycled water accounts	2015	0
<b>Total</b>			<b>1,624</b>
NOTES: Volumes are in AF. The expected increase in recycled water for all actions is included in the "Expand Recycled Water Facilities" total.			

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

<input 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 checked="" 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.					
Page 6-27	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: See Section 6.8 for a description of potential future supplies being investigated by Zone 7 and DSRSD.

**Table 6-8 Retail: Water Supplies — Actual**

Water Supply		2015		
	Additional Detail on Water Supply	Actual Volume	Water Quality	Total Right or Safe Yield (optional)
Purchased or Imported Water	Zone 7	7,445	Drinking Water	
Recycled Water	From DSRSD RWTF	2,579	Recycled Water	
<b>Total</b>		10,024		0

NOTES: Volumes are in AF. Purchased water from Zone 7 includes Main Basin groundwater pumped on behalf of DSRSD.

Table 6-9 Retail: Water Supplies — Projected											
Water Supply		Projected Water Supply <i>Report To the Extent Practicable</i>									
Additional Detail on Water Supply		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	13,678		14,554		15,223		15,840		15,840	
Recycled Water		3,905		4,117		4,203		4,203		4,203	
<b>Total</b>		17,583	0	18,671	0	19,426	0	20,043	0	20,043	0

NOTES: Volumes are in AF; DSRSD's GPQ of 645 AF is pumped by Zone 7 on DSRSD's behalf, and this amount is included in the purchased Zone 7 supply.

**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: <a href="#">Table 7-2</a> , <a href="#">Table 7-3</a>
		<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%
Single-Dry Year			
Multiple-Dry Years 1st Year			
Multiple-Dry Years 2nd Year			
Multiple-Dry Years 3rd Year			
<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 <i>(Opt)</i>
Supply totals <i>(autofill from Table 6-9)</i>	17,583	18,671	19,426	20,043	20,043
Demand totals <i>(autofill from Table 4-3)</i>	17,583	18,671	19,426	20,043	20,043
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	14,162	15,032	15,620	16,083	16,083
Demand totals	14,162	15,032	15,620	16,083	16,083
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	15,530	16,488	17,142	17,667	17,667
	Demand totals	15,530	16,488	17,142	17,667	17,667
	Difference	0	0	0	0	0
Second year	Supply totals	15,530	16,488	17,142	17,667	17,667
	Demand totals	15,530	16,488	17,142	17,667	17,667
	Difference	0	0	0	0	0
Third year	Supply totals	15,530	16,488	17,142	17,667	17,667
	Demand totals	15,530	16,488	17,142	17,667	17,667
	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 <sup>1</sup> <i>Numerical value as a percent</i>	Water Supply Condition <i>(Narrative description)</i>
1	Up to 20%	Minimal Reduction
2	Up to 20%	Moderate Reduction
3	Up to 35%	Severe Reduction
4	Up to 50%	Critical Reduction
<sup>1</sup> One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
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?
1	Landscape - Restrict or prohibit runoff from landscape irrigation		No
1	Landscape - Limit landscape irrigation to specific times	Watering is allowed only between 9 pm and 6 am	No
1	Landscape - Other landscape restriction or prohibition	Sprinklers are to be turned off during and 48 hours following measurable precipitation	No
1	CII - Restaurants may only serve water upon request		No
1	CII - Other CII restriction or prohibition	Post water conservation messages on bathroom mirrors	No
1	Other - Require automatic shut of hoses		No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		No
1	Other	Use broom and bucket to wash private pavement	No
2	Landscape - Limit landscape irrigation to specific days	Limited to 3 nonconsecutive days per week	No
2	CII - Commercial kitchens required to use pre-rinse spray valves		No
2	Pools and Spas - Require covers for pools and spas		No
2	Other - Prohibit use of potable water for construction and dust control	No potable water for construction use when reasonable	Yes
2	Other	Use bucket to wash autos, boats, and buildings no more than once a month; Encourage use of commercial wash services that recycle water	No
3	Landscape - Limit landscape irrigation to specific days	Limited to 2 nonconsecutive days per week	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
3	Other water feature or swimming pool restriction	Must be equipped with a recirculating pump	Yes
3	Other water feature or swimming pool restriction	Require water theme parks to reclaim and recirculate their water	Yes
3	Other - Prohibit use of potable water for washing hard surfaces		Yes
3	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water		Yes
4	Landscape - Prohibit certain types of landscape irrigation	No turf irrigation	Yes
4	Landscape - Other landscape restriction or prohibition	Hand water non-turf landscaping 1 day per week	Yes
4	CII - Other CII restriction or prohibition	Prohibit use of non-efficient washing machines	Yes
4	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	Prohibit any use of water for water theme parks	Yes

NOTES: All Stage 1 restrictions become enforced in Stage 2

**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	Residential Water Survey Program; Large Landscape Audit Support Services Program
All	Provide Rebates for Landscape Irrigation Efficiency	Commercial Irrigation Equipment Rebate Program
All	Provide Rebates for Turf Replacement	
1	Expand Public Information Campaign	
1	Provide Rebates on Plumbing Fixtures and Devices	Offer rebates on low flow rinse nozzles, high efficiency washing machines, ultra-low flush toilet replacement program
1	Reduce System Water Loss	Obligation to fix leaks, breaks, or other malfunctions
1	Implement or Modify Drought Rate Structure or Surcharge	District has drought rates for Stages 1, 2, 3 and 4 (see Chapter 9 Section 9.2.3)
2	Decrease Line Flushing	District will perform line flushing only in critical areas of the distribution system
NOTES:		

Table 8-4 Retail: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	9,670	8,759	9,254
NOTES: Volumes are in AF and includes potable water system only.			

**Table 10-1 Retail: Notification to Cities and Counties**

City Name	60 Day Notice	Notice of Public Hearing
City of Dublin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
City of San Ramon	<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"/>
Contra Costa County	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

NOTES: This table lists only the cities and counties that DSRSD is required to notify. See text for list of other cities, agencies and stakeholders notified.

## **APPENDIX C**

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DWR 2015 Urban Water Management Plan 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
<b>10620(b)</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)
<b>10620(d)(2)</b>	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 2-3)
<b>10642</b>	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
<b>10631(a)</b>	Describe the water supplier service area.	System Description	Section 3.1	Section 3.2 (page 3-1)
<b>10631(a)</b>	Describe the climate of the service area of the supplier.	System Description	Section 3.3	Section 3.5 (page 3-3)
<b>10631(a)</b>	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	Section 3.6.1 (page 3-4)
<b>10631(a)</b>	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	Section 3.6.2 (page 3-5)
<b>10631(a)</b>	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 3-4)
<b>10631(e)(1)</b>	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)
<b>10631(e)(3)(A)</b>	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	Section 4.3 (page 4-5)
<b>10631.1(a)</b>	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	Section 4.5 (page 4-6)
<b>10608.20(b)</b>	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	Section 5.6 (page 5-4); Appendix F
<b>10608.20(e)</b>	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, 5.7 (page 5-4); Appendix F
<b>10608.22</b>	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 F
<b>10608.24(a)</b>	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	Section 5.7 (page 5-5); Appendix F
<b>1608.24(d)(2)</b>	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 5-5); Appendix F
<b>10608.36</b>	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
<b>10608.40</b>	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	Section 5.7 (page 5-5); Appendix F
<b>10631(b)</b>	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	Section 6.9 (page 6-32)
<b>10631(b)</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 6-10)
<b>10631(b)(1)</b>	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 6-10)
<b>10631(b)(2)</b>	Describe the groundwater basin.	System Supplies	Section 6.2.1	Section 6.2.1 (page 6-10)
<b>10631(b)(2)</b>	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	Section 6.2.1 (page 6-10)
<b>10631(b)(2)</b>	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 6-10)

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

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
<b>10631(b)(3)</b>	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	<b>Section 6.2.3 (page 6-16)</b>
<b>10631(b)(4)</b>	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	<b>Section 6.9 (page 6-32)</b>
<b>10631(d)</b>	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	<b>Section 6.7 (page 6-27)</b>
<b>10631(g)</b>	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	<b>Section 6.8 (page 6-27)</b>
<b>10631(i)</b>	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	<b>Section 6.6 (page 6-26)</b>
<b>10631(j)</b>	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	<b>Section 2.5.1 (page 2-3)</b>
<b>10631(j)</b>	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
<b>10633</b>	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	<b>Section 6.5.1 (page 6-18)</b>
<b>10633(a)</b>	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	<b>Section 6.5.2 (page 6-19)</b>
<b>10633(b)</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	<b>Section 6.5.2 (page 6-19)</b>
<b>10633(c)</b>	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	<b>Section 6.5.3 (page 6-21)</b>
<b>10633(d)</b>	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	<b>Section 6.5.4 (page 6-22)</b>
<b>10633(e)</b>	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	<b>Section 6.5.4 (page 6-22)</b>
<b>10633(f)</b>	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	<b>Section 6.5.5 (page 6-24)</b>
<b>10633(g)</b>	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	<b>Section 6.5.5 (page 6-24)</b>
<b>10620(f)</b>	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	<b>Section 7.5 (page 7-13)</b>
<b>10631(c)(1)</b>	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	<b>Section 7.2 (page 7-2)</b>
<b>10631(c)(1)</b>	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	<b>Section 7.3 (page 7-6)</b>
<b>10631(c)(2)</b>	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	<b>Section 7.2 (page 7-2)</b>
<b>10634</b>	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	<b>Section 7.2 (page 7-2); Section 7.5 (page 7-13)</b>
<b>10635(a)</b>	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	<b>Section 7.4 (page 7-9)</b>
<b>10632(a) and 10632(a)(1)</b>	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	<b>Section 8.1 (page 8-1)</b>
<b>10632(a)(2)</b>	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	<b>Section 8.9 (page 8-10)</b>
<b>10632(a)(3)</b>	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	<b>Section 8.8 (page 8-8)</b>

<b>Appendix C. Urban Water Management Plan Checklist Checklist Arranged by Subject</b>				
CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location
<b>10632(a)(4)</b>	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	<b>Section 8.2 (page 8-3)</b>
<b>10632(a)(5)</b>	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	<b>Section 8.4 (page 8-6)</b>
<b>10632(a)(6)</b>	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	<b>Section 8.3 (page 8-6)</b>
<b>10632(a)(7)</b>	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	<b>Section 8.6 (page 8-8)</b>
<b>10632(a)(8)</b>	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	<b>Section 8.7 (page 8-8); Appendix K</b>
<b>10632(a)(9)</b>	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	<b>Section 8.5 (page 8-7)</b>
<b>10631(f)(1)</b>	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	<b>Sections 9.2 and 9.3 (page 9-2)</b>
<b>10631(f)(2)</b>	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	<b>N/A</b>
<b>10631(j)</b>	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	<b>Section 9.5 (page 9-11)</b>
<b>10608.26(a)</b>	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	<b>Section 10.3 (page 10-2)</b>
<b>10621(b)</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	<b>Section 10.2 (page 10-1); Appendix D</b>
<b>10621(d)</b>	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	<b>Section 10.4 (page 10-2)</b>
<b>10635(b)</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	<b>Section 10.4 (page 10-3)</b>
<b>10642</b>	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	<b>Section 10.3 (page 10-2); Appendix D</b>
<b>10642</b>	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	<b>Section 10.2 (page 10-1); Appendix D</b>
<b>10642</b>	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	<b>Section 10.3 (page 10-2); Appendix O</b>
<b>10644(a)</b>	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	<b>Section 10.4 (page 10-2)</b>
<b>10644(a)(1)</b>	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	<b>Section 10.4 (page 10-2)</b>
<b>10644(a)(2)</b>	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	<b>Section 10.4 and 10.7 (page 10-2)</b>
<b>10645</b>	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	<b>Section 10.5 (page 10-3)</b>

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## **APPENDIX D**

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Required Notices

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7051 Dublin Boulevard  
Dublin, CA 94568-3018

phone (925) 828-0515  
fax (925) 829-1180  
[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Mr. Albert Lopez  
Alameda County  
224 W. Winton, Room 111  
Hayward, CA 94544

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Lopez,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

The UWMP will provide an overview of DSRSD's water deliveries and uses, water supply sources, efficient water uses, and demand management measures. Additionally, the 2015 UWMP will incorporate DSRSD's plans for achieving the water conservation practices needed to achieve the goal of reducing potable water consumption by 20% by 2020 in accordance with the Water Conservation Bill of 2009.

The status of the 2015 UWMP will be posted on DSRSD's web site, [www.dsrds.com](http://www.dsrds.com). A draft 2015 UWMP is expected to be released for public review in early May 2016. A public hearing will be held to provide an opportunity to comment on the draft in May 2016. Adoption of the plan is expected in June 2016. Additional notices will be distributed.

If you have any questions or wish to provide comments on the 2015 UWMP preparation, please contact Stan Kolodzie at (925) 875-2253 or [kolodzie@dsrds.com](mailto:kolodzie@dsrds.com).

Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

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January 27, 2016

Ms. Caroline Judy  
Alameda County  
1401 Lakeside Dr., Ste. 1115  
Oakland, CA 94612

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Judy,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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If you have any questions or wish to provide comments on the 2015 UWMP preparation, please contact Stan Kolodzie at (925) 875-2253 or [kolodzie@dsrds.com](mailto:kolodzie@dsrds.com).

Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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January 27, 2016

Mr. Jeff Lawrence  
Braddock and Logan  
4155 Blackhawk Plaze Circle, Suite 201  
Danville, CA 94506

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Lawrence,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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If you have any questions or wish to provide comments on the 2015 UWMP preparation, please contact Stan Kolodzie at (925) 875-2253 or [kolodzie@dsrdsd.com](mailto:kolodzie@dsrdsd.com).

Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



7051 Dublin Boulevard  
Dublin, CA 94568-3018

phone (925) 828-0515  
fax (925) 829-1180  
[www.dsrsd.com](http://www.dsrsd.com)

January 27, 2016

Mr. Kevin Pohlson  
Brookfield Homes  
500 LaGonda Way, Suite 100  
Danville, CA 94526

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Pohlson,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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January 27, 2016

Mr. Joe Guerra  
Brookfield Homes  
500 LaGonda Way, Suite 100  
Danville, CA 94526

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Guerra,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Principal Engineer

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January 27, 2016

Mr. Zach Otting  
Building Industry Association  
1300 Treat Blvd., Suite. 140  
Walnut Creek, CA 94596

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Otting,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Principal Engineer

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January 27, 2016

Ms. Mandi Misasi  
CalAtlantic  
4750 Willow Road, Suite 150  
Pleasanton, CA 94588

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Misasi,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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January 27, 2016

Coordinator, Urban Water Management Plans  
California State Library, Government Publications Section  
P.O. Box 942837  
Sacramento, CA 94237-0001

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Coordinator, Urban Water Management Plans,

This notice is being issued to encourage your agency's involvement.

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January 27, 2016

Mr. Frank Vallejo  
California Water Service Company, Livermore District  
195 South N St.  
Livermore, CA 94550

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Vallejo,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Principal Engineer

RB/ST

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Dan McIntyre  
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January 27, 2016

Lt. Colonel Andrew W. Jones  
Camp Parks Reserve Forces Training Area  
790 5th Street  
Dublin, CA 94568

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Lt. Colonel Jones,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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January 27, 2016

Mr. Earl Chow  
Camp Parks Reserve Forces Training Area  
790 5th Street  
Dublin, CA 94568

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Chow,

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January 27, 2016

Mr. James Tong  
Charter Properties  
4690 Chabot Drive, Suite 100  
Pleasanton, CA 94588

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Tong,

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Principal Engineer

RB/ST

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Dan McIntyre  
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January 27, 2016

Mr. Donald Miller  
Citizens for Balanced Growth  
2862 Waverly Way  
Livermore, CA 94550

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Miller,

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January 27, 2016

Ms. Margaret Tracy  
Citizens for Balanced Growth  
2862 Waverly Way  
Livermore, CA 94550

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Tracy,

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January 27, 2016

Mr. Luke Sims  
City of Dublin  
100 Civic Plaza  
Dublin, CA 94568

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Sims,

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January 27, 2016

Ms. Helen Ling  
City of Livermore  
101 W. Jack London Blvd.  
Livermore, CA 94551

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Ling,

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January 27, 2016

Ms. Kathleen Yurchak  
City of Pleasanton  
123 Main Street  
Pleasanton, CA 94566

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Yurchak,

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January 27, 2016

Mr. Phil Wong  
City of San Ramon  
2401 Crow Canyon Road  
San Ramon, CA 94583

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Wong,

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phone (925) 828-0515  
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[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Ms. Telma Moreira  
Contra Costa County  
651 Pine St., 2nd Fl-North Wing  
Martinez, CA 94553

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Moreira,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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If you have any questions or wish to provide comments on the 2015 UWMP preparation, please contact Stan Kolodzie at (925) 875-2253 or [kolodzie@dsrds.com](mailto:kolodzie@dsrds.com).

Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



7051 Dublin Boulevard  
Dublin, CA 94568-3018

phone (925) 828-0515  
fax (925) 829-1180  
[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Ms. Lashun Cross  
Contra Costa County  
651 Pine St., 2nd Fl-North Wing  
Martinez, CA 94553

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Cross,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

phone (925) 828-0515  
fax (925) 829-1180  
[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Mr. Dean Mills  
D. R. Horton  
6630 Owens Drive  
Pleasanton, CA 94588

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Mills,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

phone (925) 828-0515  
fax (925) 829-1180  
[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Ms. Gwen Huff  
Department of Water Resources, Statewide Integrated Water Management  
Water Use and Efficiency Branch, P.O. Box 942836  
Sacramento, CA 94236-0001

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Huff,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

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[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Mr. James Bewley  
DERWA  
7051 Dublin Blvd.  
Dublin, CA 94568

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Bewley,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



7051 Dublin Boulevard  
Dublin, CA 94568-3018

phone (925) 828-0515  
fax (925) 829-1180  
[www.dsrdsd.com](http://www.dsrdsd.com)

January 27, 2016

Lee Jouthas  
Dublin Public Library  
200 Civic Plaza  
Dublin, CA 94568

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Lee Jouthas,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

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[www.dsrsd.com](http://www.dsrsd.com)

January 27, 2016

Mr. Mike Connor  
East Bay Dischargers Authority  
2651 Grant Avenue  
San Lorenzo, CA 94580

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Connor,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

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[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Mr. Alexander Coate  
EBMUD  
375 11th Street  
Oakland, CA 94607

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Coate,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

phone (925) 828-0515  
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[www.dsrdsd.com](http://www.dsrdsd.com)

January 27, 2016

Mr. Michael Tognolini  
EBMUD  
375 11th Street  
Oakland, CA 94607

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Tognolini,

This notice is being issued to encourage your agency's involvement.

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RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

phone (925) 828-0515  
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[www.dsrdsd.com](http://www.dsrdsd.com)

January 27, 2016

Mr. James Buchanan  
FCI Dublin  
5701 8th St.  
Dublin, CA 94568

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Buchanan,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Sincerely,

RHODORA N. BIAGTAN  
Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

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[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Mr. Chuck Weir  
LAVWMA  
7051 Dublin Blvd.  
Dublin, CA 94568

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Weir,

This notice is being issued to encourage your agency's involvement.

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Principal Engineer

RB/ST

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Dan McIntyre  
Stan Kolodzie



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[www.dsrdsd.com](http://www.dsrdsd.com)

January 27, 2016

Mr. Michael Snowberger  
Lennar  
2603 Camino Ramon, Suite 525  
San Ramon, CA 94583

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Snowberger,

This notice is being issued to encourage your agency's involvement.

In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) is preparing its 2015 Urban Water Management Plan (UWMP). This planning effort is being conducted to ensure that adequate water supplies are available to meet existing and future water demands in DSRSD's service area. The UWMP is updated every five years.

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Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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Dublin, CA 94568-3018

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[www.dsrds.com](http://www.dsrds.com)

January 27, 2016

Ms. Kathy Middleton  
San Ramon Public Library (Dougherty Valley)  
17017 Bollinger Canyon Road  
San Ramon, CA 94582

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Middleton,

This notice is being issued to encourage your agency's involvement.

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Principal Engineer

RB/ST

cc: John Archer  
Dan McIntyre  
Stan Kolodzie



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[www.dsrdsd.com](http://www.dsrdsd.com)

January 27, 2016

Ms. Kathy Middleton  
San Ramon Public Library (Marketplace)  
100 Montgomery Street  
San Ramon, CA 94583

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Ms. Middleton,

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Principal Engineer

RB/ST

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January 27, 2016

Mr. Dave Suico  
Toll Brothers, Inc.  
8259 S. Monarch Blvd.  
San Ramon, CA 94583

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

Dear Mr. Suico,

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January 27, 2016

Mr. Steve Savage  
Toll Brothers, Inc.  
8259 S. Monarch Blvd.  
San Ramon, CA 94583

**Subject: Notice of Preparation of 2015 Urban Water Management Plan  
Dublin San Ramon Services District**

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cc: John Archer  
Dan McIntyre  
Stan Kolodzie

Dublin San Ramon Services District  
Mailing List for 2015 UWMP Agency Notices  
May 3, 2016

Prefix	FirstName	LastName	Title	Company	Address1	City	State	PostalCode	E-mail Address
Mr.	Albert	Lopez	Planning Director	Alameda County	224 W. Winton, Room 111	Hayward	CA	94544	<a href="mailto:Albert.Lopez@acgov.org">Albert.Lopez@acgov.org</a>
Ms.	Caroline	Judy	General Services Agency	Alameda County	1401 Lakeside Dr., Ste. 1115	Oakland	CA	94612	<a href="mailto:caroline.judy@acgov.org">caroline.judy@acgov.org</a>
Mr.	Zach	Oting		BIA Bay Area	1300 Treat Blvd., Suite. 140	Walnut Creek	CA	94596	<a href="mailto:zotting@biabayarea.org">zotting@biabayarea.org</a>
Mr.	Bob	Glover		BIA Bay Area	1300 Treat Blvd., Suite. 140	Walnut Creek	CA	94596	<a href="mailto:bglover@biabayarea.org">bglover@biabayarea.org</a>
Mr.	Jeff	Lawrence		Braddock and Logan	4155 Blackhawk Plaze Circle, Suite 201	Danville	CA	94506	<a href="mailto:jlawrence@braddockandlogan.com">jlawrence@braddockandlogan.com</a>
Mr.	Kevin	Pohlsen		Brookfield Homes	500 LaGonda Way, Suite 100	Danville	CA	94526	<a href="mailto:Kevin.Pohlsen@brookfieldhomes.com">Kevin.Pohlsen@brookfieldhomes.com</a>
Mr.	Joe	Guerra	Director of Forward Planning	Brookfield Homes	500 LaGonda Way, Suite 100	Danville	CA	94526	<a href="mailto:Joe.Guerra@brookfieldhomes.com">Joe.Guerra@brookfieldhomes.com</a>
Ms.	Mandi	Misasi	Project Manager	CalAtlantic	4750 Willow Road, Suite 150	Pleasanton	CA	94588	<a href="mailto:Mandi.Misasi@calatl.com">Mandi.Misasi@calatl.com</a>
	Coordinator, Urban Water Management Plans			California State Library, Government Publications Section	P. O. Box 942837	Sacramento	CA	94237-0001	
Mr.	Frank	Vallejo	District Manager	California Water Service Company, Livermore District	195 South N St.	Livermore	CA	94550	<a href="mailto:fvallejo@calwater.com">fvallejo@calwater.com</a>
Lt. Colonel	Andrew W.	Jones	Garrison Commander	Camp Parks Reserve Forces Training Area	790 5th Street	Dublin	CA	94568	<a href="mailto:andrew.w.jones22.mil@mail.mil">andrew.w.jones22.mil@mail.mil</a>
Mr.	Earl	Chow	Public Works Director	Camp Parks Reserve Forces Training Area	790 5th Street	Dublin	CA	94568	<a href="mailto:earl.r.chow.civ@mail.mil">earl.r.chow.civ@mail.mil</a>
Mr.	James	Tong		Charter Properties	4080 Gratton Street, Suite 200	Dublin	CA	94568	<a href="mailto:jim@charter-properties.com">jim@charter-properties.com</a>
Mr.	Doug	Mann		Citizens for Balanced Growth	661 South N Street	Livermore	CA	94550	<a href="mailto:doug@citizensforbalancedgrowth.org">doug@citizensforbalancedgrowth.org</a>
Mr.	Luke	Sims	Director, Community Development Dept.	City of Dublin	100 Civic Plaza	Dublin	CA	94568	<a href="mailto:Luke.Sims@dublin.ca.gov">Luke.Sims@dublin.ca.gov</a>
Ms.	Helen	Ling	Water Resources Division Manager	City of Livermore	101 W. Jack London Blvd.	Livermore	CA	94551	<a href="mailto:hling@cityoflivermore.net">hling@cityoflivermore.net</a>
Mr.	Darren	Greenwood		City of Livermore	3500 Robertson Park Road	Livermore	CA	94550	<a href="mailto:dgreenwood@cityoflivermore.net">dgreenwood@cityoflivermore.net</a>
Ms.	Dana	D'Angelo		City of Livermore	3500 Robertson Park Road	Livermore	CA	94550	<a href="mailto:dkdangelo@cityoflivermore.net">dkdangelo@cityoflivermore.net</a>
Ms.	Kathleen	Yurchak	Director of Operations Services	City of Pleasanton	P.O. Box 520	Pleasanton	CA	94566	<a href="mailto:kyurchak@cityofpleasantonca.gov">kyurchak@cityofpleasantonca.gov</a>
Ms.	Rita	Di Candia	Water Conservation Manager	City of Pleasanton	P.O. Box 520	Pleasanton	CA	94566	<a href="mailto:rdicandia@cityofpleasantonca.gov">rdicandia@cityofpleasantonca.gov</a>
Mr.	Dan	Martin		City of Pleasanton	P.O. Box 520	Pleasanton	CA	94566	<a href="mailto:dmartin@cityofpleasantonca.gov">dmartin@cityofpleasantonca.gov</a>
Mr.	Phil	Wong	Planning Director	City of San Ramon	2401 Crow Canyon Road	San Ramon	CA	94583	<a href="mailto:pwong@sanramon.ca.gov">pwong@sanramon.ca.gov</a>
Ms.	Telma	Moreira	Senior Planner	Contra Costa County	651 Pine St., 2nd Fl-North Wing	Martinez	CA	94553	<a href="mailto:tmore@cd.co.contra-costa.ca.us">tmore@cd.co.contra-costa.ca.us</a>
Ms.	Lashun	Cross	Senior Planner	Contra Costa County	651 Pine St., 2nd Fl-North Wing	Martinez	CA	94553	<a href="mailto:lcross@cd.co.contra-costa.ca.us">lcross@cd.co.contra-costa.ca.us</a>
Mr.	Dean	Mills		D. R. Horton	6630 Owens Drive	Pleasanton	CA	94588	<a href="mailto:DKWills@drhorton.com">DKWills@drhorton.com</a>
Ms.	Gwen	Huff	Coordinator, Urban Water Management P Integrated Water Management	Department of Water Resources, Statewide Integrated Water Management	Water Use and Efficiency Branch, P.O. Box 942836	Sacramento	CA	94236-0001	<a href="mailto:gwen.huff@WATER.CA.GOV">gwen.huff@WATER.CA.GOV</a>
Mr.	Michael	Tognolini	Authority Manager	DERWA	7051 Dublin Blvd.	Dublin	CA	94568	<a href="mailto:mtognoli@ebmud.com">mtognoli@ebmud.com</a>
Mr.	Lee	Jouthas	Library Manager	Dublin Public Library	200 Civic Plaza	Dublin	CA	94568	
Mr.	Mike	Connor	General Manager	East Bay Dischargers Authority	2651 Grant Avenue	San Lorenzo	CA	94580	<a href="mailto:mconnor@ebda.org">mconnor@ebda.org</a>
Mr.	Alexander	Coate	General Manager	EBMUD	375 11th Street	Oakland	CA	94607	<a href="mailto:acoate@ebmud.com">acoate@ebmud.com</a>
Mr.	James	Buchanan	Manager of Water Distribution Planning D	EBMUD	P.O. Box 24055	Oakland	CA	94623-1055	<a href="mailto:timothy.mcgowan@ebmud.com">timothy.mcgowan@ebmud.com</a>
Mr.	Chuck	Weir	General Foreman	FCI Dublin	5701 8th St.	Dublin	CA	94568	<a href="mailto:j1buchanan@bop.gov">j1buchanan@bop.gov</a>
Mr.	Michael	Snoberger	Director of Land Operation Bay Area	LAVWMA	7051 Dublin Blvd.	Dublin	CA	94568	<a href="mailto:weir@lavwma.com">weir@lavwma.com</a>
Ms.	Kathy	Middleton	Library Manager	Lennar	2603 Camino Ramon, Suite 525	San Ramon	CA	94583	<a href="mailto:Michael.Snoberger@lennar.com">Michael.Snoberger@lennar.com</a>
Ms.	Kathy	Middleton	Library Manager	San Ramon Public Library (Dougherty Valley)	17017 Bollinger Canyon Road	San Ramon	CA	94582	
Mr.	Dave	Steve	Library Manager	San Ramon Public Library (Marketplace)	100 Montgomery Street	San Ramon	CA	94583	
Mr.	Steve	Savage	Toll Brothers, Inc.	Toll Brothers, Inc.	8259 S. Monarch Blvd.	San Ramon	CA	94583	<a href="mailto:dsuico@tollbrothersinc.com">dsuico@tollbrothersinc.com</a>
Mr.	Dave	Geist	Toll Brothers, Inc.	Toll Brothers, Inc.	8259 S. Monarch Blvd.	San Ramon	CA	94583	<a href="mailto:ssavage@tollbrothersinc.com">ssavage@tollbrothersinc.com</a>
Ms.	Jill	Duerig	General Manager	Windmere BLC	6121 Bollinger Canyon Road, Suite 500	San Ramon	CA	94583	<a href="mailto:David.Geist@Lennar.com">David.Geist@Lennar.com</a>
Ms.	Amparo	Flores	General Manager	Zone 7 Water Agency	100 North Canyons Pkwy.	Livermore	CA	94551	<a href="mailto:jduerig@zone7water.com">jduerig@zone7water.com</a>
				Zone 7 Water Agency	100 North Canyons Pkwy.	Livermore	CA	94551	<a href="mailto:alflores@zone7water.com">alflores@zone7water.com</a>



7051 Dublin Boulevard  
Dublin, CA 94568-3018

phone (925) 828-0515  
fax (925) 829-1180  
[www.dsrdsd.com](http://www.dsrdsd.com)

May 3, 2016

**SUBJECT: Notice of Availability and Public Hearing - Draft 2015 Urban Water Management Plan**

The DSRSD Draft 2015 Urban Water Management Plan (UWMP) is now available for public comment. A copy of the draft UWMP can be found on our website in the Open Government/Library section at <http://www.dsrdsd.com/open-gov/library/plans-studies>. Attached is the Notice of Availability, Public Hearing and Adoption.

The DSRSD Board of Directors will conduct a public hearing at its regularly scheduled meeting on May 17, 2016, at 6:00 p.m. to provide an opportunity for public comment on the draft. The Board of Directors will consider adoption of the 2015 UWMP at its regularly scheduled meeting on June 7, 2016 at 6:00 p.m.

DSRSD encourages the public to attend these meetings and to send questions or comments regarding the DSRSD 2015 UWMP to [uwmp2015@dsrdsd.com](mailto:uwmp2015@dsrdsd.com). The public review comment period will end on May 17, 2016.

Sincerely,

STAN KOLODZIE  
Associate Civil Engineer SME

/ST

Enclosure

cc: Daniel McIntyre, General Manager  
Rhodora Biagtan, Principal Engineer

**DUBLIN SAN RAMON SERVICES DISTRICT  
Board of Directors**

**NOTICE OF PUBLIC HEARING**

**DATE:** *Tuesday, May 17, 2016*

**TIME:** *6:00 p.m.*

**PLACE:** *Regular Board Meeting Place  
7051 Dublin Boulevard, Dublin, CA*

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**NOTICE OF AVAILABILITY, PUBLIC HEARING, AND ADOPTION  
OF THE  
DUBLIN SAN RAMON SERVICES DISTRICT  
2015 URBAN WATER MANAGEMENT PLAN**

DSRSD encourages public involvement in the preparation of an important water supply plan. In compliance with the Urban Water Management Planning Act (Act), Dublin San Ramon Services District (DSRSD) has prepared its 2015 Urban Water Management Plan (UWMP). DSRSD updates this plan every five years to ensure that adequate water supplies are available to meet existing and future water demand.

The 2015 UWMP provides an overview of DSRSD's water deliveries and uses, water supply sources, efficient water uses, and water conservation measures. This 2015 UWMP incorporates DSRSD's plans to achieve the goal of reducing potable water consumption by 20% by 2020 in accordance with the Water Conservation Act of 2009 and plans to comply with the water conservation measures in Governor Brown's Executive Orders B-29-15 and B-36-15. The UWMP includes DSRSD's Water Shortage Contingency and Drought Plan.

A public review draft of the 2015 UWMP will be available on DSRSD's website, [www.dsrzd.com](http://www.dsrzd.com), starting May 3, 2016. A draft is also available at DSRSD's office at 7051 Dublin Boulevard, Dublin, during normal business hours and at City of Dublin and City of San Ramon public libraries.

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*By: Nicole Genzale  
District Secretary*

**DUBLIN SAN RAMON SERVICES DISTRICT  
Board of Directors**

**NOTICE OF PUBLIC HEARING**

**DATE:** *Tuesday, May 17, 2016*

**TIME:** *6:00 p.m.*

**PLACE:** *Regular Board Meeting Place  
7051 Dublin Boulevard, Dublin, CA*

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**NOTICE OF AVAILABILITY, PUBLIC HEARING, AND ADOPTION  
OF THE  
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*By: Nicole Genzale  
District Secretary*

Nicole's place

Information may be reviewed at City Development Department, 6000 Hill, Clayton, between 9:00 a.m. and Monday through Friday (except public holiday). A staff report will be available at the City Library on the Saturday pre-City Council meeting and at the City Council meeting and at the City (www.ci.clayton.ca.us). Interested parties are invited to attend the public hearing and present written testimony at or before 5:00 p.m. If you have any questions, please call 925-7343.

City Development Director  
CT #5723034; May 3, 2016

**NOTICE OF PUBLIC HEARING -  
STORM DRAIN FEES**

**TUESDAY, MAY 17, 2016 AT 7:00 P.M.  
CITY COUNCIL CHAMBERS,  
10890 SAN PABLO AVENUE  
EL CERRITO, CALIFORNIA**

The City Council will conduct its agenda on the computation of the Storm Drain Fee for each parcel of real property requiring storm drain services. The hearing will be held at the City Council Chambers located at 10890 San Pablo Avenue, El Cerrito, CA 94530. The Engineer's Report on the Annual Storm Drain Fee for FY 2016-17 is on file with the City Clerk and is available for public inspection and review at the City Clerk's Office in City Hall. A summary of the hearing will be posted along with the staff report will be posted on the City's website at www.ci.elcerrito.ca.us. For additional information related to this hearing, please contact Stacey Johnson, Administrative Analyst at 510-215-4310 or sjohn@ci.elcerrito.ca.us.

Anyone wishing to speak at the public hearing should bring a speaker slip from the City Clerk's Office and arrive at the meeting up until the closure of the hearing.

Comments should be mailed or delivered to the City Clerk, City of El Cerrito, 10890 San Pablo Avenue, El Cerrito, CA 94530, no later than Tuesday, May 10, 2016 in order to ensure they are included in the agenda packet. Comments received after the agenda packet will be submitted to the City Council at the next Council meeting. For additional information regarding the hearing, please contact the City Clerk, City of El Cerrito, at (510) 215-4305, ext. 215-4379, EMAIL: cmorse@ci.elcerrito.ca.us

\_\_\_\_\_  
City Clerk

WCT 5720812 May 3, 10, 2016

Information may be reviewed at City Development Department, 6000 Hill, Clayton, between 9:00 a.m. and Monday through Friday (except public holiday). A staff report will be available at the City Library on the Saturday pre-City Council meeting and at the City Council meeting and at the City (www.ci.clayton.ca.us). Interested parties are invited to attend the public hearing and present written testimony at or before 5:00 p.m. If you have any questions, please call 925-7343.

WCT 5719367 Apr. 27, 28, 29, 30: May 2, 3, 4, 2016

**DUBLIN SAN RAMON SERVICES DISTRICT  
Board of Directors**

**NOTICE OF PUBLIC HEARING**

DATE: Tuesday, May 17, 2016  
TIME: 6:00 p.m.  
PLACE: Regular Board Meeting Place  
7051 Dublin Boulevard, Dublin, CA

**NOTICE OF AVAILABILITY,  
PUBLIC HEARING, AND ADOPTION  
OF THE  
DUBLIN SAN RAMON SERVICES DISTRICT  
2015 URBAN WATER MANAGEMENT PLAN**

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DSRSD encourages the public to attend these meetings and to send questions or comments regarding the DSRSD 2015 UWMP to [uwmp2015@dsrdsd.com](mailto:uwmp2015@dsrdsd.com). The public review comment period will end on May 17, 2016.

By: Nicole Genizale  
District Secretary

PT/VT #5723551; May 3, 9, 2016

The Engineer's cost estimate is \$473,000.

Beginning Thursday, April 21, 2016, the contract documents, including the Plans Specifications, will be available and may be obtained through the City of Lafayette Engineering Services Division by contacting the Engineering Assistant at [klain@lovelafayette.com](mailto:klain@lovelafayette.com) or (925)284-1951.

This project shall be constructed in accordance with the March 2013 edition of the City of Lafayette Standard Specifications, which may be obtained at the contact above. The cost of the Standard Specifications is \$20 per set. The cost of mailing is an additional \$8. If you do not have the Standard Specifications (dated March 2013), you do not need to purchase a new copy.

Bids shall be submitted in a sealed envelope titled "Proposal: City of Lafayette, Reliez Signalization Improvements, Project No. 014-9707-1".

The Contractor shall possess a Class "A" Class "C-10" license at the time this contract is awarded. Bidder's attention is directed to requirements in Sections 2 and 3 of the Standard Specifications General Provisions. All bids shall be accompanied by a cashier's or certified check, or a bidder's bond executed by a corporate surety insurer. The bidder's guarantee shall be in the amount equal to at least 10 percent of the total bid and shall be payable to the City of Lafayette. The successful bidder shall furnish a payment bond and performance bond.

The City Council has ascertained the General Prevailing Rates of Wages applicable to this work, and these rates are on file in the City of Lafayette Engineering Services Division. The City of Lafayette reserves the right to waive any informalities or to reject all bids.

Time of completion allowed for this project shall be 45 working days. Bidder's attention is directed to the order of work stated in Section 1 of the Special Provisions.

Questions regarding the project Plans or Specifications may be directed to Farzaneh Kain, City Engineer's Office, (925) 299-3209.

The plan holders list, as well as the City of Lafayette Standard Specifications, the Project Special Provisions and the General Prevailing Rates of Wages applicable to this work may be downloaded free of charge from the City of Lafayette website at <http://www.ci.lafayette.ca.us/ci/Pages/PublicWorksAndConstruction.aspx>. Under the "Public Works and Construction" section on the homepage, click on "Quick Links" and then "Reliez Signalization Improvements" (or you may click on "Projects Out to Bid"). Or you may contact the Engineering Assistant at (925) 284-1951.

CITY OF LAFAYETTE

Date: 4/14/2016 By: /s/ Tony Coe, City Engineer  
CCT #5712844; Apr. 18; May 3, 2016

Valley Times  
Legal Ad  
5/3/16



## News

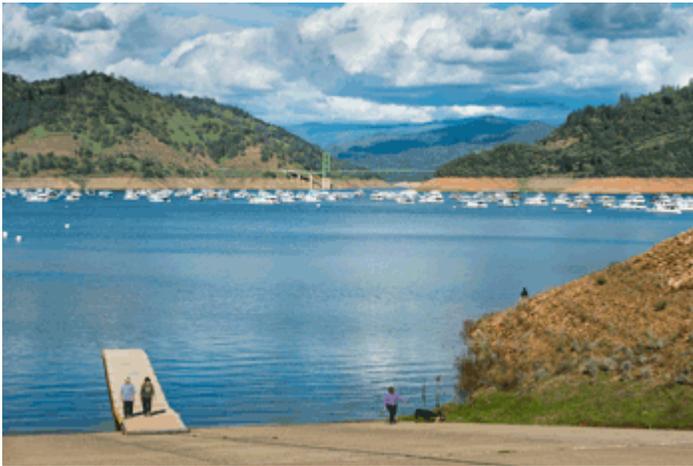
### Comment on Draft DSRSD 2015 Urban Water Management Plan

**Post Date:** 05/11/2016

#### Plan Analyzes How Much Water We Will Have in the Next Three Years and Out to 2040

DSRSD's draft [2015 Urban Water Management Plan](#) (UWMP) is available for public comment. This 432-page document projects water supply and demand through 2040 and is used to show that the District has enough water to serve current and future customers. Among other things, the UWMP describes our water system in great detail, analyzes water shortage contingency options, and calculates the minimum amount of water needed in the next three years. The UWMP also analyzes how well the District is meeting state conservation mandates and how the District might reduce its water demand even more. The DSRSD Board invites comments on the plan, via email [uwmp2015@dsrsd.com](mailto:uwmp2015@dsrsd.com) or at the DSRSD public hearing May 17, at 7051 Dublin Blvd., Dublin, at 6:00 p.m.

**Photo:** Lake Oroville, shown in March 2016, stores the majority of the Tri-Valley's water supply, which originates as snow and rain in the northern Sierra.



#### Questions or comments?

Reply to [DSRSDtoday@dsrsd.com](mailto:DSRSDtoday@dsrsd.com) or call Sue Stephenson, Community Affairs Supervisor, 925-875-2295 (office), 925-579-5739 (cell)



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**Email Address \***

**Retype Email Address \***

**First Name \***

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# **APPENDIX E**

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Water Audit

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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:  Calendar Year

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:  0.25%

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><b><u>Instructions</u></b></p> <p>The current sheet. Enter contact information and basic audit details (year, units etc)</p>	<p><b><u>Reporting Worksheet</u></b></p> <p>Enter the required data on this worksheet to calculate the water balance and data grading</p>	<p><b><u>Comments</u></b></p> <p>Enter comments to explain how values were calculated or to document data sources</p>	<p><b><u>Performance Indicators</u></b></p> <p>Review the performance indicators to evaluate the results of the audit</p>	<p><b><u>Water Balance</u></b></p> <p>The values entered in the Reporting Worksheet are used to populate the Water Balance</p>	<p><b><u>Dashboard</u></b></p> <p>A graphical summary of the water balance and Non-Revenue Water components</p>
<p><b><u>Grading Matrix</u></b></p> <p>Presents the possible grading options for each input component of the audit</p>	<p><b><u>Service Connection Diagram</u></b></p> <p>Diagrams depicting possible customer service connection line configurations</p>	<p><b><u>Definitions</u></b></p> <p>Use this sheet to understand the terms used in the audit process</p>	<p><b><u>Loss Control Planning</u></b></p> <p>Use this sheet to interpret the results of the audit validity score and performance indicators</p>	<p><b><u>Example Audits</u></b></p> <p>Reporting Worksheet and Performance Indicators examples are shown for two validated audits</p>	<p><b><u>Acknowledgements</u></b></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](mailto: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: **Dublin San Ramon Services District (DSRSD)**  
Reporting Year: **2015**      1/2015 - 12/2015

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: MILLION GALLONS (US) PER YEAR**

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

### WATER SUPPLIED

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

Volume from own sources:	+ ?	n/a	0.000	MG/Yr
Water imported:	+ ?	9	2,425.900	MG/Yr
Water exported:	+ ?	9	0.000	MG/Yr

### Master Meter and Supply Error Adjustments

Pcnt:	Value:	MG/Yr
+ ?	<input type="radio"/> <input checked="" type="radio"/>	
+ ?	<input type="radio"/> <input checked="" type="radio"/>	
+ ?	<input type="radio"/> <input checked="" type="radio"/>	

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

**WATER SUPPLIED: 2,425.900** MG/Yr

### AUTHORIZED CONSUMPTION

Billed metered:	+ ?	9	2,227.900	MG/Yr
Billed unmetered:	+ ?	8	30.600	MG/Yr
Unbilled metered:	+ ?	n/a	0.000	MG/Yr
Unbilled unmetered:	+ ?		30.324	MG/Yr

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

**AUTHORIZED CONSUMPTION: ? 2,288.824** MG/Yr

Click here: ?  
for help using option buttons below

Pcnt:	Value:	MG/Yr
1.25%	<input checked="" type="radio"/> <input type="radio"/>	

Use buttons to select percentage of water supplied OR value

Pcnt:	Value:	MG/Yr
0.25%	<input type="radio"/> <input checked="" type="radio"/>	

<input checked="" type="radio"/>	<input type="radio"/>	MG/Yr
0.25%	<input checked="" type="radio"/> <input type="radio"/>	MG/Yr

### WATER LOSSES (Water Supplied - Authorized Consumption)

**137.076** MG/Yr

#### Apparent Losses

Unauthorized consumption: + ? 6.065 MG/Yr

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

Customer metering inaccuracies:	+ ?	6	0.000	MG/Yr
Systematic data handling errors:	+ ?	8	5.570	MG/Yr

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

**Apparent Losses: ? 11.635** MG/Yr

#### Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? **125.442** MG/Yr

**WATER LOSSES: 137.076** MG/Yr

### NON-REVENUE WATER

**NON-REVENUE WATER: ? 167.400** MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

### SYSTEM DATA

Length of mains:	+ ?	9	305.0	miles
Number of <u>active AND inactive</u> service connections:	+ ?	9	21,402	
Service connection density:	?		70	conn./mile main

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

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 85.0 psi

### COST DATA

Total annual cost of operating water system:	+ ?	9	\$22,922,447	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	8	\$6.35	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+ ?	6	\$4,715.00	\$/Million gallons <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

### WATER AUDIT DATA VALIDITY SCORE:

\*\*\* YOUR SCORE IS: 79 out of 100 \*\*\*

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

### PRIORITY AREAS FOR ATTENTION:

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

1: Water imported

2: Customer metering inaccuracies

3: Variable production cost (applied to Real Losses)

# **APPENDIX F**

---

SB X7-7 Compliance and Verification Form

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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	3,939	Acre Feet
	2008 total volume of delivered recycled water	595	Acre Feet
	2008 recycled water as a percent of total deliveries	15.11%	Percent
	Number of years in baseline period <sup>1, 2</sup>	10	Years
	Year beginning baseline period range	1996	
	Year ending baseline period range <sup>3</sup>	2005	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range <sup>4</sup>	2007	

<sup>1</sup> 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. <sup>2</sup> 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.

<sup>3</sup> The ending year must be between December 31, 2004 and December 31, 2010.

<sup>4</sup> The ending year must be between December 31, 2007 and December 31, 2010.

NOTES:

**SB X7-7 Table 2: Method for Population Estimates**

<b>Method Used to Determine Population</b> (may check more than one)	
<input checked="" type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input checked="" type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> DWR recommends pre-review
NOTES:	

**SB X7-7 Table 3: Service Area Population**

Year		Population
10 to 15 Year Baseline Population		
Year 1	1996	23,829
Year 2	1997	23,928
Year 3	1998	24,506
Year 4	1999	25,045
Year 5	2000	28,540
Year 6	2001	32,437
Year 7	2002	33,514
Year 8	2003	35,720
Year 9	2004	39,873
Year 10	2005	45,239
<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	2003	35,720
Year 2	2004	39,873
Year 3	2005	45,239
Year 4	2006	53,766
Year 5	2007	57,577
2015 Compliance Year Population		
<b>2015</b>		<b>81,873</b>
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>	
<b>10 to 15 Year Baseline - Gross Water Use</b>							
Year 1	1996	4,266			-		4,266
Year 2	1997	4,641			-		4,641
Year 3	1998	4,763			-		4,763
Year 4	1999	6,565			-		6,565
Year 5	2000	7,368			-		7,368
Year 6	2001	8,815			-		8,815
Year 7	2002	8,728			-		8,728
Year 8	2003	9,037			-		9,037
Year 9	2004	10,977			-		10,977
Year 10	2005	9,626			-		9,626
Year 11	0	-			-		-
Year 12	0	-			-		-
Year 13	0	-			-		-
Year 14	0	-			-		-
Year 15	0	-			-		-
<b>10 - 15 year baseline average gross water use</b>							<b>7,478</b>
<b>5 Year Baseline - Gross Water Use</b>							
Year 1	2003	9,037			-		9,037
Year 2	2004	10,977			-		10,977
Year 3	2005	9,626			-		9,626
Year 4	2006	9,825			-		9,825
Year 5	2007	10,885			-		10,885
<b>5 year baseline average gross water use</b>							<b>10,070</b>
<b>2015 Compliance Year - Gross Water Use</b>							
<b>2015</b>		7,445	-		-		<b>7,445</b>
* 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.

<b>Name of Source</b>		Zone 7 (includes DSRSD's GW)		
<b>s</b>				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	<b>Volume Entering Distribution System</b>	<b>Meter Error Adjustment*</b> <i>Optional (+/-)</i>	<b>Corrected Volume Entering Distribution System</b>	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
Year 1	1996	4,266		4,266
Year 2	1997	4,641		4,641
Year 3	1998	4,763		4,763
Year 4	1999	6,565		6,565
Year 5	2000	7,368		7,368
Year 6	2001	8,815		8,815
Year 7	2002	8,728		8,728
Year 8	2003	9,037		9,037
Year 9	2004	10,977		10,977
Year 10	2005	9,626		9,626
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
<b>5 Year Baseline - Water into Distribution System</b>				
Year 1	2003	9,037		9,037
Year 2	2004	10,977		10,977
Year 3	2005	9,626		9,626
Year 4	2006	9,825		9,825
Year 5	2007	10,885		10,885
<b>2015 Compliance Year - Water into Distribution System</b>				
	<b>2015</b>	7,445		7,445
* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document				
NOTES:				

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

<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
Year 1	1996	23,829	4,266	160
Year 2	1997	23,928	4,641	173
Year 3	1998	24,506	4,763	174
Year 4	1999	25,045	6,565	234
Year 5	2000	28,540	7,368	230
Year 6	2001	32,437	8,815	243
Year 7	2002	33,514	8,728	232
Year 8	2003	35,720	9,037	226
Year 9	2004	39,873	10,977	246
Year 10	2005	45,239	9,626	190
<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	-	-	
<b>10-15 Year Average Baseline GPCD</b>				<b>211</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
Year 1	2003	35,720	9,037	226
Year 2	2004	39,873	10,977	246
Year 3	2005	45,239	9,626	190
Year 4	2006	53,766	9,825	163
Year 5	2007	57,577	10,885	169
<b>5 Year Average Baseline GPCD</b>				<b>199</b>
<b>2015 Compliance Year GPCD</b>				
<b>2015</b>		81,873	7,445	<b>81</b>
NOTES:				

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

10-15 Year Baseline GPCD	211
5 Year Baseline GPCD	199
2015 Compliance Year GPCD	81
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
211	169
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
<p align="center"><b>Target</b> <i>(If more than one region is selected, this value is calculated.)</i></p>				<p align="center"><b>124</b></p>
<p>NOTES:</p>				

**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 <sup>1</sup>	Calculated 2020 Target <sup>2</sup>	<b>Confirmed 2020 Target</b>
199	189	169	<b>169</b>

<sup>1</sup> Maximum 2020 Target is 95% of the 5 Year Baseline GPCD <sup>2</sup> 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>	<b>2015 Interim Target GPCD</b>
169	211	<b>190</b>

NOTES:

**SB X7-7 Table 9: 2015 Compliance**

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments <i>(in GPCD)</i>					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				
81	190	-	-	-	-	81	81	YES

NOTES:

## **APPENDIX G**

---

DSRSD/Zone 7 Water Supply Contracts and Agreements

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A94-18

P.1-48

CONTRACT BETWEEN  
ZONE 7 WATER AGENCY  
AND  
DUBLIN SAN RAMON SERVICES DISTRICT  
FOR A MUNICIPAL & INDUSTRIAL WATER SUPPLY



**TABLE OF CONTENTS**

**MUNICIPAL & INDUSTRIAL WATER SUPPLY CONTRACT**

	PAGE
<b>A. INTRODUCTORY PROVISIONS</b>	
1. Definitions . . . . .	1
2. Term of Contract . . . . .	3
<b>B. WATER SERVICE PROVISIONS</b>	
3. Quantity of Water . . . . .	4
4. Quality of Water . . . . .	4
5. Water from Other Sources . . . . .	4
6. Contractor's Service Area . . . . .	6
7. Turnout Facilities . . . . .	7
8. Measurement of Treated Water Deliveries . . . . .	8
9. Ranges of Flow . . . . .	8
10. Delivery Schedule of Municipal & Industrial Water . . . . .	9
11. Reporting Use of Water . . . . .	10
12. Peak Demands . . . . .	11
13. Curtailment of Delivery During Maintenance Periods . . . . .	11
14. Availability of Water . . . . .	12
15. Suspension of Service . . . . .	13
<b>C. GROUNDWATER EXTRACTION PROVISIONS</b>	
16. Groundwater Pumping from the Main Basin . . . . .	13
17. Recharge Water . . . . .	14
18. Carry-over of Groundwater Pumping Quota . . . . .	14
19. In-Lieu Treated Water . . . . .	15
20. Water Delivery Shortage Emergency Extractions . . . . .	16
21. Transfer of Groundwater Pumping Quota . . . . .	16
22. Changes in Contractor's Groundwater Pumping Quota . . . . .	16

## D. CHARGE AND PAYMENT PROVISIONS

23. Rate Schedule . . . . .	17
24. Recharge Fee . . . . .	17
25. In-lieu Treated Water Credit . . . . .	18
26. Time for Payment . . . . .	18
27. Payment for Turnout Facilities . . . . .	19
28. Delinquent Payments . . . . .	19

## E. GENERAL PROVISIONS

29. Remedies . . . . .	20
30. Assignment . . . . .	20
31. Contract Modification . . . . .	20
32. Liabilities . . . . .	21
33. Renewability . . . . .	22
34. Notices . . . . .	23
35. Severability . . . . .	23
36. Section Headings . . . . .	24
37. Waiver . . . . .	24
38. Water Conservation . . . . .	24
39. Contracts to be Substantially Similar . . . . .	24

**CONTRACT BETWEEN  
ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER  
CONSERVATION DISTRICT AND DUBLIN SAN RAMON SERVICES DISTRICT  
FOR A MUNICIPAL & INDUSTRIAL WATER SUPPLY**

THIS CONTRACT, made and entered into this 23rd day of August, 1994, by and between ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, commonly known as the Zone 7 Water Agency, hereinafter referred to as "Zone 7" and the DUBLIN SAN RAMON SERVICES DISTRICT, hereinafter referred to as "Contractor."

**W I T N E S S E T H:**

For and in consideration of the terms and conditions herein contained, Zone 7 agrees to furnish and provide a water supply to Contractor, and Contractor agrees to purchase and accept such water supply consistent with the provisions herein.

**A. INTRODUCTORY PROVISIONS**

1. Definitions

When used in this contract, the following terms shall have the meanings hereinafter set forth:

- a. "Board" shall mean the Board of Directors of Zone 7 of Alameda County Flood Control and Water Conservation District.
- b. "Each Contractor" or "Other Contractor" shall mean any entity, public or private, contracting with Zone 7 for a Municipal & Industrial Water Supply.
- c. "Extract," "Extraction" or "Extracting" shall mean obtaining groundwater, by pumping or any other means, from wells, shafts, tunnels, excavations or other sources of such groundwater, for domestic, municipal, irrigation, industrial or other use.

- d. "Groundwater Pumping Quota" shall mean that quantity of water that the Contractor is entitled to extract from the Main Basin without paying a recharge fee to Zone 7.
- e. "In-Lieu Treated Water" shall mean that quantity of treated water delivered from Zone 7 in exchange for an equal reduction in Contractor's extraction of its Groundwater Pumping Quota.
- f. "Main Basin" shall mean that part of the Livermore-Amador Valley groundwater basin located essentially within the valley floor sections of the Castle, Bernal, Amador and Mocho (II) Subbasins as defined in Bulletin No. 118-2, Evaluation of Groundwater Resources: Livermore and Sunol Valleys, State of California, Department of Water Resources and shown in Exhibit A attached.
- g. "Municipal & Industrial Water Supply" shall mean a supply of water from Zone 7 to Each Contractor regardless of the source of said water or Contractor's use of said water.
- h. "Other Sources" shall mean a water source from any person, corporation or entity, whether public or private, other than from Zone 7.
- i. "Recharge" or "Recharged" shall mean managed replenishment of the Main Basin including but not limited to spreading on natural or improved channels or basins or well injection with imported, locally developed, or recycled water, or through In-Lieu Treated Water. Applied irrigation water percolation shall not be considered recharge.

- j. "Recycled Water" shall mean wastewater treated for reuse as permitted by the California Department of Health Services, the Regional Water Quality Control Board and other agencies that from time to time may have jurisdiction.
- k. "Safe Yield" shall mean the quantity of water that can be successfully extracted from the Main Basin on an annual basis over an extended number of years without reducing groundwater storage. Such safe yield is the net quantity of groundwater added to the Main Basin by stream percolation (including percolation from stream releases required for prior water rights), rainfall percolation, applied irrigation water percolation, and net subsurface inflow.
- l. "Treated Water" shall mean water that is processed as necessary to comply with drinking water requirements of the California Department of Health Services, the United States Environmental Protection Agency and other agencies that from time to time may have jurisdiction.
- m. "Turnout Facilities" shall mean the facilities required to provide treated water deliveries from Zone 7's water system to the Contractor's water system. See Exhibit B for a schematic of a typical turnout facility.
- n. "Zone 7 Boundary" shall mean the boundary of Zone 7 as shown on Exhibit C and as may be revised from time to time.

2. Term of Contract

This contract shall become fully effective upon execution of the duly authorized signatures of the parties hereto and shall remain in effect for a period of thirty (30) years from

the date hereof, unless terminated or extended prior to expiration of term by mutual agreement at an earlier date.

**B. WATER SERVICE PROVISIONS**

3. Quantity of Water

Contractor shall purchase from Zone 7 all water required by Contractor for use within Contractor's service area as defined in Section 6 except that Contractor may extract groundwater as provided in the Groundwater Extraction Provisions herein or obtain water from Other Sources under the conditions in Section 5. No quantity of water purchased from Zone 7 or extracted as part of Contractor's Groundwater Pumping Quota shall be delivered by or provided from Contractor to any area other than Contractor's service area, except for short-term emergency and/or public health purposes.

4. Quality of Water

All treated water to be delivered by Zone 7 to Contractor shall be of a quality that complies with the Requirements for Drinking Water of the California Department of Health Services and the United States Environmental Protection Agency or their successor regulatory agencies. Zone 7 will endeavor to provide treated water that is aesthetically acceptable to the Contractor's customers. Zone 7 will blend its different sources of water within its operational capabilities to provide water of approximately equal quality to Each Contractor.

5. Water from Other Sources

In order to protect Zone 7's financial interest, Contractor shall not contract for, purchase or receive, with or without compensation, either directly or indirectly, any water for use in its service area from any source other than by

extraction of its Groundwater Pumping Quota or from purchase from Zone 7, except for any one or more of the following:

- (a) The water received is for fire flow or fire storage requirements or other emergency purposes;
- (b) The water delivered through Zone 7's turnout facility does not comply with drinking water requirements of California Department of Health Services, United States Environmental Protection Agency, or successor regulatory agencies. The quantity of water obtained shall be limited to that necessary to meet Contractor's treated water needs as a result of Zone 7's non-compliance with said drinking water requirements;
- (c) Zone 7 is unable to deliver the quantity of treated water necessary to satisfy the requirements of Contractor. Zone 7 shall specify the quantity of treated water that it cannot deliver and the time period for which it cannot satisfy the Contractor's requirements. Contractor is otherwise obligated to secure all water from Zone 7 to the extent Zone 7 can provide it;
- (d) Zone 7 is able to meet Contractor's water delivery request, and Contractor has paid Zone 7 for obligated fixed costs of Zone 7 associated with the quantity of water the Contractor will obtain from Other Sources. These obligated fixed costs shall include but are not limited to water facility improvements, water contract obligations, and debt service thereto incurred by Zone 7 in supplying water that would have gone to the Contractor, and for which said costs would have been recovered through the sale of said water to Contractor. The Contractor shall obtain the prior written approval from the Board which approval shall not be unreasonably withheld;

(e) The source of water is groundwater extracted within Zone 7's boundary but outside the Main Basin provided said extraction does not cause an adverse impact on the Main Basin; or

(f) The source of water is recycled water from Contractor's or Other Contractors' treated wastewater.

6. Contractor's Service Area

As used herein, the Contractor's service area shall include all areas presently served water by Contractor. Contractor's service area shall also include any future areas to be served by the Contractor within the boundaries of Zone 7 subject to Subsection 32c. Contractor may include any future areas outside the boundaries of Zone 7 upon a finding of the Board that providing water to said area is in the best interests of Zone 7 and after written modification of this contract providing for said service area. The Contractor's present service area is designated on the map attached hereto as Exhibit D. Contractor shall promptly notify Zone 7 of changes in its service area, as may occur from time to time, by furnishing a map to Zone 7 showing any change in said service area so that Zone 7 can maintain a map indicating the most recent Zone 7 water service area. Said changes in service area shall be in accordance with the requirements of the Local Agency Formation Commission, Public Utility Commission or other agency having authority to set service areas.

Any future areas outside Zone 7 boundaries to be served by Contractor which receive water from sources other than Zone 7 or the Main Basin shall not be considered part of the Contractor's service area under the terms of this contract.

7. Turnout Facilities

- a. Turnout facilities shall be constructed at the general location requested by Contractor. The exact location shall be determined by Zone 7 after consultation with Contractor. Turnout facilities shall be designed and/or constructed either by Zone 7 or by Contractor (upon the written approval of Zone 7) based on the ranges of flow set forth in Section 9. Turnout facilities shall include the necessary valves, piping, meter and recording equipment, vaults, telemetry equipment and any other appurtenances necessary to meet the standards and operational needs of Zone 7. Zone 7 shall submit its design of new turnout facilities to contractor for review and written approval.
  
- b. Contractor shall reimburse Zone 7 for all costs incurred by Zone 7 related to the new turnout facilities including but not limited to design, engineering, design review, construction, right-of-way and acquisition thereof, inspection, and contract administration. Contractor shall also pay all costs for the installation of all associated landscaping and recognizes that Zone 7 shall not be responsible for maintenance of landscaping under the terms and conditions of this contract. Contractor further agrees to grant or cause to be granted to Zone 7 the necessary permanent right-of-way and right of ingress thereto and egress therefrom, as determined by Zone 7, for the purposes of constructing, operating and maintaining said turnout facilities.
  
- c. Zone 7 shall install the nozzle outlet portion of all turnout facilities requested by Contractor prior to the construction of the transmission pipeline. For turnout facilities requested by Contractor subsequent to the construction of Zone 7's transmission pipeline, Contractor shall pay for the nozzle outlet portion of the

turnout facility, and all costs set forth in subsection b. above. Ownership of turnout facility, including the shut off valve downstream of the turnout facility, shall be with Zone 7, and Contractor shall have no obligation to operate, maintain, repair, replace or relocate the same.

8. Measurement of Treated Water Deliveries

At any time or times, Contractor may, upon request, inspect said turnout facilities (in the presence of a Zone 7 representative), and the measurements and records taken therefrom. Zone 7 shall test and calibrate the instrumentation at each turnout meter at least annually and furnish such results to the Contractor. When requested by the Contractor, Zone 7 shall test and calibrate any meter through which treated water is served to Contractor. The Contractor shall have the right to be represented by a qualified observer at and during any instrumentation and/or meter tests and/or calibration. Whenever testing and/or calibration of the instrumentation and/or the meter is requested by Contractor, and in the event that any such test shall disclose an error exceeding two percent (2.0%), an adjustment shall be made in charges against the Contractor covering the known or estimated period of duration of such error, but in no event exceeding six (6) months, and the expenses of such test shall be borne by Zone 7; otherwise, such expenses shall be borne by Contractor requesting such tests.

9. Ranges of Flow

a. It is recognized that the range of flow rates of water through a turnout facility may vary considerably over the contract term. A normal range of flow rates for a turnout facility is hereby established as from ten percent (10%) to one hundred percent (100%) of a maximum design flow rate. Contractor shall provide Zone 7 with

the following information for each turnout facility prior to the design of such facilities:

- (1) Anticipated ultimate (future) maximum flow rate,
- (2) Anticipated present design range of flow rates. (The maximum design flow rate shall not exceed ten (10) times the minimum design flow rate for this range in normal installations.)
- (3) Anticipated pressure ranges for (1) and (2) above on the Contractor's side of the turnout facility.

b. Zone 7 shall design the metering and/or recording installation for the range set forth in accordance with Subsections (2) and (3) above with provisions for future modifications in accordance with a range based on Subsections (1) and (3) above.

c. Contractor shall regulate the flow demands through the turnout facility such that the range of flow rates set forth in accordance with Subsection b above will be maintained insofar as such regulation is reasonable and practicable. Zone 7 shall make modification of the metering and/or recording equipment upon request of Contractor or at such time that the actual flow rate exceeds the maximum design flow rate or is less than the minimum design flow rate; provided, however, that flow rates resulting from emergencies shall not apply to such requirement for modification. Said modification will be at the expense of the Contractor and payment thereof shall be in accordance with Section 27.

10. Delivery Schedule of Municipal & Industrial Water

Each year, the Contractor shall submit in writing to Zone 7 a preliminary water delivery schedule on a form provided by Zone 7 indicating the anticipated quantity of treated water and groundwater in excess of its Groundwater Pumping Quota required by Contractor during each month of the succeeding

five (5) calendar years and the anticipated peak day treated water demand from Zone 7 for each such year. Zone 7 shall review such schedule, and after consultation with Contractor, shall approve such schedule in a timely manner or make such revisions in the same as may, in the judgment of Zone 7, be necessary to make such deliveries. To the extent water is available to Zone 7, Zone 7 will approve in writing, a delivery schedule each year for delivery to Contractor during the next succeeding calendar year of an amount of water not less than the amount of water set forth in the approved schedule for the then-current calendar year. The amount of water set forth in the approved delivery schedule for the next succeeding calendar year shall be the basis for which Zone 7 shall contract with the State of California or other entity for delivery to Zone 7. Zone 7 shall identify the reason for any revisions or disapproval of Contractor's delivery request. Zone 7 shall only revise or disapprove Contractor's delivery request for the reasons set forth in Sections 12, 13, 14 or 15.

11. Reporting Use of Water

The Contractor shall report to Zone 7 on or before the tenth day of each month the total volume, in acre-feet, of groundwater extracted from the Main Basin and any water obtained from Other Sources (including any water recharged to the Main Basin) for the preceding month. The report shall become the basis for which water charge determinations and hydrologic inventory calculations of the Main Basin are made by Zone 7. Said report shall be made on a form or forms provided by or acceptable to Zone 7. The measurement and recordation of such flows shall be subject to the same provisions for inspection and testing of meters and instrumentation by Zone 7 as is provided to Contractor in Section 8.

12. Peak Demands

The Zone 7 system is not designed to serve all Contractor's peak demands. As water demands increase, it may be necessary to curtail peak deliveries to conform to Zone 7 system capacity as it exists from time to time. However, so long as water and line capacity are available, Zone 7 will endeavor to meet all reasonable demands for peak deliveries and will use reasonable diligence to provide a regular and uninterrupted supply of water from its turnout facility, but shall not be liable to Contractor for damages, breach of contract, or otherwise, for failure, suspension, diminution, or other variations of service occasioned by any cause beyond the control of, or without the fault or negligence of Zone 7. Such causes may include, but are not restricted to, acts of God, acts of war, or criminal acts of others, acts of Contractor or Other Contractors, water shortages, fires, floods, earthquakes, epidemics, quarantine restrictions, strikes, or failure or breakdown of transmission or other facilities.

13. Curtailement of Delivery During Maintenance Periods

Zone 7 will make all reasonable effort to provide continuous service to Contractor but may schedule to temporarily discontinue or reduce the delivery of water to Contractor for the purpose of necessary investigation, inspection, maintenance, repair or replacement of any of the facilities necessary for the delivery of treated water to Contractor. Zone 7 shall notify Contractor as far in advance as possible of any scheduled discontinuance or reduction and the estimated duration of such discontinuance or reduction. Recognizing that Contractor may rely on Zone 7 for deliveries of water with minimal interruption, particularly during the high water consumption months, Zone 7 shall use its best efforts to make any such discontinuance or reduction in the delivery of water only during the period of November through March. In the event of any discontinuance or reduction in

delivery of water, Contractor may elect to receive the amount of water that otherwise would have been delivered to it during such period under the approved water delivery schedule at other times during the year, consistent with Zone 7's delivery ability considering the then current delivery schedules of all Other Contractors.

14. Availability of Water

In any year in which a shortage occurs due to drought or other cause in the supply of water available for delivery to Each Contractor such that the supply to Zone 7 is less than the total amount included in the approved delivery schedule of Each Contractor for that year, Zone 7 shall reduce deliveries to Each Contractor in an amount that results in a reduction of total water used within Contractor's service area that is equal to the percent reduction for total water used within Zone 7's service area for that year, all as determined by Zone 7; provided, that Zone 7 may apportion on another basis if such is required to meet minimum demands for domestic supply, fire protection, or public health during the year.

The amount of water available under this contract and Zone 7's obligation to supply water shall be subject to the terms and conditions of the contract between Zone 7 and the State of California for water service via the South Bay Aqueduct and any other contracts Zone 7 may enter into for water supply; provided, further, that wherever the provisions of the contract with the State of California or other entity as to the availability of water conflict with the provisions of this contract, the terms and provisions of this contract shall prevail. Zone 7 shall give Contractor written notice as far in advance as possible of any reduction in deliveries that would be necessary because of a shortage in water supply. Neither Zone 7 nor any of its officers, agents, or employees shall be liable for any damage, direct or indirect,

arising from this contract caused by drought, regulatory constraints, operation of area of origin statutes, or any other cause beyond the control or without the negligence of Zone 7.

15. Suspension of Service

In the event that Contractor shall be delinquent in the payment for water for more than ninety (90) days after the due date (as said due date is defined in Section 28), such delinquency shall be called to the attention of the Board and the Board may, in its discretion and after giving Contractor an opportunity to be heard, order the suspension or reduction of service to Contractor.

**C. GROUNDWATER EXTRACTION PROVISIONS**

16. Groundwater Pumping from the Main Basin

Zone 7 acknowledges Contractor's right to extract groundwater based on Contractor's historical groundwater extractions and based on the mutually agreed upon limitations in Contractor's original water supply contract with Zone 7. Contractor acknowledges that Zone 7 manages the Main Basin and that Zone 7 recharges, stores, and extracts from the Main Basin as necessary to supply water to Each Contractor. Accordingly, Contractor shall not extract under this agreement, more than 645 acre-feet (210 million gallons), its Groundwater Pumping Quota, from the Main Basin in any calendar year except as follows:

- (a) The Contractor pays Zone 7 a recharge fee for recharging the Main Basin as set forth in Section 17;
- (b) The groundwater extracted is Contractor's accumulated carry-over of its Groundwater Pumping Quota from prior years as provided in Section 18; or

(c) The source of the groundwater extracted is from Other Sources obtained by Contractor pursuant to 5(c), 5(d), and 5(f) herein and the Contractor has previously recharged said groundwater into the Main Basin. Said recharged water shall not adversely impact Zone 7's use of the Main Basin, including the recharge, storage or extraction thereof.

17. Recharge Water

In any calendar year, if Contractor should extract groundwater from the Main Basin in an amount in excess of its Groundwater Pumping Quota plus any accumulated carry-over and any groundwater recharged by Contractor per 16 (c), Contractor shall pay Zone 7, in addition to other payments required by this contract, a recharge fee as set forth in the rate schedule and Sections 23 and 24 herein, for each acre-foot of water (or portion thereof) in excess of said amount. In express consideration of Contractor's agreement to pay such recharge fee, as aforesaid, Zone 7 shall recharge the Main Basin in an amount aggregating the quantity of such excess water.

Because said recharge fee would be in the nature of an assessment fee upon annual extractions in excess of the Groundwater Pumping Quota, if Zone 7 (or any other public body or agency) shall impose a valid replenishment assessment fee or other charge upon or measured by the pumping or extraction of water for use in Contractor's service area, then the provisions of this Section shall be superseded accordingly, except as to any payment attributable to a period prior to the effective date of any such assessment fee or other charge.

18. Carry-over of Groundwater Pumping Quota

If, in any calendar year, Contractor does not extract its entire Groundwater Pumping Quota from the Main Basin,

Contractor may carry-over from that calendar year the unextracted portion of Groundwater Pumping Quota for extraction from the Main Basin during subsequent calendar years. Said carry-over or accumulated carry-over shall not exceed 20 percent of the Contractor's Groundwater Pumping Quota. Said carry-over shall not include any Groundwater Pumping Quota waived under the In-Lieu Treated Water provision of Section 19.

19. In-Lieu Treated Water

During periods when sufficient water is available to Zone 7 at reasonable cost and Zone 7 desires to raise or maintain groundwater levels, Zone 7 will offer delivery of treated water at a cost that is less than treated water rates to Contractor in lieu of Contractor extracting groundwater per its Groundwater Pumping Quota. The amount of In-Lieu Treated Water that Contractor may receive shall not exceed its Groundwater Pumping Quota plus any accumulated carry-over or its operational capability to extract said Groundwater Pumping Quota and accumulated carry-over. Zone 7's offer to deliver In-Lieu Treated Water for a given calendar year will be made on or about May 1 of that year, however, said rates may be retroactive for the entire calendar year or other mutually agreed upon portion thereof. Credit or payment for In-Lieu Treated Water will be as provided for under Section 25. Contractor is not required to take or purchase any In-Lieu Treated Water.

Contractor acknowledges that any credits or payments received under Section 25 are received in-lieu of the Contractor's right to extract its Groundwater Pumping Quota, and Contractor agrees that its Groundwater Pumping Quota and any accumulated carry-over shall be reduced by an amount equivalent to the amount of In-Lieu Treated Water delivered by Zone 7 to Contractor for the year in which the delivery is made.

20. Water Delivery Shortage Emergency Extractions

During a water supply emergency, as declared by the Board, in which Zone 7 is unable to deliver the quantity of treated water as approved on the delivery schedule, the Contractor may extract water from the Main Basin in excess of the Contractor's Groundwater Pumping Quota at a reduced recharge rate. Said rate shall be the same as the In-Lieu Treated Water rate.

21. Transfer of Groundwater Pumping Quota

Temporary or permanent transfer of Contractor's Groundwater Pumping Quota outside of the Zone 7 boundary shall not be permitted. Temporary or permanent transfer of Contractor's Groundwater Pumping Quota within Zone 7's boundary shall be permitted provided that it is transferred to an Other Contractor. Said transfer of Contractor's Groundwater Pumping Quota shall be permitted upon written notification to Zone 7 from each contractor that is a party to the transfer.

22. Changes in Contractor's Groundwater Pumping Quota

The annual Safe Yield of the Main Basin, estimated as approximately 13,200 acre-feet per year in 1993, is essentially the same as the long-term average extraction by existing groundwater producers. The Board shall not increase any Other Contractor's Groundwater Pumping Quota unless such increase in Groundwater Pumping Quota is acceptable to Each Contractor with a Groundwater Pumping Quota.

Neither Contractor nor Zone 7 waives any rights to pursue a court adjudication of the safe yield of the Main Basin or any other court action on extraction of groundwater from the Main Basin that may change Contractor's Groundwater Pumping Quota. Furthermore, Zone 7 reserves its authority to levy a replenishment assessment on the extraction of any groundwater, including Contractor's Groundwater Pumping Quota

(excluding any adjudication of the safe yield), as necessary to protect the water supplies for users within Zone 7.

**D. CHARGE AND PAYMENT PROVISIONS**

23. Rate Schedule

Zone 7 shall charge for water in accordance with a rate schedule for water service, as such rate schedule is established or amended by the Board. The Board shall review the rate schedule and establish a rate schedule for each calendar year period in accordance with the most recent costs and revenues of Zone 7. The Board shall review the rate schedule at the September regular meeting and endeavor to establish the rate schedule at the November regular meeting prior to January 1 of the following calendar year for which the rate schedule is to be effective. The rates, including but not limited to the treated water, in-lieu treated water, meter fee, and recharge fee, to be so established, shall be based on the cost of providing service, and shall not be unreasonable, arbitrary, or discriminatory. In the event the Board fails, in conformity to the preceding schedule, to establish a new rate schedule for any calendar year the rate schedule in effect for the prior calendar year shall be continued in full force and effect until otherwise modified by the Board.

24. Recharge Fee

The recharge fee shall be charged to Contractor in accordance with the rates included in the rate schedule. Contractor shall be invoiced by Zone 7 in accordance with Section 26 at the time in which Contractor exceeds its Groundwater Pumping Quota as provided in Section 17. Section 28 herein shall apply to said charges. The recharge fee shall be based upon Zone 7's costs including but not limited to the cost to purchase or develop the water, as well as the cost to construct, maintain, and operate the facilities needed to

import, distribute, store, treat and recharge said water into the Main Basin for the benefit of Each Contractor.

25. In-Lieu Treated Water Credit

In any calendar year in which the Contractor has foregone pumping of its Groundwater Pumping Quota, plus accumulated carry-over, as set forth in Section 19, Zone 7 shall determine the amount of delivered treated water that should be charged at the In-Lieu Treated Water rate, and shall credit or make payment to the Contractor the difference between the treated water rate and the In-Lieu Treated Water rate.

26. Time for Payment

Contractor shall be invoiced on a calendar month basis for charges. Contractor shall pay promptly all charges invoiced by Zone 7, such invoices to be rendered on or about the 5th day of each month for charges incurred in the preceding month and to become due and payable within 30 days from date of invoice. In the event that Contractor in good faith contests the accuracy of any invoices submitted to it pursuant to this Section, it shall give Zone 7 notice thereof at least ten (10) days prior to the day upon which payment of the stated amount is due. To the extent that Zone 7 finds Contractor's contentions regarding the statement to be correct, it shall revise the statement accordingly and Contractor shall make payment of the revised amounts on or before the due date. To the extent that Zone 7 does not find Contractor's contentions to be correct or where time is not available for a review of such contentions prior to the due date, Contractor shall make payment of the invoiced amount on or before the due date and make the contested part of such payment under protest and seek to recover the amount thereof from Zone 7.

27. Payment for Turnout Facilities

Prior to commencing with the design of a turnout facility, Contractor shall deposit with Zone 7 an amount of money estimated by Zone 7 to cover all costs to be incurred by Zone 7 for designing said turnout facility or shall request in writing to be invoiced for such design in accordance with Section 26. The option of invoicing Contractor shall be at the sole discretion of Zone 7. Prior to constructing said turnout facility, Contractor shall deposit with Zone 7 an amount of money estimated by Zone 7 to cover all costs to be incurred by Zone 7 for completion of turnout facility or request to be invoiced for such construction in accordance with Section 26. Following completion of the construction of the turnout facility, Zone 7 shall submit to Contractor a statement for the actual costs incurred for completion of the design and construction of said turnout facility as provided in Section 7. The deposit shall be applied to the actual costs incurred by Zone 7, and the appropriate refund or invoicing to Contractor will be made. Contractor shall make payment of any such invoicing to Zone 7 within thirty (30) days of submission of said statement. Zone 7 shall refund any deposit in excess of actual cost within thirty days of Zone 7's determination of said cost. Contractor shall have the right to audit the records of Zone 7 for the purpose of verifying actual costs.

28. Delinquent Payments

In the event that Contractor is delinquent in the payment of invoiced charges for more than thirty (30) days after the due date, delinquent amounts shall accrue at the legal rate of interest commencing on the due date and continuing each month thereafter until payment of both the principal amount of such charges and the interest thereon is paid in full insofar as permitted by law. Unless otherwise determined by law, the legal rate of interest shall be the combined per annum

APR/18

discount rate of the Federal Reserve Bank of San Francisco on the 25th day of the current month and five percent (5%).

**E. GENERAL PROVISIONS**

29. Remedies

By reason of the specialized nature of the water service rendered, and for the further reason that the extent of any damage caused to either party by the other by reason of any breach of this contract or agreement may be extremely difficult to determine, it is agreed by the parties hereto that an action for damages is an inadequate remedy for any breach, and that specific performance, without precluding any other remedy available in equity or law, will be necessary to furnish either party hereto with an adequate remedy for the breach thereof.

30. Assignment

This contract is not for the benefit of any person, corporation or other entity, other than the parties hereto, and no person, corporation or other entity except the parties hereto, shall have any rights or interest in or under this contract unless otherwise specifically provided herein. Contractor shall not assign or transfer any rights or privileges under this contract, either in whole or in part, without the prior written consent of Zone 7, which consent shall not be unreasonably withheld, or make any transfer of all or any part of its water system, or allow the use thereof, in any manner whereby any provisions of this contract will not continue to be binding on it, its assignee or transferee, or such user of the system. This contract and the rights and responsibilities provided for herein shall be binding on the successors and assigns of the parties hereto.

31. Contract Modification

This contract may be amended or modified any time only by mutual written agreement of the parties.

32. Liabilities

- a. Zone 7 and/or any of its officers, agents or employees shall not be liable for the control, carriage, handling, use, disposal, or distribution of treated water supplied to Contractor by Zone 7, after such water has passed through the turnout facility or for claims of damage of any nature whatsoever, including but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal or distribution of such water beyond said turnout facility. Contractor shall indemnify, save and hold harmless Zone 7 and its officers, agents, and employees from any such damages or claims of damages. Contractor shall further reimburse Zone 7 for costs of repair of Zone 7's facilities and other damages resulting from the operations of Contractor.
  
- b. Contractor and/or any of its officers, agents, or employees shall not be liable for the control, carriage, handling, use, disposal, or distribution of water prior to such water being delivered through the turnout facility or for claims of damage of any nature whatsoever, including but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such water prior to its delivery to Contractor, excepting, however, claims by Zone 7 for costs of repair to Zone 7's facilities and other damages resulting from the operations of the Contractor. Zone 7 shall indemnify, save and hold harmless the Contractor and its officers, agents, and employees from any such damages or claims of damages, except claims by Zone 7 for costs of repair of Zone 7's facilities and other damages resulting from the operations of Contractor.

- c. Zone 7 needs to be protected from any obligation to supply water to projects or consumers which the contractor has supplied from sources other than what has been directly purchased from Zone 7. Accordingly, any other provision herein notwithstanding, Zone 7 shall not be obligated nor liable to provide, without exception, that quantity of water obtained by Contractor pursuant to Subsections 5a-f, to Contractor or any customer of Contractor regardless of purpose. Accordingly, Contractor shall indemnify, save and hold harmless Zone 7 from any and all obligations, liability, responsibility, costs, expenses, or fees associated in any way with any claims, demands, requests, suits, causes of action of whatever type or nature concerning the provision of any quantity of water obtained by Contractor pursuant to Subsections 5a-f herein.
- d. Likewise, if pursuant to Section 3 herein, Contractor is instructed by Zone 7 to acquire water from Zone 7 which has been previously acquired from third parties pursuant to Subsections 5a-f herein, Zone 7 shall save and hold harmless Contractor from any and all obligations, liability, responsibility, costs, expenses, or fees that may arise from such third parties.

33. Renewability

At the expiration of the thirty (30) year term of this contract, said contract may be renewed upon the mutual consent of the parties hereto. If no such renewal shall take place and in the absence of any new contract, Zone 7 shall nevertheless continue delivery to Contractor in accordance with this contract, that quantity of water set forth in the approved delivery schedule for the last full calendar year before the expiration of the term of this contract. However, if a new contract is not entered into within two (2) years from the date of expiration of this contract, then the Board

may, at its option, set the terms and conditions for a Municipal & Industrial Water Supply.

34. Notices

All notices or other writings in this contract provided to be given or made or sent, or which may be given or made or sent, by one party hereto to another, shall be deemed to have been fully given or made or sent when made in writing and deposited in the United States mail, registered, certified or first class, postage prepaid, and addressed as follows:

To Zone 7: General Manager  
Zone 7 Water Agency  
5997 Parkside Drive  
Pleasanton, CA 94588

To Contractor: General Manager  
Dublin San Ramon Services District  
7051 Dublin Boulevard  
Dublin, CA 94568

The address to which any notice or other writing may be given or made or sent to any party may be changed upon written notice given by such party as provided above.

35. Severability

If any one or more of the terms or conditions set forth in this contract to be performed on the part of Zone 7 or Contractor, or either of them, should be contrary to any provisions of law or contrary to the policy of law to such an extent as to be unenforceable in any court of competent jurisdiction, then such terms or conditions, shall be null and void and shall be deemed severable from the remaining terms or conditions and shall not affect the validity of the remaining provisions of this contract.

36. Section Headings

Section headings in this contract are for convenience only and are not to be construed as a part of this contract or in any way limiting or amplifying the provisions hereof.

37. Waiver

None of these terms or conditions herein contained can be waived except by mutual written consent.

38. Water Conservation

In order to increase water supply by demand reduction or to comply with regulatory requirements, Zone 7 will undertake and support water conservation programs. To that end, Zone 7 will develop, implement or participate in such programs and enter into agreements with Other Contractors, and other entities to make more efficient use of water supplies through water conservation programs so long as such agreements serve a beneficial purpose to the residents of Zone 7.

39. Contracts to be Substantially Similar

Zone 7 agrees that each contract for a Municipal & Industrial Water Supply hereafter entered into by Zone 7 with any Other Contractor shall contain provisions substantially similar to those herein set forth and shall not contain any provisions of a material nature more favorable to the Other Contractor than the provisions herein applicable to Contractor. This section shall not restrict Zone 7 from considering other terms and conditions for subsequent Municipal & Industrial Water Supply contracts provided that if such other terms and conditions are not substantially similar, Zone 7 shall notify all Other Contractors and offer such other terms and conditions in accordance with Section 31 to Each Contractor. This section shall not limit Zone 7 from entering into other contracts for services not provided for under the terms and conditions of this contract.

IN WITNESS WHEREOF, the parties hereto and have executed this contract on the date and year first above written.

DUBLIN SAN RAMON SERVICES  
DISTRICT

ZONE 7 WATER AGENCY

BY Georgian M. Vorhude  
President, Board of Directors

BY David W. Layton  
Chairman, Board of Directors

ATTEST:

ATTEST:

BY Nancy Gamble  
Secretary

BY Jin Dipon  
Secretary

APPROVED AS TO FORM:  
KELVIN H. BOOTY, JR.,  
COUNTY COUNSEL

BY Mike M. Bold  
Deputy County Counsel

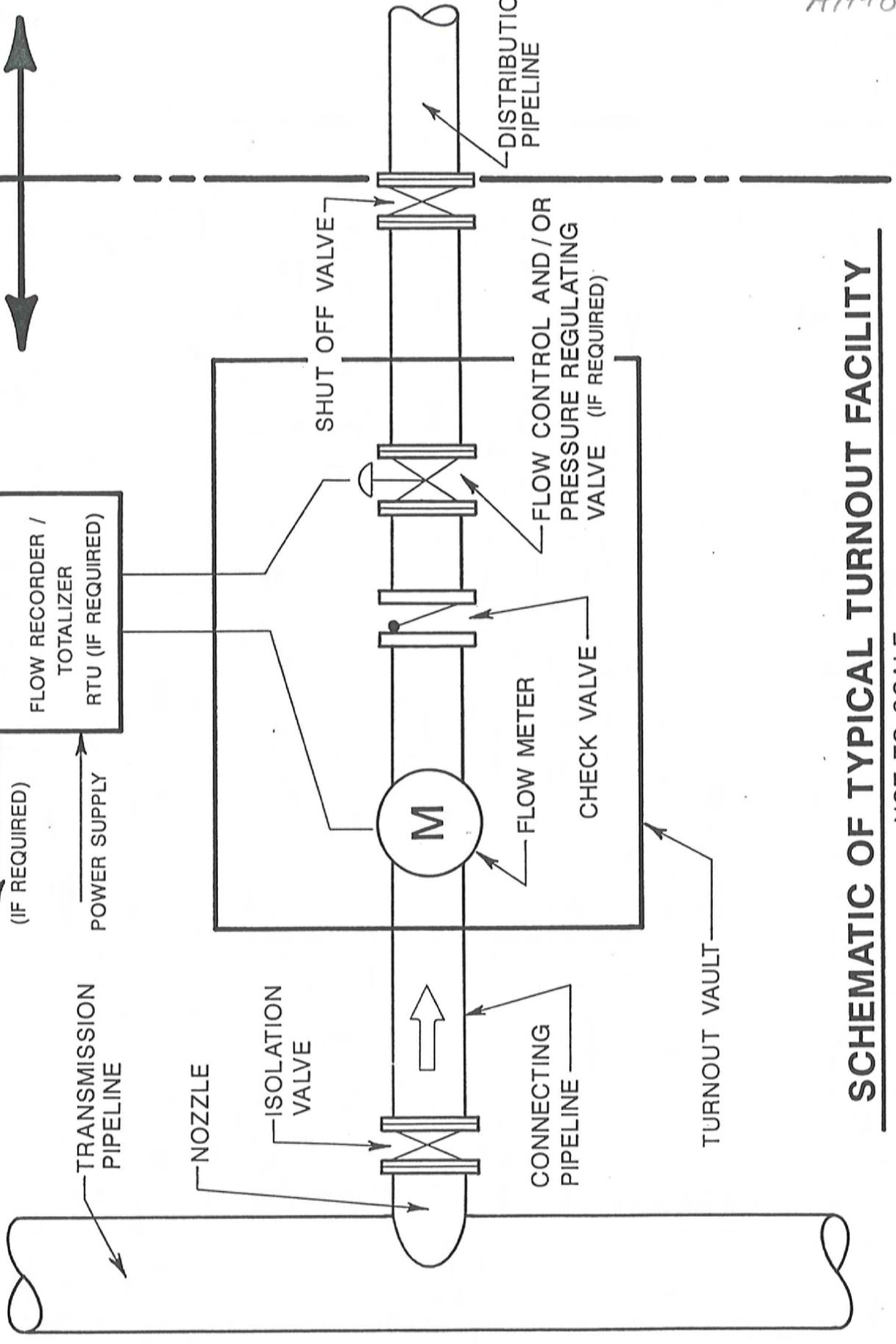
**ZONE 7**  
OWNED & MAINTAINED

CONTRACTOR  
OWNED  
& MAINTAINED

SCADA SYSTEM  
(IF REQUIRED)

CONTROL PANEL  
FLOW RECORDER /  
TOTALIZER  
RTU (IF REQUIRED)

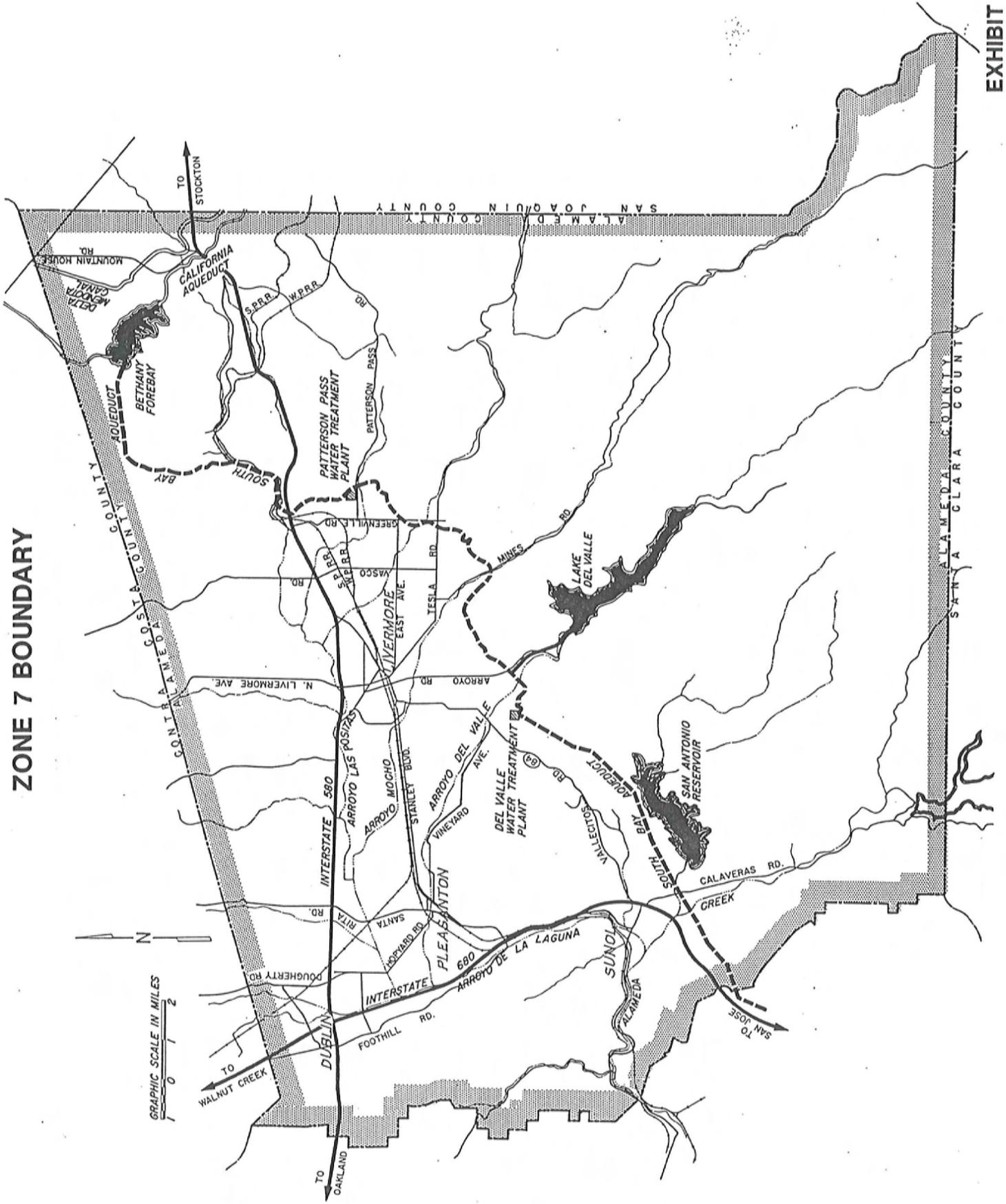
POWER SUPPLY



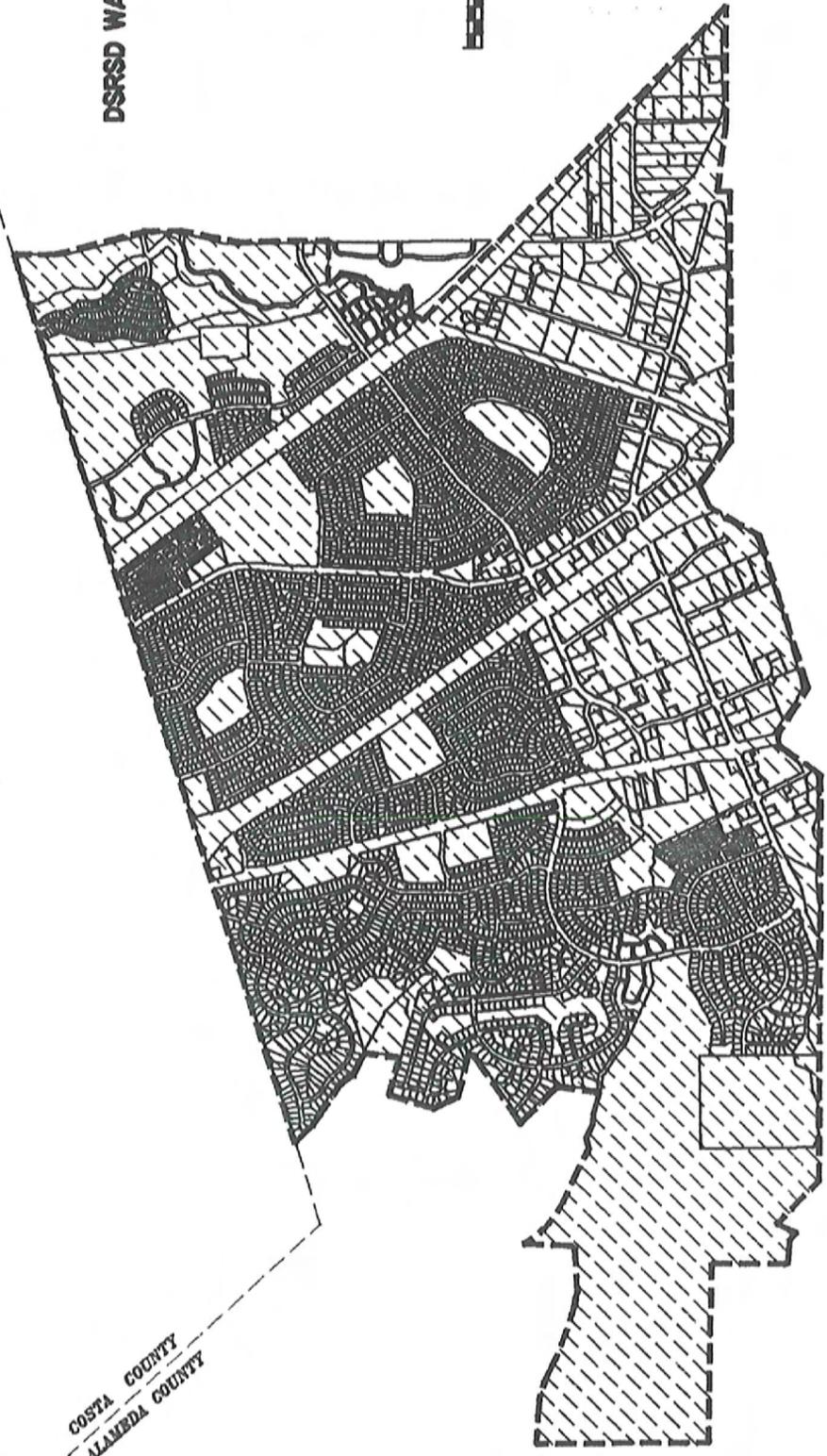
**SCHEMATIC OF TYPICAL TURNOUT FACILITY**

NOT TO SCALE

ZONE 7 BOUNDARY

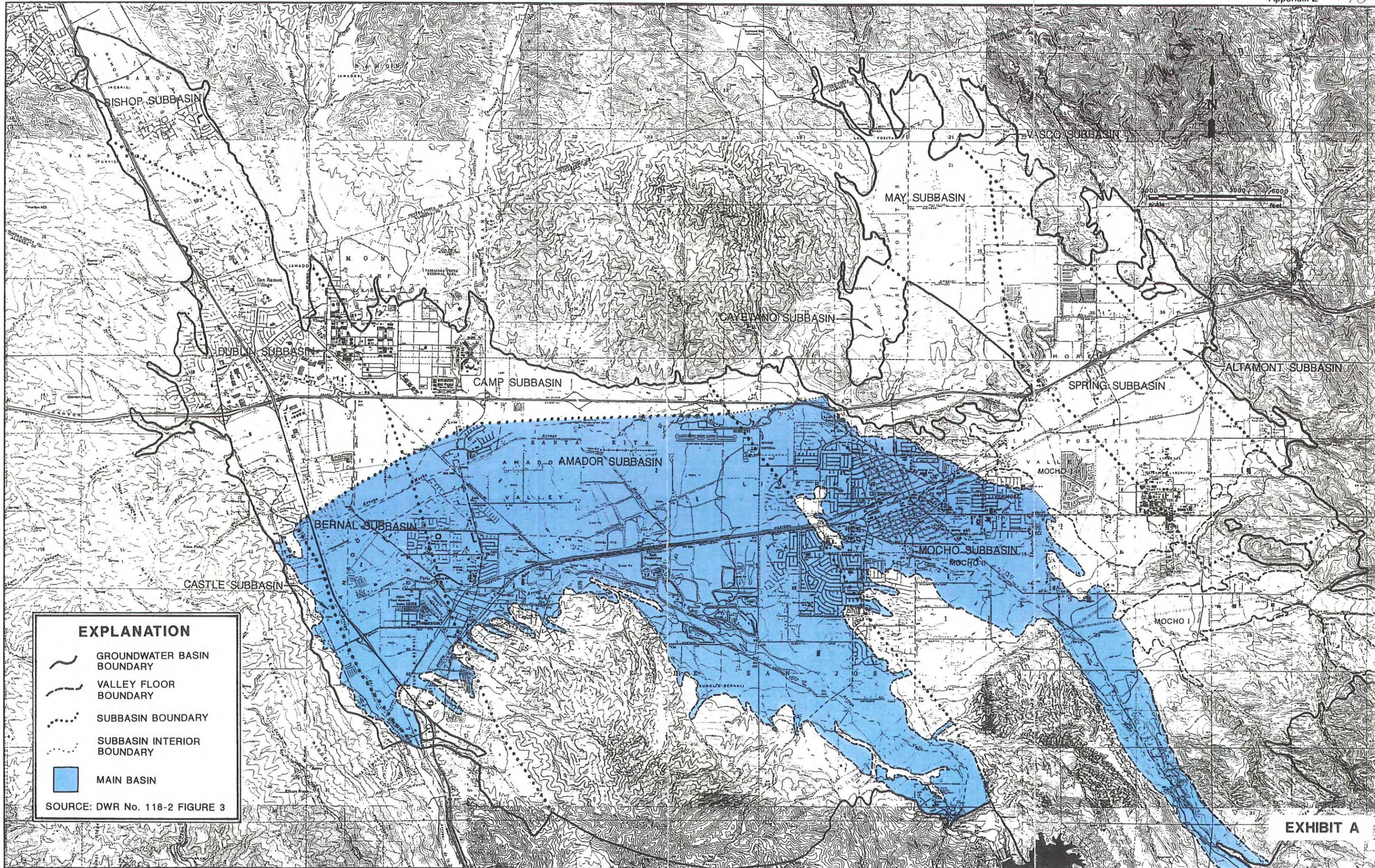


DSRSD WATER SERVICE AREA



CONTRA COSTA COUNTY  
ALAMEDA COUNTY

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**EXPLANATION**

- GROUNDWATER BASIN BOUNDARY
- VALLEY FLOOR BOUNDARY
- SUBBASIN BOUNDARY
- SUBBASIN INTERIOR BOUNDARY
- MAIN BASIN

SOURCE: DWR No. 118-2 FIGURE 3

EXHIBIT A

REVISIONS	NUMBER	DESCRIPTION	BY	DATE	APVD
7					
6					
5					
4					
3					
2					
1					



**ZONE 7 WATER AGENCY**  
5997 PARKSIDE DRIVE PLEASANTON CA 94588

DRAWN	<i>JW</i>
DESIGNED	
CHECKED	<i>JW</i>
APPROVED	

WATER RESOURCES ENGINEERING  
LIVERMORE VALLEY GROUNDWATER BASIN BOUNDARIES

SCALE	1"=6,000'
DATE	12 MAY 1994
FILE NO.	M-321

SHEET  
**GW**  
OF SHEETS

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**AMENDMENT NO. 1 TO CONTRACT BETWEEN ZONE 7 WATER AGENCY AND  
DUBLIN SAN RAMON SERVICES DISTRICT FOR A MUNICIPAL &  
INDUSTRIAL WATER SUPPLY**

This Amendment No. 1 to Contract Between Zone 7 Water Agency and Dublin San Ramon Services District for a Municipal & Industrial Water Supply (the "**Amendment**") is entered into as of 2/7/2000, 1998, (the "**Effective Date**") by and between ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, commonly known as the Zone 7 Water Agency ("**Zone 7**"), and DUBLIN SAN RAMON SERVICES DISTRICT ("**Contractor**").

**RECITALS**

A. Zone 7 and Contractor have entered into that certain Contract between Zone 7 of Alameda Flood Control and Water Conservation District and Dublin San Ramon Services District for a Municipal & Industrial Water Supply, dated as of August 23, 1994 (the "**Water Supply Contract**"). Pursuant to and as more fully set forth in the Water Supply Contract, Zone 7 has agreed to furnish and provide to Contractor, and Contractor agreed to purchase and accept, a water supply for municipal and industrial uses.

B. Pursuant to Section 6 of the Water Supply Contract, Contractor has requested Zone 7's approval of an expansion of Contractor's "Service Area" under the Water Supply Contract to include approximately 4,400 acres of real property located outside of the boundaries of Zone 7 as shown on **Figure 1** attached hereto (the "**Dougherty Valley Service Area**"). The County of Contra Costa has adopted plans and permits authorizing the development, within the Dougherty Valley Service Area, of a mixed-use community including up to 9784 residential dwelling units and associated commercial, civic and other uses. Contra Costa County's plans designate Contractor as the primary provider of treated water to the Dougherty Valley Service Area and the owners of property of said Area, Windemere Ranch Partners ("**Windemere**") and Shapell Industries, Inc. ("**Shapell**"), have requested Contractor to provide such service.

C. The property in the Dougherty Valley Service Area owned by Windemere has been annexed to Contractor and is within Contractor's sphere of influence; the property in the Dougherty Valley Service Area owned by Shapell is within Contractor's sphere of influence.

D. On September 13, 1994, Contractor and the Berrenda Mesa Water District ("**BMWD**") entered into an agreement for Contractor to purchase BMWD rights for 7,000 acre-feet of firm water entitlement from State Water Project for use in the Dougherty Valley Service Area with an option to purchase an additional 5,000 acre-feet.

E. Instead of using the aforementioned agreement between Contractor and BMWD for the water supply for Dougherty Valley Service Area, Zone 7 is concurrently herewith entering into an agreement with BMWD ("the Water Purchase Agreement") to purchase 7,000 acre feet annually of firm water entitlement from the State Water Project (the "**Water Entitlement**") to

provide water for the Dougherty Valley Service Area. Concurrently with this agreement, Contractor and BMWD are terminating their Water Purchase Agreement, dated September 13, 1994, with the exception of the provision of that agreement providing Contractor with an option to purchase 5,000 acre-feet of water from BMWD.

F. Zone 7 concurrently herewith is entering into an agreement with the Semitropic Water Storage District ("**Semitropic**") pursuant to which Semitropic will agree to store water for Zone 7 so that Zone 7 may supplement the water available from the Water Entitlement to maintain the reliability of the service to the Dougherty Valley Service Area and enhance Zone 7's ability to serve its existing customers and future customers within Zone 7.

G. Zone 7 and Contractor desire to amend the Water Supply Contract to expand Contractor's service area and to establish certain terms and conditions pursuant to which Zone 7 will furnish and provide water to Contractor for delivery to the Dougherty Valley Service Area.

## AMENDMENT NO. 1 TO THE WATER SUPPLY CONTRACT

NOW, THEREFORE, Zone 7 and Contractor hereby mutually agree to amend the Water Supply Contract as follows:

1. Contractor's Service Area. The Dougherty Valley Service Area, as delineated in Figure 1, is hereby added to the Contractor's Service Area as defined in and pursuant to Section 6 of the Water Supply Contract.
2. Special Provisions for Water Supplied to Contractor for Use in the Dougherty Valley Service Area. Those certain terms and conditions described more fully in **Appendix 1**, attached hereto, are hereby appended to and incorporated into the Water Supply Contract and shall govern the provision of services to the Dougherty Valley Service Area.
3. Ratification of Water Supply Contract. Except as modified by this Amendment, the Water Supply Contract and all provisions contained therein shall remain unchanged.
4. Counterparts. This Amendment may be executed in one or more counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one and the same document.
5. Effective Date. This amendment shall not become effective until the close of escrow pursuant to the Water Service Escrow Agreement entered into concurrently herewith.
6. Interpretation. To the extent any provisions of this Amendment and/or **Appendix 1** are inconsistent with any provisions of the Water Supply Contract, the provisions of this Amendment and/or **Appendix 1** shall control with respect to the Dougherty Valley Service Area. Otherwise, the terms of the Water Supply Contract, as amended by this Amendment, shall remain in full force and effect.

IN WITNESS WHEREOF, this Amendment has been executed as of the day and year first above written.

ZONE 7:

ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By: [Signature]  
Its: President, Board of Directors

ATTEST:

By: [Signature]  
Its: Secretary

APPROVED AS TO FORM:

DOUGLAS HICKLING  
COUNTY COUNSEL

By: [Signature]  
Deputy County Counsel

Contractor:

DUBLIN SAN RAMON SERVICES DISTRICT

By:   
Its: President, Board of Directors

ATTEST:

By:   
Its: Secretary

APPROVED AS TO FORM:

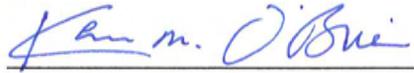
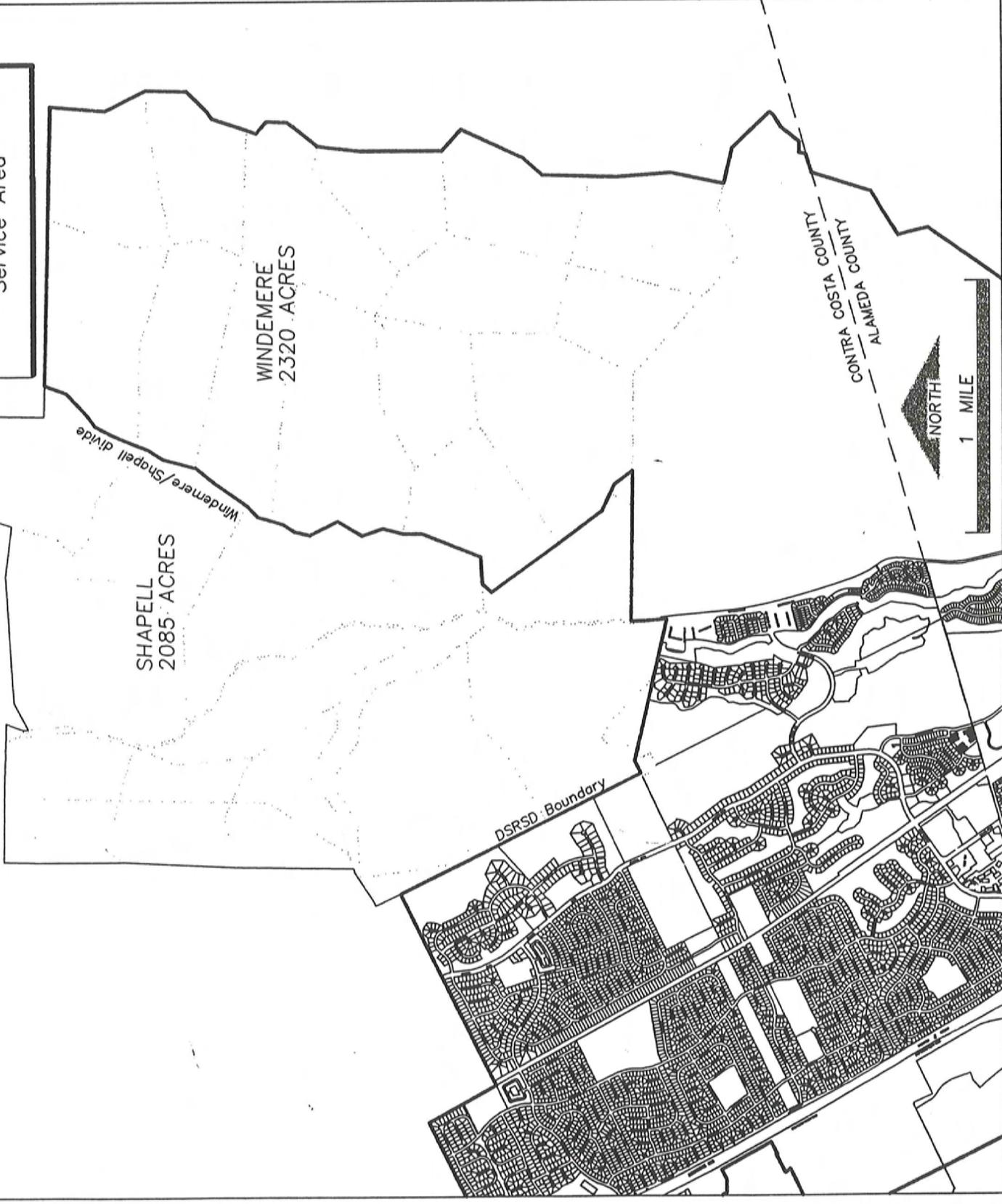
By:   
DSRSD Special Counsel

Figure 1  
Map of Dougherty Valley  
Service Area



## APPENDIX I

SPECIAL PROVISIONS  
FOR WATER SUPPLIED TO CONTRACTOR  
FOR USE IN THE DOUGHERTY VALLEY SERVICE AREA

## A. DEFINITIONS

"**Adjustment Index**" for the year in which the adjustment is being made shall mean a fraction, the numerator of which is the Construction Costs Index, 20-City Average, published by the Engineering News Record (the "Construction Costs Index") of the calendar year immediately preceding the calendar year when the adjustment is being made, and the denominator of which shall be 5,858.3 (20-City Average as of December 1997). If publication of the Construction Cost Index ceases or if the basis for the index is substantially modified, Zone 7 and Contractor shall mutually agree on an alternative index.

"**Amendment**" shall mean this Amendment No. 1 to the Water Supply Contract.

"**Annual Water Supply Report**" shall mean that certain annual report required to be delivered by Contractor to Zone 7 pursuant to Section C of this Appendix.

"**Dougherty Valley Service Area**" shall mean, as delineated in Figure 1 of the Amendment, that geographic area added to Contractor's Service Area under the Water Supply Contract pursuant to this Amendment

"**Dougherty Valley Service Area Allotment**" equals the Water Entitlement multiplied by a factor based on the Department of Water Resources' latest estimate of long-term State Water Project annual yield, as determined and used by Zone 7 for water supply planning purposes. This factor is currently 75%. The factor will be the same for water conveyed to DSRSD for delivery to the Dougherty Valley Service Area as it will be for State Water Project water being delivered within Zone 7's boundaries. Zone 7 and Contractor recognize that the long-term State Water Project yield is based on hydrological records and applicable regulatory requirements that are subject to change over time. Zone 7 will meet and confer with Contractor prior to changing the yield estimate. The current Dougherty Valley Service Area Allotment is: 7,000 acre feet (the Water Entitlement, defined below) x .75 (the current factor for the long-term State Water Project yield) = 5,250 acre feet per year.

"**DWR**" shall mean State of California Department of Water Resources.

"**DWR/Zone 7 Agreement**" shall mean the Contract between the State of California Department of Water Resources and Alameda County Flood Control and Water

Conservation District for a Water Supply for Zone No. 7, dated November 21, 1961, as amended.

**"DWR/Zone 7 Amendment No. 19"** shall mean the amendment to the DWR/Zone 7 Agreement whereby DWR agrees to convey the Water Entitlement to Zone 7.

**"New Connection"** shall mean any new metered water service within the Dougherty Valley Service Area that will furnish water from a water supply system that is connected to the Zone 7 water supply system or to the Livermore-Amador Valley Main Groundwater Basin (as defined in the Water Supply Contract), including but not limited to water services that are part of any new development to be constructed.

**"Semitropic"** shall mean the following public entities: Semitropic Water Storage District, Semitropic Improvement District, Buttonwillow Improvement District and the Pond-Poso Improvement District of the Semitropic Water Storage District, collectively.

**"Semitropic Agreement"** shall mean the agreement between Zone 7 and Semitropic, entered concurrently herewith, whereby Semitropic agrees to provide groundwater storage space for Zone 7's use.

**"Tax Override Charges"** shall mean those certain State Water Project expenses that Zone 7 pays for through an ad valorem tax levied on property owners within Zone 7 (denoted as "Flood Zone 7 State Water" on the property tax bill) as authorized under Section 36 of the California Water Code, Appendix 55 ("the District Act") and other applicable state laws. Zone 7 currently determines the Tax Override Charges based on the following State Water Project charges as invoiced by DWR: 1) Water System Revenue Bond Surcharge; 2) Capital Cost Component -- Transportation Charge; 3) Minimum Operating Maintenance, Power and Replacement Component -- Transportation Charge; and 4) Off-Aqueduct Power Facilities. Zone 7 may include other DWR charges as Tax Override Charges in accordance with applicable law, as long as such other charges are prospective in nature and charged as Tax Override Charges on property owners within Zone 7.

**"Water Connection Charge Program"** shall mean Zone 7's Water Connection Charge Program, as updated from time to time.

**"Water Entitlement"** shall mean that certain 7,000 acre feet of firm water entitlements that Zone 7 has agreed to purchase concurrently herewith from the Berrenda Mesa Water District ("BMWD") as set forth in the Water Purchase Agreement.

**"Water Purchase Agreement"** shall mean that certain agreement between Zone 7 and BMWD pursuant to which Zone 7 has agreed concurrently herewith to purchase, and BMWD agreed to sell, the Water Entitlement.

## B. DELIVERY

1. Water Supply. Subject to, and as set forth in, the terms and conditions of this Amendment, Zone 7 shall provide Contractor with a supply of treated water for the Dougherty Valley Service Area.
2. Preliminary Water Delivery Schedule. Section 10 of the Water Supply Contract requires Contractor, on an annual basis, to submit to Zone 7 a preliminary water delivery schedule indicating the quantity of water anticipated by Contractor to be required for Contractor's service area during each month of the succeeding five (5) calendar years. Each such preliminary water delivery schedule shall hereafter include a separate itemization of water anticipated by Contractor to be required for the Dougherty Valley Service Area during such five-year period and be accompanied by the "**Annual Water Supply Report**" described in Section C below.
3. Review and Approval by Zone 7. Zone 7 shall review the Preliminary Water Delivery Schedule in accordance with Section 10 of the Water Supply Contract. Zone 7 may only revise or disapprove contractor's delivery request for the Dougherty Valley Service Area for the reasons set forth in Sections 12 (Peak Demands), 13 (Curtailed Delivery During Maintenance Periods), 14 (Availability of Water), or 15 (Suspension of Service) of the Water Supply Contract, or as described in Section B4, B5 and D1 below.
4. Limitations on Deliveries. Notwithstanding any other provision of this Amendment, Zone 7 shall have no obligation under this Amendment, in any year, to deliver water to the Dougherty Valley Service Area in excess of the Dougherty Valley Service Area Allotment.
5. Shortfalls. If a delivery schedule submitted to Zone 7 for the Dougherty Valley Service Area pursuant to paragraph B.2 above exceeds the Dougherty Valley Service Area Allotment for any year covered by the preliminary water delivery schedule, Zone 7 shall immediately deliver notice to Contractor of the shortfall, and Contractor, shall either (i) use its best efforts to secure additional water supplies adequate to eliminate such projected shortfall prior to its occurrence, or (ii) submit a revised delivery schedule that does not result in a shortfall. Zone 7 is under no obligation pursuant to this Amendment to seek additional water supplies for the Dougherty Valley Service Area if Contractor's request exceeds the Dougherty Valley Service Area Allotment in any year. Zone 7 shall use its best efforts to facilitate the transfer and use of any additional water supplies obtained through the efforts of the Contractor.

## C. REPORTS

1. Annual Water Supply Report. Contractor shall measure and report to Zone 7 annually on treated water usage within the Dougherty Valley Service Area. Contractor's annual report to Zone 7 (the "Annual Water Supply Report") shall include a description of, among other things, (i) water deliveries by month for the past year; (ii) number and size of current service connections; and (iii) number and size of New Connections established over the preceding

year. The measurement and recordation of such water deliveries shall be subject to the same provisions for inspection and testing of meters and instrumentation by Zone 7 as is provided to Contractor in Section 8 of the Water Supply Contract. The Annual Water Supply Report shall be prepared and submitted by Contractor in a form acceptable to Zone 7 and due by March 1 of the following year.

2. Monthly Water Delivery Report. Section 11 of the Water Supply Contract requires Contractor to report to Zone 7 on or before the tenth day of each month the total volume, in acre-feet, of groundwater extracted from the Main Basin and any water obtained from "Other Sources" (as defined in the Water Supply Contract) for the preceding month. This report shall be expanded to include water supplied by Contractor to the Dougherty Valley Service Area from all sources during such preceding month, based on all metered flows to the Dougherty Valley Service Area (the "**Monthly Water Delivery Report**").

#### D. PAYMENTS

1. Treated Water Rate. Contractor shall pay Zone 7 for water delivered by Zone 7 to Contractor for the Dougherty Valley Service Area in accordance with the provisions of Section D of the Water Supply Contract. If any payments required under the provisions of Section D of this Appendix are not received by the due date, Contractor shall be subject to suspension of service and the accrual of interest as provided in the Water Supply Contract under Sections 15 and 28 respectively. Zone 7 shall not be obligated to provide water for any demands resulting from New Connections for which Contractor has not made Water Connection Payments or Facility Use Payments pursuant to Sections D.2 and D.3, below.

2. Water Connection Payments. Contractor shall make payments to Zone 7 to compensate Zone 7 for the Dougherty Valley Service Area's share of Zone 7's Capital Expansion Program. For each New Connection in the Dougherty Valley Service Area, Contractor shall pay Zone 7 an amount, established by the Zone 7 Board by resolution, to Zone 7's Capital Expansion Program. The amount due for each New Connection will equal the connection charges within the Zone 7 boundaries less the sums included in the Zone 7 connection charge for obtaining additional water entitlements and additional storage, as Contractor has already provided the Water Entitlement and storage for the Dougherty Valley Service Area. Payments to Zone 7 shall be due within 30 days from the date upon which the building permit for the property receiving the New Connection was issued or 30 days from the date that the New Connection is made, whichever is earlier.

3. Facility Use Payments. Contractor agrees to compensate Zone 7 for use of Zone 7's existing facilities in providing water to the Dougherty Valley Service Area. Contractor shall make payments to Zone 7, hereinafter referred to as Facility Use Payments, as Contractor permits New Connections in the Dougherty Valley Service Area. The Facility Use Payments shall be \$1,850 per New Connection of the basic connection size, 5/8" meter. The amount of said Facility Use Payments are based on the pro rata share of the current value of Zone

7's capital assets. The Facility Use Payments for New Connections of other sizes shall be adjusted by the "fee factor" contained in the Zone 7 Water Connection Charge Ordinance, Section III.

Zone 7 shall adjust the Facility Use Payments at the times specified in this section by multiplying \$1,850 by the Adjustment Index. The first adjustment to the Facility Use Payments shall go into effect no earlier than five years following issuance of the first building permit for development in the Dougherty Valley Service Area. Subsequent adjustments shall occur at five (5) year intervals thereafter. Payments to Zone 7 under this section shall be collected in the same manner and be due at the same time as payments due under Section D.2 (above).

4. Capital Expansion Water Facilities. Zone 7 shall keep Contractor apprised of Zone 7's progress in developing and constructing any capital water facilities that are necessary to provide service to Contractor for ultimate use in the Dougherty Valley Service Area. If Contractor determines, and Zone 7 concurs, that capital facilities required by Zone 7 to provide water to Contractor pursuant to this Amendment will not be available in time for Zone 7 to make requested deliveries under this Amendment, Contractor may elect to design and construct such capital facilities, and Zone 7 will reduce future connection payments pursuant to Paragraph D.2 (above) by the costs incurred by Contractor.

5. Surcharge for Water Service for Dougherty Valley Service Area. Contractor shall pay Zone 7 a surcharge for water service for the Dougherty Valley Service Area to compensate Zone 7 for additional State Water Project charges incurred by Zone 7 as a result of providing water to the Dougherty Valley Service Area. The surcharge shall equal the Dougherty Valley Service Area's proportionate share of the total Tax Override Charges, calculated as follows: (6,080 (the estimated amount of water entitlement necessary to supply the Dougherty Valley Service Area with 4,560 acre-feet of water per year given a State Water Project long-term yield of 75%)/Zone 7's total State Water Project entitlement) multiplied by the total Tax Override Charges.

$$\left( \frac{4,560}{\text{Zone 7's Total State Water Project entitlement (in acre-feet)}} \right) \times \left( \frac{\text{factor used to determine}}{\text{SWP long-term yield}} \right) \times \left( \frac{\text{Total Tax}}{\text{Override Charges}} \right) = \text{Annual surcharge per this paragraph}$$

Zone 7 receives a statement of charges from DWR on or about July 1<sup>st</sup> of the preceding calendar year for which the charges are payable. Zone 7 shall invoice the Contractor on or

about September 1<sup>st</sup> preceding the November 1<sup>st</sup> for which the surcharge shall be due. DWR may make subsequent adjustments to its statement of charges. Accordingly, Zone 7 will make revisions to said invoice by issuing an additional invoice or refund as appropriate.

If, at some future date, the Dougherty Valley Service Area is annexed to Zone 7 and Zone 7 levies the Tax Override Charges directly on Contractor's customers in the Dougherty Valley Service Area, the aforementioned surcharge shall automatically terminate and be of no further force and effect.

6. Other Charges. Zone 7 and Contractor acknowledge and agree that from time to time there may arise a need for the imposition of additional payments to ensure that the Dougherty Valley Service Area bears all costs associated with the provision of treated water thereto under this Amendment. However, Zone 7 shall not impose upon Contractor any payments or charges not imposed upon Zone 7's Other Contractors for any purposes other than to recover costs associated with delivering water to the Dougherty Valley Service Area pursuant to this Amendment.

## E. ALTERNATIVE DELIVERY METHODS

If a court of competent jurisdiction determines, in a judgment that cannot be appealed, that Zone 7 cannot participate in water delivery to the Dougherty Valley Service Area pursuant to the terms of this Amendment, Zone 7 and Contractor agree to use their best efforts to negotiate a contract, pursuant to which Zone 7 can convey water to Contractor for service to the Dougherty Valley Service Area. To limit the possibility of any interruption of service to the Dougherty Valley Service Area, either Zone 7 or Contractor may request such negotiations to commence prior to the conclusion of any such litigation. Zone 7 and Contractor agree to negotiate the contract in accordance with the principles listed below:

1. Insofar as possible, the contract shall contain all of the same terms and condition as this Amendment, except that Zone 7 would transfer to Contractor (i) ownership the 6,080 acre-feet of water entitlement, (ii) the Zone 7's rights and obligations pursuant to the Semitropic Water Storage District contract, (iii) water in storage in Semitropic, (iv) Zone 7's interest in any security instrument relating to the provision of water to the Dougherty Valley Service Area and (v) any remaining funds paid to Zone 7 by Contractor for the purpose of Zone 7 making payments to Semitropic.
2. Upon such transfer, Contractor would become solely responsible for all costs and other obligations associated with the entitlements, storage rights and service to the Dougherty Valley Service Area.
3. The parties agree to cooperate in good faith to obtain all administrative and regulatory approvals necessary for the transfer, and Contractor would pay all costs incurred by both parties in executing such a transfer.
4. Contractor would contract with Zone 7 to provide the services of water wheeling, treatment, seasonal storage and distribution through the Zone 7 system at a mutually agreeable price.
5. Contractor would not increase its use of the Main Groundwater Basin in excess of 1,400 AF of seasonal storage without the prior approval of Zone 7.
6. Contractor, upon consulting with Zone 7, would have the authority to determine the size of Semitropic Storage required for service to the Dougherty Valley Service Area.
7. Zone 7 would administer the DWR State Water Project contracts on behalf of DSRSD, as well as operations and conveyance of Semitropic Storage and the Water Entitlements.
8. Contractor will neither seek to materially alter its contractual relationship with Zone 7 nor terminate its Water Supply Contract with Zone 7 for the purposes of becoming an independent water purveyor for 30 years or until the specific termination date

contained in the existing Water Supply Contract between Zone 7 and DSRSD, whichever is longer.

# **APPENDIX H**

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## Recycled Water Ordinances and Policy

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ORDINANCE NO. 301ORDINANCE FORMALLY ESTABLISHING RULES AND REGULATIONS GOVERNING THE USE OF RECYCLED WATER WITHIN THE DUBLIN SAN RAMON SERVICES DISTRICT, AND REPEALING ORDINANCE NO. 280

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The Board of Directors (“Board”) of the Dublin San Ramon Services District (“District”), a political subdivision of the State of California, in the Counties of Alameda and Contra Costa, does ordain as follows:

**SECTION 1. FINDINGS**

This Board finds that:

- A. The people of the State of California (“State”) have a primary interest in the development of facilities to recycle wastewater to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the State (California Water Code, Section 13510);
- B. Conservation of all available water resources requires the maximum reuse of wastewater for beneficial uses of water (California Water Code, Section 461);
- C. Continued use of potable water for irrigation of greenbelt areas and other non-potable uses may be an unreasonable use of such water where recycled water is available (California Water Code, Section 13550);
- D. Resolution No. 42-92 adopted on August 4, 1992, established policies for the use, promotion, and priorities for recycled water service within and outside the District’s water service boundaries;
- E. Ordinance No. 280 established a Recycled Water Use Zone within the District, consisting of all areas currently served by potable water services of the District and those additional

Ord. No. 301

areas designated for such service by the pertinent Local Agency Formation Commission pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.);

F. The State policies described in previous findings apply within the District. The District is highly dependent on limited imported water for domestic, agricultural and industrial uses, and the reliability of the supply of imported water is uncertain. Developing and utilizing recycled water can reduce the need for additional imported water. Moreover, recycled water is more readily available in seasons of drought when the supply of potable water for nonessential uses may be uncertain. In light of these circumstances, within the Recycled Water Use Zone as confirmed herein, certain uses of potable water may be considered unreasonable pursuant to Section 3 of this Ordinance.

G. The environmental impacts of numerous development projects within the Recycled Water Use Zone have been examined in depth by various land use jurisdictions with the respective responsibility therefor, and for each such development project, the respective land use jurisdictions have adopted mitigation measures that require the use of recycled water for landscape irrigation on certain land use types to reduce the respective environmental impacts of the project under consideration. Accordingly, the respective land use jurisdictions have approved those development projects on the condition that recycled water is used for landscape irrigation. Among the major development projects of this type are the following:

1. The Schaefer Ranch project within the City of Dublin was approved by said City under the Schaefer Ranch General Plan Amendment in conjunction with a Final Environmental Impact Report (FEIR) therefor in May 1996, and the territory

comprising the Schaefer Ranch project was annexed to the District effective December 23, 1997;

2. The Dougherty Valley area in Contra Costa County was approved by said County under the Dougherty Valley Specific Plan in conjunction with an FEIR in November 1996, and, subsequently, Eastern Dougherty Valley (Windemere Ranch) was annexed to the District effective October 20, 1997;

3. Portions of eastern Dublin have been approved by the City under the Eastern Dublin Specific Plan and General Plan Amendment in conjunction with an FEIR for the Eastern Dublin Specific Plan and General Plan Amendment on May 10, 1993, as amended;

H. The District has planned for, and made a commitment to, the provision of recycled water for approved uses within its potable water service area by forming the DSRSD·EBMUD Recycled Water Authority (DERWA), a public agency established by joint exercise of powers agreement between East Bay Municipal Utility District (EBMUD), and this District, and DERWA has certified an FEIR and approved a project that includes the service of recycled water in District's potable water service area;

I District has prepared a Water Master Plan dated September 2000 to define facilities needed for providing recycled water service within the Recycled Water Use Zone;

J. District has prepared Recycled Water Use Guidelines and a Recycled Water Section of the Standard Procedures, Specifications and Drawings ("Standards") which comprise a compilation of the criteria by which the planning, design, construction, operation, maintenance, and use of recycled water are administered by the District;

Ord. No. 301

K. In consideration of the foregoing and to protect the common water supply of the region that is vital to public health and safety and to prevent endangerment of public and private property, requirements for the use of recycled water within the potable water service area of the District shall be, and hereby are, established as set forth this Ordinance.

### **SECTION 2. RECYCLED WATER USE ZONE**

All areas designated for or currently served by potable water services of the District, from and after the effective date hereof, shall be, and hereby are, included within the Recycled Water Use Zone of the District, which zone is hereby established. Designation for potable water services shall mean that certain designation made by the Local Agency Formation Commission under the requirements of Government Code Section 56000 et seq.

### **SECTION 3. REQUIREMENT TO USE RECYCLED WATER AND RULES AND REGULATIONS GOVERNING SUCH USE**

#### **A. Mandatory Use of Recycled Water**

1. It is the policy of the District that recycled water determined to be available pursuant to Section 13550 of the California Water Code shall be used for non-potable irrigation uses within the designated Recycled Water Use Zone wherever there is not an alternative higher or better use for the recycled water, its use is economically justified, financially and technically feasible, and consistent with legal requirements, preservation of public health, safety and welfare, and the environment.

Accordingly, unless otherwise provided hereunder, all new development within the Recycled Water Use Zone shall be required to use recycled water for appropriate landscape irrigation. Planning, design and construction in such new development shall incorporate recycled water facilities in conformity with District

Standards, and such facilities shall be connected to and use District recycled water services. The District's determination of appropriate landscape irrigation uses shall be based on Standards and/or requirements for water of unrestricted use quality contained in Title 22 of the California Code of Regulations, as said provisions may from time to time be amended, and applicable requirements of the Department of Health Services for recycled water distribution operations.

2. Compliance with the requirements of this Ordinance shall be a condition precedent to the District's provision of new potable water services within the Recycled Water Use Zone.

3. New development within the Recycled Water Use Zone which the District Engineer or his or her designee determines meets at least one of the following criteria, shall be exempt from the requirements of this Ordinance:

a. Residential development that will contain no landscape areas owned in common requiring irrigation.

b. Development of single-family, detached residences for which no homeowners' or similar association or entity will have responsibility for irrigation system maintenance and operations.

c. Development of single-family, detached residences for which a homeowners' or similar association or entity will have responsibility for irrigation and maintenance operations, but only for individual parcels corresponding to each single-family detached residence ownership.

- d. Development for which recycled water service is determined by the District Engineer or his or her designee not to be economical because of its distance from available or planned recycled water sources; and/or because irrigation demands within such development are very slight relative to overall water demands; and/or inadequate recycled water supply is available to serve the demand. Recycled water service that is not economical, as used herein, shall be determined by the District Engineer or his or her designee using such tests as he or she deems appropriate, and nothing in this Ordinance shall be construed to require that the District Engineer or his or her designee hold a hearing or take any evidence.
4. Existing potable water customers within the Recycled Water Use Zone shall be exempt from the requirements of this Ordinance except as set forth in subsections “a” or “b” below.
  - a. Landscape irrigation for property located within the area described in the Eastern Dublin General Plan Amendment, adopted by the City of Dublin May 10, 1993, shall not be exempt.
  - b. Any customers who received either a potable water connection or a construction permit (or both) containing conditions requiring use of recycled water or construction of recycled water facilities shall not be exempt.
5. Nothing in this Ordinance shall be construed to prohibit any existing customer from voluntarily applying for recycled water service. The District shall have the right to deny such application if the District Engineer or his or her designee determines that such recycled water service would not be economical because of its

distance from available or planned recycled water sources; and/or because anticipated irrigation demands served through that connection would be very slight relative to overall water demands; and/or because inadequate recycled water supply is available to serve the demand. Recycled water service that is not economical, as used herein, shall be determined by the District Engineer or his or her designee using such tests as he or she deems appropriate, and nothing in this Ordinance shall be construed to require that the District Engineer or his or her designee hold a hearing or take any evidence.

6. Procedures following determination

a. Each applicant or customer shall be notified in writing of any determination made under the preceding paragraphs (3, 4 or 5) and of the basis therefor. The notice, including any proposed conditions and time schedule for compliance, and, if applicable, a recycled water permit application, shall be sent to the applicant or customer by certified mail. The determination shall be final if the applicant or customer does not file a written notice of appeal in compliance with paragraph d within thirty (30) days after receipt of the notice of determination.

b. The applicant or customer may file a written notice of appeal with the District Secretary within thirty (30) days after any notice of determination to comply is delivered or mailed to the applicant or customer, and may request the Board to reconsider the determination or to modify the proposed conditions or schedule for conversion. The notice of appeal must specify

each ground of the appeal. The Board will act on the appeal after reviewing the record of the District Engineer's determination and the written notice of appeal, and such other information that the Board believes is necessary to review the District Engineer's determination. Nothing in this Ordinance shall be construed to require that the Board hold a hearing or take any evidence.

**B. Rules and Regulations Governing Use of Recycled Water**

1. **Purpose.** The purpose of these rules and regulations is to establish the requirements for the planning, design, construction, operation, and maintenance of customer-owned recycled water systems in compliance with District Standards and the requirements of other regulatory agencies, including the California Department of Health Services (DHS), San Francisco Bay Regional Water Quality Control Board (RWQCB) and the County Environmental Management Department (EMD).
2. **Recycled Water Use Guidelines.** The District Engineer shall prepare, maintain and update from time to time the Recycled Water Use Guidelines to implement these rules and regulations and to establish requirements and standards for the planning, design, construction, operation, and maintenance of customer-owned recycled water systems. Compliance with the Recycled Water Use Guidelines is a requirement of these rules and regulations. In the event of any conflicts between the Recycled Water Use Guidelines and these rules and regulations, these rules and regulations shall prevail.
3. **Need for Site Approval.** In addition, each recycled water use site must be reviewed and approved by the DHS

4. **Land Use Authorities.** Compliance with these rules and regulations will not excuse any requirements for approvals from land use authorities, which may include the submission of plans for the project to city or county departments, agencies, or districts, that have the authority to issue permits and requirements such as: plumbing, permits, building requirements, and planning criteria.

5. **Protection of Public Health.** Notwithstanding compliance with these rules and regulations, the District reserves the right to take any action necessary with respect to the operation of the customer's recycled water system to safeguard the public health. If at any time during construction or operation of the recycled water system, real or potential hazards are evidenced, such as cross connections with the potable system, improper tagging, signing, or marking, or unapproved/prohibited uses, the District reserves the right and has the authority to terminate immediately, without notice, recycled water service in the interest of protecting the public health.

6. **Recycled Water Use License.** The California Regional Water Quality Control Board requires that the District establish permitting, tracking, record keeping, monitoring, and inspection procedures for all water recycling. The Recycled Water Use License and referenced documents serve as this permit. The Recycled Water Use License constitutes permission for the customer to use recycled water in conformance with all District Standards, Codes, Ordinances, policies and these guidelines including any special site-specific requirements that may be identified. A standard form Recycled Water Use License and required referenced documents shall be included in the Recycled Water Use Guidelines.

7. **Recycled Water Systems Application Process.** Applicant, whether or not an existing potable water customer, shall prepare and submit a general Application for Services that includes a Recycled Water Service – Application/Supplemental Information in the form defined in the Recycled Water Use Guidelines.
8. **General Design Requirements.** To assure the protection of the public and those operating and maintaining the recycled water irrigation system, design of the customer-owned recycled water irrigation facilities is required to meet standards established by the California State Department of Health Services, and the District Engineer shall prepare, maintain and update from time to time the Standards.
9. **Design & Construction of Recycled Water Systems.** Applicant, whether or not an existing potable water customer, shall prepare and submit the construction plans for the required District-owned facilities and the customer-owned facilities in compliance with the requirements set forth in the Recycled Water Use Guidelines and the Standards. Upon approval of the design by the District Engineer, the applicant shall obtain all required permits and construct the recycled water facilities, subject to inspection by the City, County and the District, and shall arrange for testing of backflow prevention devices, testing for cross connections, and coverage testing, all in compliance with the requirements set forth in the Recycled Water Use Guidelines.
10. **On-Site Supervisor of Customer Facilities.** Each recycled water customer is required to designate, in compliance with the Recycled Water Use Guidelines, an On-site Supervisor who is knowledgeable about all facets of the system, and who

shall be responsible for the safe and efficient operation of the customer's recycled water system.

11. **Operation and Maintenance of Recycled Water Systems.** The customer, through the On-site Supervisor, shall operate and maintain the customer's recycled water system in compliance with the requirements set forth in the Recycled Water Use Guidelines.

12. **Emergency Procedures.** In case of a major earthquake, flood, fire, tornado, structural failure, or other incident, which could likely damage the recycled or potable water systems, the customer, through the On-site Supervisor, shall comply with of the emergency procedures' requirements of the Recycled Water Use Guidelines.

13. **Emergency Cross-Connection Response Plan.** In the event that a backflow incident or cross connection is suspected or occurs, the customer shall immediately implement the procedures set forth in the emergency cross-connection response plan of the Recycled Water Use Guidelines.

C. **Payment for Recycled Water Facilities**

Facilities required for provision of recycled water services shall be constructed and financed in conformance with the District Major Infrastructure Policy (Resolution No. 55-97), as said policy provides as of the effective date hereof or as it may from time to time be amended.

**SECTION 4. DEFINITIONS**

The following terms are defined for purposes of this Ordinance:

A. **Alameda County Environmental Management Department** (Alameda County EMD) - This agency is the local health protection agency for most areas of Alameda County.

Ord. No. 301

B. **Applicant** - Any person or entity that applies for recycled water service under the terms of the appropriate regulations. The approved customer may be a different party than the applicant but must be specified in the Recycled Water Use License.

C. **Approved Use** - An application of recycled water in a manner, and for a purpose, designed in a Recycled Water Use License issued by the District and in compliance with all applicable regulatory agency requirements.

D. **Contra Costa County Environmental Management Department** (Contra Costa County EMD) - This agency is the local health protection agency for most areas of Contra Costa County.

E. **Cross Connection** - Any physical connection between any part of a water system used or intended to supply water for drinking purposes and any source or system containing water or substance that is not or cannot be approved as safe, wholesome and potable for human consumption. This includes direct piping between the two systems, regardless of the presence of valves, backflow prevention devices, or other appurtenances.

F. **Customer** - A person furnished recycled water service by the District.

G. **Customer Facilities** - Designates or relates to facilities owned or operated by a customer, downstream of the water meter, and typically consists of distribution and irrigation lines and appurtenances such as pumps, control valves and sprinklers. All customer system/facilities are the property of the user, and are to be maintained and operated by the user and/or their employees.

H. **Development** - (1) The placement or erection of any structure or other improvements and all alterations of the land and construction incident thereto for the purpose of changing the type, density, or intensity of use of land, which use(s) will (2) require one or more new potable water connections.

Ord. No. 301

- I. **District** - The Dublin San Ramon Services District
- J. **Greenbelt Areas** - A greenbelt area includes, but is not limited to, golf courses, cemeteries, parks and landscaping.
- K. **On-Site Supervisor** - The customer shall designate an On-site Supervisor to provide liaison with the District. This person shall be available to the District at all times, shall have the authority to carry out any requirements of the District, and shall be responsible for the installation, operation and maintenance of the recycled and potable water systems and also prevention of potential hazards.
- L. **Point of Connection** - This is the point where the customer's system ties to the District's system. This is usually at the outlet of the water meter.
- M. **Potable Water** - Water of a quality suitable for human consumption as defined in the State Safe Drinking Water Act, Health & Safety Code, Section 116275, Subdivision (e), as it may be amended from time to time.
- N. **Potable Water Customer** - A person furnished potable water service by the District.
- O. **Recycled Water** - Water produced by further treatment of secondary effluent and of a quality suitable for unrestricted irrigation as defined in Title 22, California Code of Regulations, Division 4, Environmental Health, Chapter 3, Reclamation Criteria, as it may be amended from time to time.
- P. **Recycled Water Use License** - A license issued by the District to the customer, which outlines monitoring, self-inspection, reporting, and site-specific requirements. This license is required by the California Regional Water Quality Control Board. This license allows the customer to use recycled water in accordance with District Standards, Codes, Ordinances, policies and these guidelines and all applicable regulatory agency requirements.

Ord. No. 301

Q. **Secondary Effluent** - Wastewater treated that meets the requirements of the District NPDES discharge permit governing wastewater disposal, as it may be amended from time to time.

R. **State of California Department of Health Services** (State DHS) – Refers to the State of California Department of Health Services, Drinking Water Field Operations Branch – San Francisco District.

S. **Water** - All water delivered to a customer by the District.

#### **SECTION 5. FINDINGS IN CONFORMANCE WITH CEQA**

This Board hereby finds, in its independent judgment, that the environmental impacts of the adoption of this Ordinance are adequately examined and described in the Final Environmental Impact Report for the City of Dublin Schaefer Ranch General Plan Amendment, the Contra Costa County Final Environmental Impact Report for Dougherty Valley Specific Plan and General Plan Amendment, and the DSRSD·EBMUD Recycled Water Authority Final Environmental Impact Report for the San Ramon Valley Recycled Water Program.

#### **SECTION 6. EFFECTIVE DATE**

This Ordinance shall be effective thirty (30) days after its adoption.

#### **SECTION 7. REPEALER**

Ordinance No. 280, entitled “Ordinance Implementing the Dublin San Ramon Services District Recycled Water Policy (Resolution No. 42-92), Establishing a Recycled Water Use Zone Corresponding to the Potable Water Service Area of the District, and Repealing Ordinance No. 276,” adopted April 7, 1998, is hereby repealed.

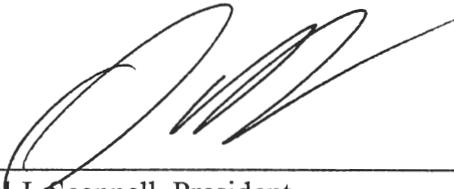
Ord. No. 301

ADOPTED by the Board of Directors of the Dublin San Ramon Services District at its regular meeting held on the 6th day of April, 2004, passed by the following vote:

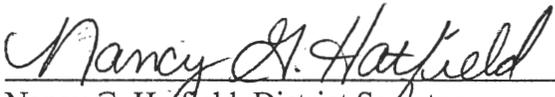
AYES: 5 – Directors Jeffrey G. Hansen, Thomas W. Ford, G.T. (Tom) McCormick,  
Richard W. Rose, Daniel J. Scannell

NOES: 0

ABSENT: 0

  
\_\_\_\_\_  
Daniel J. Scannell, President

ATTEST:

  
\_\_\_\_\_  
Nancy G. Hatfield, District Secretary

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## Dublin San Ramon Services District Code

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### **3.20.110      Duty to connect – Recycled water.**

- A. Recycled water determined to be available pursuant to Section 13550 of the California Water Code shall be used for nonpotable irrigation uses within the District's water service area, wherever there is not an alternative higher or better use for the recycled water, its use is economically justified, financially and technically feasible, and consistent with legal requirements, preservation of public health, safety and welfare, and the environment.

Unless otherwise provided under subsection (C) of this section, all new development within the District's water service area shall use recycled water for appropriate landscape irrigation. Planning, design and construction in such new development shall incorporate recycled water facilities in conformity with the District's Standard Specifications and/or the Recycled Water Use Guidelines, as amended from time to time. Such recycled water facilities shall be connected to and use District recycled water services. The District's determination of appropriate landscape irrigation uses shall be based on standards and/or requirements for water of unrestricted use quality contained in Title 22 of the California Code of Regulations, as said provisions may from time to time be amended, and applicable requirements of the Department of Public Health for recycled water distribution operations. The District Engineer shall establish permitting, tracking, record keeping, monitoring, and inspection procedures for all water recycling.

- B. Compliance with the requirements of this section shall be a condition precedent to the District's provision of new potable water services within the District's water service area.
- C. New development within the District's water service area, which the District Engineer or his or her designee determines meets at least one of the following criteria, shall be exempt from the requirements of this section:
1. Residential development that will contain no landscape areas owned in common requiring irrigation.
  2. Development of single-family, detached residences for which no homeowners' or similar association or entity will have responsibility for irrigation system maintenance and operations.
  3. Development of single-family, detached residences for which a homeowners' or similar association or entity will have responsibility for irrigation and maintenance operations, but only for individual parcels corresponding to each single-family detached residence ownership.
  4. Development for which recycled water service is determined by the District Engineer or his or her designee not to be economical because of its distance from available or planned recycled water sources; and/or because irrigation demands within such development are very slight relative to overall water demands; and/or inadequate recycled water supply is available to serve the demand. Recycled water service that is not economical, as used herein, shall be determined by the District Engineer or his or her designee using such studies as he or she deems appropriate, and nothing in this section shall be construed to require that the District Engineer or his or her designee hold a hearing or take any

## Dublin San Ramon Services District Code

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evidence.

- D. Nothing in this section shall be construed to prohibit any customer from voluntarily applying for recycled water service. The District shall have the right to deny such application if the District Engineer or his or her designee determines that such recycled water service would not be economical because of its distance from available or planned recycled water sources; and/or because anticipated irrigation demands served through that connection would be very slight relative to overall water demands; and/or because inadequate recycled water supply is available to serve the demand. Recycled water service that is not economical, as used herein, shall be determined by the District Engineer or his or her designee using such studies as he or she deems appropriate, and nothing in this section shall be construed to require that the District Engineer or his or her designee hold a hearing or take any evidence.
- E. Procedures following determination.
1. Each applicant or customer shall be notified in writing of any determination made under subsection (C) of this section, and of the basis therefor. The notice, including any proposed conditions and time schedule for compliance, and, if applicable, a recycled water permit application shall be sent to the applicant or customer by certified mail. The determination shall be final if the applicant or customer does not file a written notice of appeal in compliance with subsection (E)(2) of this section within thirty (30) days after receipt of the notice of determination.
  2. The applicant or customer may file a written notice of appeal in accordance with DSRSDC 1.80.050, Procedures for appeal. Nothing in this section shall be construed to require that the Board hold a hearing or take any evidence. [Ord. 301, 2004; Ord. 327, 2010]



# POLICY

## Dublin San Ramon Services District

<b>Policy No.:</b>	P300-10-3	<b>Type of Policy:</b>	Operations
<b>Policy Title:</b>	Water Recycling		
<b>Policy Description:</b>	Policy Regarding the Provision of Recycled Water Service both Within and Outside the District		
<b>Approval Date:</b>	Sept 7, 2010	<b>Last Review Date:</b>	2010
<b>Approval Resolution No.:</b>	37-10	<b>Next Review Date:</b>	2014
<b>Rescinded Resolution No.:</b>	34-06	<b>Rescinded Resolution Date:</b>	August 1, 2006

It is the policy of the Board of Directors of Dublin San Ramon Services District:

### **I. GENERAL**

- A. To promote, produce, sell and deliver recycled water to retail and wholesale customers both within and outside the District in a manner consistent with laws, regulations and prudent public policy.
- B. To work with the State of California, the Counties of Alameda and Contra Costa and individual local cities and agencies to develop ordinances and guidelines to encourage the use of recycled water.
- C. To develop regulations and standards to ensure the safe and beneficial use of recycled water within the District.
- D. To conduct ongoing public information and customer service programs to ensure that the public and individual customers have an appropriate understanding of recycled water including the benefits of using recycled water.
- E. To support scientific and practical research related to recycled water.
- F. To honor the terms of all contracts entered into regarding treatment, delivery and/or distribution of recycled water.

**II. RECYCLED WATER SERVICE PRIORITIES**

- A. That the first service priority is the continued delivery of recycled water to retail customers within the District service area.
- B. That the second service priority is the continued delivery of recycled water to wholesale customers outside the District service area pursuant to existing contracts.
- C. That the third service priority is the delivery of recycled water to existing potable water customers (retrofits) within the District service area.
- D. That the fourth service priority is the delivery of recycled water to new development within the District service area.
- E. That the fifth service priority is the delivery of recycled water to retail or wholesale customers within the Zone 7, Alameda County Flood Control and Water Conservation District.
- F. That the last service priority is the delivery of recycled water to any retail or wholesale customers that do not fit into any of the priorities above.
- G. That, in the event the need arises to further prioritize deliveries within any of the above priorities, or in the event of conflicts between the above priorities, the service priority shall be determined at the sole discretion of the Board of Directors of the District using the guidelines herein.

**III. RECYCLED WATER SERVICE TO RETAIL CUSTOMERS WITHIN THE DISTRICT**

- A. Recycled water service shall be provided to all existing and new customers when service is requested subject to:
  - 1. When in conformance with all laws and regulations governing the use of recycled water;
  - 2. On a case-by-case determination of the economic, environmental, and institutional feasibility of doing so; the feasibility will be determined at the sole discretion of the District using such tests as are appropriate unless there is a finding by the District that it is in the best interest of the District to proceed with a project on other grounds; and
  - 3. Availability of recycled water.

**IV. WHOLESALE RECYCLED WATER SERVICE OUTSIDE DISTRICT**

- A. To provide recycled water to wholesale customers outside the District when service is requested by the wholesale entity subject to:
  - 1. Case-by-case determination by District Board of Directors of the economic, environmental, and institutional feasibility of doing so; the economic feasibility will be

determined at the sole discretion of the Board of Directors using such tests as are appropriate unless there is a finding by the Board of Directors that it is in the best interest of the District to proceed with a project on other grounds;

2. Availability of adequate recycled water for District retail customers, DERWA and any signed agreements for firm wholesale delivery provided higher priority needs have been satisfied; and
  3. No adverse financial impact to customers within the District service area.
- B. That agreements between the District and wholesale customers be long-term due to the significant capital investment associated with the development of such projects.

**V. RETAIL RECYCLED WATER SERVICE OUTSIDE DISTRICT**

- A. To provide recycled water to retail customers outside the District whenever requested by the potable water purveyor providing service subject to:
1. Case-by-case determination by District Board of Directors of the economic, environmental, and institutional feasibility of doing so; the economic feasibility will be determined at the sole discretion of the Board of Directors using such tests as are appropriate unless there is a finding by the Board of Directors that it is in the best interest of the District to proceed with a project on other grounds; and
  2. Availability of adequate recycled water for retail customers within the District, DERWA, and any signed agreements for firm wholesale delivery.
- B. That service to retail customers outside the District be on the same basis, and have the same priority, as retail customers inside the District, except for Backup Water Supplies.

**VI. BACKUP WATER SUPPLIES**

- A. To provide backup potable water supplies to retail recycled water customers within the District service area, when available, for those infrequent times when recycled water deliveries may be halted, and to establish conditions of service for such situations.

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# **APPENDIX I**

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## DSRSD Long-Term Water Supply Alternatives

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Dublin San Ramon  
Services District

**Long Term  
Alternative Water Supply Study**  
Final Report



# Long-term Alternative Water Supply Study Final Report

Prepared by:



September 2015

**Table of Contents**

**Executive Summary** .....i  
**Introduction** .....i  
**Development of Alternatives** .....i  
**Evaluation of Alternatives** .....iii  
**Recommended Portfolios** .....iv  
**Recommended Next Steps** .....v

**Chapter 1 Introduction** .....1-1  
1.1 Background .....1-1  
1.2 Current Conditions .....1-1  
1.3 Future Projections .....1-2  
1.4 Study Purpose and Approach .....1-3

**Chapter 2 Development of Alternatives** .....2-5  
2.1 Potential Options .....2-5  
2.1.1 Non-Potable Recycled Water .....2-5  
2.1.2 Indirect/Direct Potable Reuse .....2-6  
2.1.3 Imported Recycled Water .....2-6  
2.1.4 Groundwater .....2-6  
2.1.5 Stormwater .....2-6  
2.1.6 Desalination .....2-6  
2.1.7 North of Delta Water Contracts, Transfers, and Exchanges .....2-6  
2.2 DSRSD Board Workshop 1 .....2-7  
2.3 Meetings with Potential Partners .....2-7  
2.4 Options Carried Forward for Evaluation .....2-8  
2.5 Options Screened from Evaluation .....2-8  
2.5.1 Fringe Basin Groundwater .....2-8  
2.5.2 District-wide Stormwater Capture .....2-8

**Chapter 3 Evaluation of Alternatives** .....3-9  
3.1 Option 1a: Enhanced Conservation .....3-9  
3.1.1 Cost Estimates .....3-9  
3.1.2 Board Criteria .....3-10  
3.1.3 Benefits and Challenges .....3-10  
3.1.4 Partners Needed .....3-10  
3.1.5 Cost Saving Considerations .....3-10  
3.2 Option 1b: Recycled Water Direct to Customers .....3-11  
3.2.1 Cost Estimates .....3-11  
3.2.2 Board Criteria .....3-12  
3.2.3 Benefits/Challenges .....3-12  
3.2.4 Partners Needed .....3-12  
3.2.5 Cost Saving Considerations .....3-13  
3.3 Option 1c: Rainwater Capture and Greywater .....3-13  
3.3.1 Cost Estimates .....3-13  
3.3.2 Board Criteria .....3-14  
3.3.3 Benefits/Challenges .....3-14  
3.3.4 Partners Needed .....3-14  
3.3.5 Cost Saving Considerations .....3-14  
3.4 Option 1d: Residential Turf Replacement .....3-15  
3.4.1 Cost Estimates .....3-15  
3.4.2 Board Criteria .....3-15

3.4.3	Benefits/Challenges.....	3-15
3.4.4	Partners Needed .....	3-16
3.4.5	Cost Saving Considerations .....	3-16
3.5	Option 2a: Indirect Potable Reuse with Groundwater Recharge .....	3-16
3.5.1	Cost Estimates .....	3-17
3.5.2	Board Criteria .....	3-17
3.5.3	Benefits/Challenges.....	3-18
3.5.4	Partners Needed .....	3-18
3.5.5	Cost Saving Considerations .....	3-18
3.6	Option 2b: Indirect Potable Reuse with Reservoir Augmentation .....	3-19
3.6.1	Cost Estimates .....	3-20
3.6.2	Board Criteria .....	3-21
3.6.3	Benefits/Challenges.....	3-21
3.6.4	Partners Needed .....	3-22
3.6.5	Cost Saving Considerations .....	3-22
3.7	Option 2c: Direct Potable Reuse.....	3-22
3.7.1	Cost Estimates .....	3-23
3.7.2	Board Criteria .....	3-24
3.7.3	Benefits/Challenges.....	3-24
3.7.4	Partners Needed .....	3-25
3.7.5	Cost Saving Considerations .....	3-25
3.8	Option 3: Bay Desalination .....	3-25
3.8.1	Cost Estimates .....	3-27
3.8.2	Board Criteria .....	3-27
3.8.3	Benefits/Challenges.....	3-28
3.8.4	Partners Needed .....	3-28
3.8.5	Cost Saving Considerations .....	3-28
3.9	Option 4: North of Delta Transfers .....	3-28
3.9.1	Cost Estimates .....	3-30
3.9.2	Board Criteria .....	3-31
3.9.3	Benefits/Challenges.....	3-31
3.9.4	Partners Needed .....	3-32
3.9.5	Cost Saving Considerations .....	3-32
<b>Chapter 4 Recommended Portfolios .....</b>		<b>4-33</b>
4.1	Moving Beyond Status Quo .....	4-33
4.2	Portfolio 1: Prioritizing Supply Diversification .....	4-34
4.3	Portfolio 2: Maximizing IPR and Meeting the Concentration Risk Goal .....	4-35
4.4	Portfolio 3: Maximizing Desalination and Meeting the Concentration Risk Goal...	4-37
4.5	Portfolio 4: Maximizing Desalination and Meeting the Reliability Goal .....	4-38
4.6	Portfolio Overview .....	4-39
<b>Chapter 5 Recommended Next Steps.....</b>		<b>5-41</b>
<b>References .....</b>		<b>5-1</b>

**List of Tables**

<b>Table 3-1: Option 1a: Expanded Conservation Summary of Cost Estimates .....</b>	<b>3-10</b>
<b>Table 3-2: Option 1b: Recycled Water Direct to Customers Summary of Cost Estimates. 3-12</b>	
<b>Table 3-3: Option 1c: Rainwater and Greywater Summary of Cost Estimates .....</b>	<b>3-13</b>

Table 3-4: Option 1d: Residential Turf Replacement Summary of Cost Estimates .....	3-15
Table 3-5: Option 2a: IPR with Groundwater Recharge Summary of Cost Estimates ....	3-17
Table 3-6: Option 2b: IPR with Reservoir Augmentation Summary of Cost Estimates..	3-21
Table 3-7: Option 2c: DPR Summary of Cost Estimates .....	3-24
Table 3-8: Option 3: Bay Desalination Summary of Cost Estimates .....	3-27
Table 3-9: Option 4: North-of-Delta Transfers Summary of Cost Estimates .....	3-31
Table 4-1: Portfolio 1 Compared to Tentative Policy Goals .....	4-35
Table 4-2: Portfolio 2 Compared to Tentative Policy Goals .....	4-36
Table 4-3: Portfolio 3 Compared to Tentative Policy Goals .....	4-38
Table 4-4: Portfolio 4 Compared to Tentative Policy Goals .....	4-39
Table 4-5: Comparison of Four Portfolios against the Tentative Policy Goals.....	4-40
Table 5-1: Overview of Portfolio Water Supply Yields and Sources .....	5-41
Table 5-2: Example Regulatory, Technical, and Economic Tasks for Consideration.....	5-43

### List of Figures

Figure 1-1: DSRSD's Current Total Supply and Potable Supply Portfolio .....	1-2
Figure 1-2: Overview of DSRSD Potable Water, Wastewater, and Recycled Water Systems .....	1-2
Figure 1-3: Alternative Water Supply Study Approach .....	1-4
Figure 2-1: Potential Regional Water Supply Options.....	2-5
Figure 3-1: Schematic for IPR with Groundwater Recharge .....	3-17
Figure 3-2: Schematic for IPR with Reservoir Augmentation .....	3-19
Figure 3-3: Potential Pipeline Alignments for Option 2b IPR with Reservoir Augmentation .....	3-20
Figure 3-4: Schematic for DPR.....	3-23
Figure 3-5: Overview of Option 2c DPR.....	3-23
Figure 3-6: Schematic for Bay Desalination.....	3-26
Figure 3-7: Potential Pipeline Alignment for Option 3 Bay Desalination .....	3-26
Figure 3-8: Overview of Option 4 North-of-Delta Transfers .....	3-29
Figure 3-9: Potential Pipeline Alignment from EBMUD Walnut Creek Treatment Plant for Option 4 North of Delta Transfers .....	3-30
Figure 4-1: Status Quo Water Supply Portfolio in 2025.....	4-33
Figure 4-2: Overview of Portfolio 1 .....	4-34
Figure 4-3: Overview of Portfolio 2 .....	4-36
Figure 4-4: Overview of Portfolio 3 .....	4-37
Figure 4-5: Overview of Portfolio 4 .....	4-38
Figure 5-1: Typical Project Implementation Process.....	5-42

### Appendices

Appendix A -	Board Workshop 1 Materials
Appendix B -	Board Workshop 2 Materials
Appendix C -	Costing Spreadsheet for Supply Options

## **Acknowledgements**

This report was prepared by the following RMC Water and Environment staff:

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Review and input was provided by the following Dublin San Ramon Service District staff:

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Dan McIntyre

Rhodora Biagtan

## **List of Abbreviations**

ACWD	Alameda County Water District
AF	Acre-feet
AFY	Acre-feet per year
AOP	Advanced oxidation process
CCWD	Contra Costa Water District
District	Dublin San Ramon Services District
DERWA	Dublin San Ramon Services District-East Bay Municipal Utility District Recycled Water Authority
DPR	Direct potable reuse
DSRSD	Dublin San Ramon Services District
DWR	California Department of Water Resources
EBDA	East Bay Dischargers Authority
EBMUD	East Bay Municipal Utility District
IPR	Indirect potable reuse
LAVWMA	Livermore-Amador Valley Water Management Agency
MF	Microfiltration
r-gpcd	Residential gallons per capita per day
RO	Reverse osmosis
RWTF	Recycled Water Treatment Facility
SCVWD	Santa Clara Valley Water District
SFPUC	San Francisco Public Utilities Commission
SWRCB	State Water Resources Control Board
TDS	Total dissolved solids
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WWTP	Wastewater treatment plant
YCWA	Yuba County Water Agency
Zone 7	Zone 7 Water Agency

## Executive Summary

### Introduction

The Dublin San Ramon Services District (District or DSRSD) currently serves potable water and recycled water to about 54,000 customers in the City of Dublin and Dougherty Valley portion of San Ramon. The District's potable water is supplied by the Zone 7 Water Agency as stipulated in a contract that expires in 2024. Zone 7 receives a portion of its water supply from local surface water and groundwater sources, but currently 80% of its water supply comes from imported sources, most of which is delivered from the Delta through the South Bay Aqueduct as part of the State Water Project (SWP). The current drought has severely impacted delivery of most surface water supplies in California, and the 2014 SWP cutbacks of Table A allocations, first to 0% and then to 5% (but only for delivery late in the year) were the lowest on record. In March 2015, the California Department of Water Resources (DWR) announced that the 2015 allocation would be 20%, the second lowest since 1991. These cutbacks also limited Zone 7's access to stored groundwater south of the Delta and prompted the District to restrict local use of potable water and question the long term water reliability of its current supply of potable water.

DSRSD projects that in 2015, total non-drought potable demand within its service area will be almost 13,000 acre-feet per year (AFY), with total demand (potable and non-potable) around 17,500 AFY (DSRSD 2015). By 2025, DSRSD projects that total demand will grow to around 21,900 AFY<sup>1</sup>. Roughly 4,400 AFY of the total demand in 2025 will be met with recycled water; the remaining 17,500 AFY will need to be met with potable supplies. Given the recent and projected cutbacks of water delivered by the State Water Project, DSRSD is investigating alternative sources of water. As a result, DSRSD is conducting this high-level study, the Long-Term Alternative Water Supply Study, to consider regional and local supply alternatives. Supplies considered include increased conservation, stormwater and grey water capture, potable reuse, bay desalination, regional interties and water exchanges, and groundwater. These options underwent analysis, including costing.

The overarching purpose of the Alternative Water Supply Study is to:

- Conduct a high level assessment of the District's long-term alternative water supply options
- Provide valuable information for the 2015 Urban Water Management Plan (UWMP) update
- Help the District develop a policy framework for its water management goals
- Identify next steps to enhance water supply reliability for the District and its customers

This policy level framework would include the following goal-oriented elements:

- Reducing potable demand
- Increasing reuse
- Increasing water supply reliability and decreasing water supply variability
- Increasing reliance on sources under local control
- Reducing source concentration risk

### Development of Alternatives

Identification of potential alternatives began with review of recent studies for the greater Bay Area and studies for each of the other wholesale water agencies. A brainstorming workshop was held with DSRSD staff to identify all local and regional water supplies that DSRSD could potentially pursue. The Project

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<sup>1</sup> While preliminary work for the 2015 UWMP update indicates that future demands are less than previous projections, a total demand of 21,900 AFY in 2025 was assumed for this report.

Team then met with neighboring water purveyors, including the San Francisco Public Utilities Commission, Zone 7 Water Agency, Alameda County Water District, East Bay Municipal Utility District, Contra Costa Water District, and the Cities of Livermore and Pleasanton, to gather a better understanding of potential supply opportunities.

Input on the list of potential water supply options, demand management measures, and draft goals for a DSRSD policy-level framework was collected at a special workshop held with the DSRSD Board of Directors. The preliminary policy-level goals discussed at the workshop were as follows:

- Reducing potable demand
  - 70 residential gallons per person per day
- Increasing reuse
  - No discharge to the Bay 300 days per year (functional equivalent of 90% effluent reuse)
- Increasing reliability and decreasing variability
  - 85% deliveries once every 10 years; and
  - 70% deliveries once every 30 years
  - This is equivalent to a 97.5% reliability on average with a standard deviation of 7%
- Increasing reliance on sources under local control
  - At least 60% of demand satisfied by local and regional supplies
- Reducing source concentration risk
  - No more than 40% of total supply originates from one source

As a result of the meetings with DSRSD staff, neighboring agencies, and the DSRSD Board of Directors, the following major sources were considered:

### **Non-Potable Water**

DSRSD for many years has produced tertiary recycled water for delivery to customers for non-potable uses (e.g. irrigating landscaping, construction water, etc). There are still opportunities available to further expand non-potable water recycling in the area, but supplies of recycled water generated from DSRSD's wastewater service area are limited in dry months.

### **Indirect/Direct Potable Reuse**

Recycled water can be used for potable water supplies when it has been treated to full advanced treatment levels which typically include primary and secondary wastewater treatment, followed by microfiltration (MF), reverse osmosis (RO), and an advanced oxidation process (AOP). While regulations for recharge of groundwater were adopted by the State Water Resources Control Board (SWRCB) in 2014, regulations for reservoir augmentation and direct potable reuse have not yet been released but are in development and scheduled for a 2016 and 2020 release, respectively.

### **Imported Recycled Water**

Because DSRSD is close to maximizing recycled water use during peak times (summer months), there may be a desire to import recycled water from a nearby agency (e.g., Central Contra Costa Sanitary District (CCCSD) to further expand the non-potable recycled water uses and/or to expand the quantity of advanced treated recycled water available for IPR/DPR.

### **Groundwater**

The Livermore Valley Groundwater Basin (DWR Basin 2-10) extends from the Pleasanton Ridge east to the Altamont Hills and from the Livermore Uplands north to the Tassajara Uplands. While DSRSD doesn't itself extract groundwater from the basin as a supply, Zone 7 extracts an allocation of groundwater on behalf of DSRSD. Additional groundwater rights could be exercised to pump additional water supplies for potable or non-potable uses.

## Stormwater

Stormwater can be captured and recharged into a groundwater basin for later use. Rainfall in the San Francisco Bay Area is highly variable and seasonal, with most precipitation occurring between November and May and very little occurring from late spring to fall. Stormwater not currently captured could be conveyed to a recharge area for recharge into the groundwater basin or for treatment and use as a potable or non-potable water supply.

## Desalination

Desalination is the process of removing salts or total dissolved solids (TDS) from high salinity ocean or bay water to create potable water. This is done through reverse osmosis (RO) treatment, a filtration method that removes dissolved salts and minerals from the source water. Source water to be treated at desalination plants can be conveyed from an ocean or bay into to the plant via a pipeline. After the desalination process, the treated water is conveyed to the distribution system for potable water uses and the brine (or concentrate) is discharged back to the ocean or bay.

## North of Delta Water Contracts, Transfers, and Exchanges

DSRSD could acquire water rights north of the Delta and receive them through direct conveyance or through transfers (rather than pumping or entitlements directly from the Delta). North of Delta water allocations could be transferred to DSRSD through EBMUD facilities, or stored in CCWD's Los Vaqueros Reservoir and later exchanged for supplies to be treated and distributed from the Walnut Creek WTP.

## Evaluation of Alternatives

For each of the options selected for analysis, cost estimates were developed, including assumptions and other cost criteria that should be considered in the future. The project options were also compared against the policy framework goals to determine the degree to which each contributes to goals. Benefits and challenges of each option were highlighted, as well as the partners that each option may need if implemented. Additionally, cost saving considerations, including potential funding opportunities and cost savings that could be realized if the project were implemented were reviewed.

The following table indicates the yield and cost (total and per acre-foot) of each analyzed alternative.

Alternative	Analysis
1a: Enhanced Conservation	Yield: 70 AFY Total Program Cost: \$64,900 \$/AF: \$930/AF
1b: Recycled Water Direct to Customers	Yield: 130 AFY Total Program Cost: \$20,000 (\$0 if required in new developments) \$/AF: \$4,500/AF (\$0 if required in new developments)
1c: Rainwater and Greywater	Yield: 450 AFY Total Program Cost: \$191,000 (\$0 if required in new developments) \$/AF: \$3,400/AF (\$0 if required in new developments)
1d: Residential Turf Removal	Yield: 250 AFY Total Program Cost: \$2,545,100 \$/AF: \$10,250
2a: Indirect Potable Reuse with Groundwater Recharge	Yield: 2,800 AFY Total Program Cost: \$54M - \$57M \$/AF: \$2,000 - \$2,200/AF

2b: Indirect Potable Reuse with Reservoir Augmentation	Yield: 2,800 AFY Total Program Cost: \$94M - \$118M \$/AF: \$2,700 - \$3,200/AF
2c: Direct Potable Reuse	Yield: 3,100 AFY Total Program Cost: \$61M - \$75M \$/AF: \$1,700 - \$2,000/AF
3a: Bay Desalination	Yield: 4,730 – 15,955 AFY Total Program Cost: \$143M - \$729M \$/AF: \$2,500 - \$3,800/AF
4: North of Delta Transfers	Yield: 9,000 AFY Total Program Cost: \$107M - \$133M \$/AF: \$3,700 - \$3,900/AF

## Recommended Portfolios

Four portfolios are recommended for further consideration by DSRSD staff to enhance the District's existing water supplies, while meeting the District's policy framework goals. Demand management measures, such as recycled water direct to customers, conservation, rainwater, and greywater, are included in each portfolio. These portfolios are described as follows:

### Portfolio 1: Prioritizing Supply Diversification

Portfolio 1 prioritizes supply diversification and includes water from multiple sources to meet demand, including the State Water Project, bay desalination, indirect potable reuse, local groundwater, and non-potable recycled water. Water from the State Water Project would make up 40% of the total supply in this portfolio, which is nearly a 40% reduction from the District's current supply portfolio. Non-potable recycled water would make up about 21% of the supply portfolio, water from bay desalination would make up about 23% of the total supply, indirect potable reuse (with either groundwater recharge or reservoir augmentation) would make up about 13% of the total supply, and local groundwater would make up about 3% of the total supply. Implementing this combination of supplies would have a melded cost of between \$1,400 and \$1,800 per AFY. Total capital costs associated with implementing bay desalination and indirect potable reuse for this portfolio are estimated to be between \$197 million and \$377 million. Portfolio 1 meets three of the five policy framework goals, including reuse, local control, and concentration risk.

### Portfolio 2: Maximizing IPR and Meeting the Concentration Risk Goal

Portfolio 2 maximizes indirect potable reuse while meeting the concentration risk goal. Indirect potable reuse makes up 40% of this portfolio, while water from the State Water Project comprises 36%, non-potable recycled water is 21%, and the remaining 3% is from local groundwater. This portfolio is expected to cost between \$1,000 and \$1,500 per AFY. Capital costs associated with implementing the indirect potable reuse component of this portfolio are estimated to be between \$136 million and \$251 million. Portfolio 2 meets three of the five policy framework goals, including reuse, local control, and concentration risk.

### Portfolio 3: Maximizing Desalination and Meeting the Concentration Risk Goal

Portfolio 3 maximizes desalination while meeting the concentration risk goal. Desalination makes up 40% of this portfolio, while water from the State Water Project comprises 36%, non-potable recycled water is 21%, and the remaining 3% is from local groundwater. This portfolio is expected to cost between \$1,700 and \$1,900 per AFY. Capital costs associated with implementing the Bay desalination supply option of this portfolio are estimated to be between \$328 million and \$408 million. Portfolio 3 meets two of the five policy framework goals, including local control and concentration risk.

### Portfolio 4: Maximizing Desalination and Meeting the Reliability Goal

Portfolio 4 meets the reliability policy framework goal by maximizing Bay desalination as a supply source, with 76% of demand met with bay desalination, 21% met with non-potable recycled water, and 3% met with local groundwater. Implementing this supply portfolio would cost between \$2,200 and \$2,500 per AFY. Capital costs associated with the Bay desalination supply option of this portfolio are estimated to be between \$585 million and \$729 million. Portfolio 4 meets two of the five policy framework goals, including reliability and local control.

## Recommended Next Steps

As previously indicated, this study was meant as an overview assessment of potential future alternative water supplies for the Dublin San Ramon Services District. It is the recommendation of this project team that feasibility assessment work be initiated with a series of meetings with other local and regional agencies in an effort to develop partnerships for evaluating IPR and/or bay desalination. Scoping for a Feasibility Study for IPR and/or bay desalination should be done in collaboration with agency partners, which may potentially include Zone 7 Water Agency, ACWD, SFPUC, Santa Clara Valley Water District (SCVWD), CCCSD, and EBMUD. Example tasks that would be needed within the regulatory, technical and economic elements are presented in the table below for the IPR with groundwater recharge, IPR with reservoir augmentation, and bay desalination water supplies.

Water Supply Component	Regulatory	Technical	Economic
IPR with Groundwater Recharge	<ul style="list-style-type: none"> <li>• Work with RWQCB and SWRCB to define groundwater recharge permitting requirements; coordinate with Zone 7, Pleasanton and Livermore, as needed</li> <li>• Work with RWQCB and EBDA agencies to recognize benefits of reduced wastewater discharges through EBDA outfall</li> <li>• Work with RWQCB and EBDA agencies to define permitting requirements for brine discharges in EBDA outfall</li> </ul>	<ul style="list-style-type: none"> <li>• Assess capacity of Main Basin to accept purified recycled water for various water year conditions and define target safe yield for project</li> <li>• Assess available recycled water for potable use from DSRSD’s WWTP and need for additional sources of recycled water</li> <li>• Assess water quality of DSRSD WWTP effluent and define process, sizing and siting requirements for implementing full advanced treatment</li> <li>• Assess locations for injection wells and travel times from points of injection to points of extraction at potable wells</li> <li>• Assess water quality impacts related to Bay discharge of brine in EBDA outfall</li> </ul>	<ul style="list-style-type: none"> <li>• Compare value of benefits with life cycle costs for each alternative</li> <li>• Compute return on investment (ROI) and compare with current and other alternative water supplies</li> <li>• Develop plan for funding and financing project improvements</li> </ul>

Water Supply Component	Regulatory	Technical	Economic
IPR with Reservoir Augmentation	<ul style="list-style-type: none"> <li>• Work with RWQCB and SWRCB to define reservoir augmentation permitting requirements; coordinate with Zone 7, Pleasanton, Livermore, ACWD, SCVWD, SFPUC, as needed</li> <li>• Work with RWQCB and EBDA agencies to recognize benefits of reduced wastewater discharges through EBDA outfall</li> <li>• Work with RWQCB and EBDA agencies to define permitting requirements for brine discharges in EBDA outfall</li> <li>• Work with DWR, SWRCB and other agencies, as appropriate, to assess water rights impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Assess capacity of reservoir(s) to accept purified recycled water for various water year conditions and define target safe yield for project</li> <li>• Assess available recycled water for potable use from DSRSD's WWTP and need for additional sources of recycled water</li> <li>• Assess water quality of DSRSD WWTP effluent and define process, sizing and siting requirements for implementing full advanced treatment</li> <li>• Assess alternative pipeline routes for transmission of purified recycled water to reservoir(s)</li> <li>• Assess dilution of purified recycled water with discharge at various locations in reservoir(s) and predicted quality impacts on reservoir supplies</li> <li>• Assess water quality impacts related to Bay discharge of brine in EBDA outfall</li> <li>• Assess water exchange scenarios and impacts on project infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Compare value of benefits with life cycle costs for each alternative</li> <li>• Compute return on investment (ROI) and compare with current and other alternative water supplies</li> <li>• Develop plan for funding and financing project improvements</li> </ul>

Water Supply Component	Regulatory	Technical	Economic
Bay Desalination	<ul style="list-style-type: none"> <li>• Work with RWQCB and SWRCB to define Bay Desalination permitting requirements</li> <li>• Work with RWQCB and EBDA agencies to define permitting requirements for brine discharges in EBDA outfall</li> <li>• Work with local agencies to assess facility permitting requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Review previous studies and assess siting options for desalination plant near east shoreline of Bay</li> <li>• Assess impacts on adjacent groundwater levels for various quantities of extraction from slant wells</li> <li>• Assess water quality of desalination influent and corresponding treatment and blending requirements</li> <li>• Assess energy requirements and potential for collaboration with nearby energy providers</li> <li>• Assess water quality impacts related to Bay discharge of brine in EBDA outfall</li> <li>• Assess routing of pipelines for transmission of product water</li> <li>• Assess water exchange scenarios and impacts on project infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Compare value of benefits with life cycle costs for each alternative</li> <li>• Compute return on investment (ROI) and compare with current and other alternative water supplies</li> <li>• Develop plan for funding and financing project improvements</li> </ul>

## **APPENDIX J**

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### Zone 7 and DSRSD Water Supply Reliability Policies

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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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<b>Policy No.:</b> P300-15-1	<b>Type of Policy:</b> Operations
<b>Policy Title:</b> Water Supply, Storage, Conveyance, Quality and Conservation	
<b>Policy Description:</b> Provides guidance for addressing the current water supply challenges	
<b>Approval Date:</b> 10/20/2015	<b>Last Review Date:</b> 2015
<b>Approval Resolution No.:</b> 89-15	<b>Next Review Date:</b> 2019
<b>Rescinded Resolution No.:</b> 57-06	<b>Rescinded Resolution Date:</b> 11/21/2006

It is the policy of the Board of Directors of Dublin San Ramon Services District:

1. To meet continuously the water demands of existing customers and the needs of new development planned by the Cities of Dublin and San Ramon.
2. To maintain a safe, secure, and reliable water supply and water storage system so that the water supplied continuously meets full customer demands in no less than 85% of calendar years, and that 75% of water supplied continuously meets demands in no less than 99% of calendar years.
3. To diversify the sources of water supply so that no less than 60% of total demand (potable and recycled) is satisfied by local and regional water supplies, and that no more than 40% of total water supply (potable and recycled) comes from any one physical source.
4. To take measures to meet continuously the recycled water demands of DERWA 100% of time, which may include acquiring additional wastewater effluent supplies and/or off-season wastewater effluent storage.
5. Given the uncertainty of consistent water deliveries from the State Water Project, explore in partnership with other Tri-Valley agencies the development of an expanded or additional local water facility to supplement the groundwater basin when flows from the State Water Project are jeopardized.
6. To diversify the transmission system so that there are at least two independent conveyance systems for each water supply source to serve DSRSD's customers, and each conveyance system in concert with local storage facilities has the capacity to convey 70% of maximum day demands for extended periods of time.

**Policy No.:** P300-15-1

**Policy Title:** Water Supply, Storage, Conveyance, Quality and Conservation

7. To actively promote water conservation for commercial and residential customers, with a long-term goal of a permanent system-wide average annual residential potable use of no more than 70-gallons per capita per day.
8. To enhance the quality of the District's water supply.
9. With the exception of brine produced from recycling production, to discharge no treated wastewater to the Bay.
10. To seek grant opportunities and project partners so that the costs to District customers for implementing these policy objectives are acceptable.
11. To ensure that the ultimate beneficiaries of the water supply equitably participate in the funding of the costs associated with the acquisition and delivery of the water supply into the District service area.
12. These policy objectives can best be met through collaboration with the other Tri-Valley water agencies and cities, and regional water agencies.

## **APPENDIX K**

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### Water Shortage Contingency Plan Ordinances

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ORDINANCE NO. 323

AN ORDINANCE REPEALING ORDINANCE NOS. 242 AND 244, ESTABLISHING A WATER CONSERVATION PROGRAM AND A PROGRAM FOR MANAGEMENT OF THE WATER SUPPLIES OF THE DISTRICT DURING ANY WATER SHORTAGE CONDITION DECLARED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT AND ESTABLISHING REGULATIONS AND RESTRICTIONS ON THE DELIVERY AND CONSUMPTION OF WATER AND PENALTIES FOR ORDINANCE VIOLATIONS DURING A DECLARED WATER SHORTAGE CONDITION

BE IT ORDAINED by the Board of Directors of the Dublin San Ramon Services District ("Board"), a public agency located in the counties of Alameda and Contra Costa, California, as follows:

**SECTION 1: FINDINGS AND DETERMINATIONS.**

- a) Pursuant to the Agreement dated August 23, 1994, as amended, by and between Zone 7 of the Alameda County Flood Control and Water Conservation District ("Zone 7") and the Dublin San Ramon Services District ("District"), District currently acquires from Zone 7 most potable water required for District purposes and for resale and distribution to the customers and users of District's water system.
- b) Zone 7 obtains the majority of the water delivered to District from the State Water Project (SWP), owned and operated by the California Department of Water Resources (DWR), which delivers water to Zone 7 by way of the Banks Pumping Plant located in and pumping from the Delta formed by the Sacramento and San Joaquin Rivers ("Delta"), the South Bay Aqueduct, and related facilities.
- c) Progressive water conservation practices by District water customers and users are important to ensure that water is put to reasonable and beneficial use and to minimize the impact that DWR's diversion of water from the Delta has on the environment.
- d) California periodically experiences consecutive years of below normal precipitation, which can result in reduced deliveries of SWP water by DWR to Zone 7.
- e) Environmental issues also can affect the ability of DWR to deliver the amount of SWP water to which Zone 7 is contractually entitled.
- f) During any extended period of reduced deliveries of SWP water from DWR, and depending upon the availability of other supplies of water, Zone 7 may not be able to deliver adequate supplies of potable water to District to meet the ordinary demands and requirements of District's water customers and users without

Ord. No. 323

reducing the water supply of the District to the extent that there would be insufficient water for human consumption, sanitation, fire protection, and other beneficial uses.

- g) During such events the District may be unable to obtain additional potable water supplies from other sources, as allowed under the terms of the District Agreement with Zone 7, sufficient to make up the shortage in potable water supply from Zone 7 to meet the ordinary demands and requirements of District's water customers and users.
- h) At any time, a natural or man-made event may adversely affect some or all of the DWR, Zone 7, or District water system in such a way that District may not be able to deliver adequate potable water to meet the ordinary demands and requirements of District's water customers and users without reducing the water supply of the District to the extent that there would be insufficient water for human consumption, sanitation, fire protection, and other beneficial uses.
- i) The Board hereby finds, determines and declares that the rules, regulations and restrictions set forth in this Ordinance concerning the delivery of water and water consumption by District's water customers and users during any period in which the Board has declared a Water Shortage Condition to exist are intended to conserve the water supply of District for the greatest public benefit, with particular regard to municipal and domestic use, sanitation, fire protection, and protection of the environment.
- j) The Board hereby finds, determines and declares that the water conservation provisions of this Ordinance are appropriate and in accordance with best water management practices, and said provisions are hereby adopted and shall be enforced during any Water Shortage Condition declared by the Board pursuant to the provisions of Article X, Section 2 of the California Constitution, California Water Code sections 375 - 378, the authority granted to this Board by the Community Services District Law (California Government Code sec. 61000 *et seq.*), and the common law.
- k) The Board hereby finds, determines and declares that those specific uses of water supplied by the District that are expressly prohibited or restricted by the provisions of this Ordinance are non-essential, and if allowed to occur during a declared Water Shortage Condition would constitute a waste and an unreasonable use of water.
- l) The actions taken in considering, adopting, implementing, and enforcing this Ordinance are exempt from the provisions of the California Environmental Quality Act (Public Resources Code sec. 21000 *et seq.*) pursuant to Title 14, California Code of Regulations, Section 15269, as specific actions necessary to prevent or mitigate an emergency.

- m) On June 2, 2009, following notice duly given and published, a public hearing was held by this Board at which all District water customers and users had an opportunity to be heard on this Ordinance, to protest against the adoption of this Ordinance, and to present their respective needs to the Board, and the Board has heard and given due consideration to all comments and protests received prior to and during said hearing.

**SECTION 2: WATER CONSERVATION PROGRAM.** The District shall establish, by separate resolution, and maintain a "Water Conservation Program" for use and implementation at all times, including but not limited to, during any declared Water Shortage Condition. Said Water Conservation Program shall be adopted and periodically reviewed and updated by action of the Board, and shall include best management and conservation practices for Normal Supply conditions, public education and information elements, and other components deemed necessary and appropriate. Said Water Conservation Program shall also include conservation practices, water use restrictions, enforcement measures, and penalty provisions that may be imposed during any Water Shortage Condition declared by the Board.

**SECTION 3: NORMAL SUPPLY.** Normal Supply conditions are hereby defined as those years in which District water supplies are adequate or more than adequate to meet the ordinary demands and requirements of District's water customers and users for that year and for a reasonable planning time horizon. Based upon the findings and determinations set forth in Section 1 of this Ordinance, the Board hereby declares that best water management and conservation practices identified in the Water Conservation Program shall be encouraged and should be implemented by District's water customers and users during Normal Supply conditions.

**SECTION 4: WATER SHORTAGE CONDITION.** A Water Shortage Condition is hereby defined as a year or years in which the supply of potable water available to District for distribution and sale to water customers and users may not be adequate to meet ordinary water demands without reducing the supply to the extent that there would be insufficient water for human consumption, sanitation, fire protection, and other beneficial uses. Notification to the Board of a possible water supply shortage may be made by, but is not restricted to, DWR, Zone 7, or District's General Manager. After determining that a water supply shortage exists, the Board shall consider a resolution to declare a Water Shortage Condition, after notice is duly given and a public hearing held at which all District water customers and users have an opportunity to be heard on the question, to protest against the adoption of the resolution, and to present their respective needs to the Board.

**Conditions:** Any declaration of a Water Shortage Condition shall include a determination and declaration of the Stage of the Water Shortage Condition (as such Stages are defined in this Ordinance), the anticipated duration of the Water Shortage Condition, the target water use reduction, the conservation practices and water use restrictions contained in the Water Conservation Program that shall be implemented,

if any, and the enforcement actions and penalties, if any, being imposed as provided for in this Ordinance.

**Water Supply Shortage Rates:** The Board, by separate resolution adopted after the appropriate notice is duly given, may from time to time establish water rates for each Stage of the Water Shortage Condition to be applicable for the duration of the Stage, and to go into effect on the date said Stage is declared by the Board or on any subsequent date established by the Board.

**Fines:** The Board, by separate resolution adopted after the appropriate notice is given, may from time to time establish a progressive schedule of fines to be levied against District water customers and users for successive violations of water use restrictions established in Stage 3 and Stage 4 as set forth in this Ordinance. Written notice of any fine that is to be levied by the District on a specific District water customer or user shall be given at the time the violation is identified by District. The fine shall be assessed on the District's next regular water bill.

**SECTION 5: STAGES OF WATER SHORTAGE CONDITION.** During any Water Shortage Condition declared by the Board pursuant to this Ordinance, water use restrictions, rates, enforcement actions and penalties shall be implemented in Stages, as follows, pursuant to actions taken by District's Board by separate resolution after the appropriate notice is given:

**Stage 1 – Minimal Reduction:** Stage 1 may be declared by District's Board when there are identifiable events that lead to a reasonable probability that in the next few years, District potable water supplies will not be adequate to meet the ordinary demands and requirements of the District's water customers and users. Stage 1 is voluntary and best water management and conservation practices included in the Water Conservation Program shall be encouraged by District and should be implemented by District's water customers and users.

**Stage 2 – Moderate Reduction:** Stage 2 may be declared by District's Board when there are identifiable events that lead to a reasonable conclusion that in the current or upcoming year, District potable water supplies may not be adequate for the ordinary demands and requirements of District water customers and users. If the Board declares Stage 2, additional voluntary best water management and conservation practices included in the Water Conservation Program shall be encouraged by District. The Board may declare Stage 2 to be mandatory and if so shall identify water use restrictions included in the Water Conservation Program that are required to be adhered to by the District water customers and users.

During the duration of Stage 2 and if Stage 2 is initially declared to be voluntary, the Board may, by separate resolution adopted after the appropriate notice is duly given, declare that Stage 2 is being made mandatory. Said declaration can only be made if verifiable water use data clearly establish that the target water use reduction by District water customers and users is not being achieved. Said declaration shall

identify those additional water use restrictions included within the Water Conservation Program that are required to be implemented and met by District water customers and users.

**Stage 3 – Severe Reduction:** Stage 3 may be declared by District’s Board when there are identifiable events that lead to a reasonable conclusion that in the current year water supplies will not be adequate to meet the ordinary demands and requirements of District water customers and users. Stage 3 shall be mandatory. The Board shall identify the specific additional water use restrictions included in the Water Conservation Program that are required to be implemented and met by District water customers and users. Fines that may be levied by District for successive violations of water use restrictions during Stage 3 shall be included within the resolution by which the Board declares Stage 3.

**Stage 4 – Critical Reduction:** Stage 4 may be declared by District’s Board, after Stage 3 has been in effect, and if verifiable water use data conclusively establish that District water customers and users are not achieving the target water use reduction previously adopted by the Board; or if new identifiable events occur that require increasing the target water use reduction; or if the Board determines that there are multiple District water customers and users who are repeatedly violating the Stage 3 water use restrictions. Under Stage 4, the District may establish a specific water use allocation for any or all District water customers and users. If a water allocation is established for a District water customer or user, upon clear evidence of violation or violations of such an allocation the District may levy fines; install a flow restrictor or restrictors in the water service line; lock out the water service if a health and safety requirement is not being met or if violation of such a requirement appears to be imminent; or enter non-residential private premises to install sub-meters for monitoring compliance with the provisions of this Ordinance and/or the Water Conservation Program.

**SECTION 6: WATER EMERGENCY.** A Water Emergency results from an event that causes a disruption in the water supply to all or a group of District water customers and users. The General Manager is hereby authorized to declare a Water Emergency and, if so declared, shall initiate implementation of the appropriate provisions of the District’s Emergency Response Plan. As soon as possible after such a declaration, the General Manager shall make a full report on the Water Emergency to the Board. During a Water Emergency, the General Manager and his/her designees may take all steps necessary to protect and preserve District’s water system, and to protect the health and safety of District water customers and users, including but not limited to locking out non-essential water services, obtaining and making available temporary water supplies, and temporarily relocating District water customers and users.

**SECTION 7: TAMPERING AND INTERFERENCE.** It shall be unlawful and a violation of this Ordinance for any person to tamper with, alter, destroy, or otherwise render inoperative any flow restricting device, service valve, meter, hydrant, or any other water system facility, equipment or device installed, operated or maintained by District.

It shall be unlawful and a violation of this Ordinance for any person to interfere with, harass, intimidate, or otherwise obstruct any employee, officer or agent of District in lawfully carrying out any duty under, or performing any act pursuant to this Ordinance.

**SECTION 8: COST RECOVERY.** The actual cost, as determined by the General Manager, for installation of flow restricting devices, for effecting lockout and reestablishment of service and for installation of sub-meters shall be recoverable from the specific water customer or user of the District water system or person found by General Manager to be in violation of the provisions of this ordinance. Prior to taking any of the actions authorized by this Section, the water customer or user shall be given reasonable notice by the District of the schedule for and the nature of the action(s) that may be taken, and of the District's authority to recover the actual cost of the action(s).

**SECTION 9: IMPLEMENTATION.** The General Manager shall be responsible for implementing and carrying out the Water Conservation Program and the Stage requirements and restrictions established and imposed from time to time by the Board. The General Manager shall provide reports to the Board on the Water Conservation Program at least annually or at such shorter intervals as he or she deems to be appropriate.

**SECTION 10: REPEALING OF ORDINANCE NOS. 242 AND 244.** Ordinance No. 242, which was adopted by the Board on June 4, 1991, is hereby repealed and shall be of no further force and effect upon the adoption of this Ordinance. Ordinance No. 244, which was adopted by the Board on November 5, 1991, is hereby repealed and shall be of no further force and effect upon the adoption of this Ordinance.

**SECTION 11: SECTION, SUBSECTION HEADINGS.** All sections and subsections headings contained in this Ordinance shall be deemed and shall be interpreted as part of the operative provisions of this Ordinance.

**SECTION 12: SURVIVABILITY.** Should any portion or portions of this Ordinance be finally determined by a court of competent jurisdiction to be unconstitutional, unlawful, or unenforceable for any reason, all other portions hereof shall remain in full force and effect until repealed or superseded by action of the Board.

**SECTION 13: EFFECTIVE DATE.** Pursuant to Water Code section 376, this ordinance shall be effective immediately upon its adoption, provided that, within ten (10) days after its adoption, this ordinance shall be published in full once in the official newspaper of the District.

Adopted by Board of Directors of Dublin San Ramon Services District at its regular meeting held on the 2nd day of June, 2009, passed by the following vote:

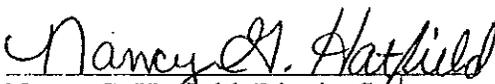
AYES: 3 - Directors Jeffrey G. Hansen, D.L. (Pat) Howard,  
Daniel J. Scannell

NOES: 0

ABSENT: 2 - Directors Thomas W. Ford, Richard M. Holket

  
\_\_\_\_\_  
Daniel J. Scannell, President

ATTEST:

  
\_\_\_\_\_  
Nancy G. Hatfield, District Secretary

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RESOLUTION NO. 33-16

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT ADOPTING THE 2015 WATER SHORTAGE CONTINGENCY PLAN

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WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act [Act]) during the 1983-1984 Regular Session, and amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan (UWMP), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, Dublin San Ramon Services District (DSRSD) is an urban supplier of water to over 21,400 customers supplying approximately 7,500 acre-feet of potable water annually, and is therefore required to prepare and adopt an UWMP; and

WHEREAS, the Act requires the inclusion of analysis and planning for water shortage contingency; and

WHEREAS, Chapter 8 of the DSRSD 2015 UWMP, titled "Water Shortage Contingency Planning" describes in detail the stages of the water supply condition during which the supply of potable water available to DSRSD for distribution and sale does not meet ordinary water demands and thus said water supply is in a water shortage condition; and

WHEREAS, Chapter 8 of the DSRSD 2015 UWMP, titled "Water Shortage Contingency Planning" describes in detail the consumption reduction methods, prohibitions, penalties, charges and other enforcement methods to be used by the General Manager at his or her discretion to mitigate the water shortage condition for DSRSD; and

WHEREAS, California Water Code Section 10632(a)(8) requires that the DSRSD 2015 UWMP include a draft Water Shortage Contingency Plan resolution or ordinance.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF DUBLIN SAN

RAMON SERVICES DISTRICT, a public agency located in the counties of Alameda and Contra Costa as follows:

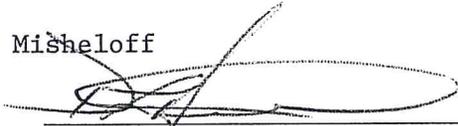
1. The 2015 Water Shortage Contingency Plan (Plan) as defined by Chapter 8 of the DSRSD 2015 UWMP is hereby adopted and ordered filed with the District Secretary. This 2015 Water Shortage Contingency Plan updates and supersedes all previous Water Shortage Contingency Plans prepared by DSRSD;
2. The General Manager is hereby authorized and directed to implement the Plan as set forth in the DSRSD 2015 UWMP, and to make recommendations to the Board of Directors regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation and water recycling programs during periods of water shortages;
3. In a water shortage, the General Manager is hereby authorized to declare a water shortage emergency according to the water shortage stages and triggers indicated in the Plan, and implement necessary elements of the Plan; and
4. The General Manager shall recommend to the Board of Directors additional regulations to carry out effective and equitable allocation of water resources.

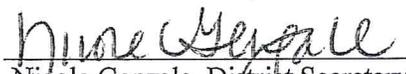
ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, counties of Alameda and Contra Costa, at its regular meeting held on the 7th day of June, 2016, and passed by the following vote:

AYES: 4 - Directors Richard M. Halket, Georgan M. Vonheeder-Leopold, Edward R. Duarte, D.L. (Pat) Howard

NOES: 0

ABSENT: 1 - Director Madelyne A. Misheloff

  
\_\_\_\_\_  
D.L. (Pat) Howard, President

ATTEST:   
Nicole Genzale, District Secretary

CERTIFIED AS A TRUE AND CORRECT COPY OF  
THE ORIGINAL ON FILE IN THE OFFICE OF  
DUBLIN SAN RAMON SERVICES DISTRICT  
Secretary 

JUN - 8 2016

## **APPENDIX L**

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Emergency Response Plan Policy and Action Plans

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# POLICY

## Dublin San Ramon Services District

<b>Policy No.:</b>	P300-12-1	<b>Type of Policy:</b>	Operations
<b>Policy Title:</b>	Emergency Response Plan (ERP)		
<b>Policy Description:</b>	Designation of District Emergency Manager and authorization to manage emergency operations		

<b>Approval Date:</b>	May 1, 2012	<b>Last Review Date:</b>	2012
<b>Approval Resolution No.:</b>	14-12	<b>Next Review Date:</b>	2016
<b>Rescinded Resolution No.:</b>	2-06	<b>Rescinded Resolution Date:</b>	Jan 10, 2006

It is the policy of the Board of Directors of Dublin San Ramon Services District:

The General Manager or successor is designated as the District's Emergency Manager who will direct District emergency response activities after natural or malevolent emergency events.

1. Under emergency conditions in which immediate action must be taken to protect lives and property, respond to emergencies, and to restore essential services for public health and safety, the Emergency Manager may proclaim a District State of Emergency and activate the Dublin San Ramon Services District Emergency Response Plan.
2. Upon activation of the District Emergency Response Plan, the Emergency Manager will direct and manage all emergency operations and make decisions to allocate resources and expend funds as necessary to meet the needs of the emergency.
3. During any state of emergency, the District's priorities will be to: 1) protect human life and health, 2) protect property, and, 3) protect the environment while at all times protecting the safety of our work force. After the state of emergency has been stabilized, DSRSD will take action to ensure its customers will have confidence in the water supply and in DSRSD.
4. The Board of Directors shall meet within ten - (10) days of the Declaration of Emergency to proclaim by official Board resolution the Declaration of the District State of Emergency and to authorize continued emergency operations and recovery operations.
5. The Declaration of the District State of Emergency shall remain in effect for fourteen (14) days from the date of Board resolution and shall be renewed by the Board of Directors every fourteen (14) days, unless terminated by the Emergency Manager and the Board of Directors.

DSRSD Policy

Page 2 of 2

Policy No.: P300-12-1

Policy Title: Emergency Response Plan (ERP)

6. The General Manager shall have the ongoing responsibility to ensure District compliance with evolving emergency response and preparedness legislation and regulation.

Delete this:

<b>AP 9 – Water Supply Interruption</b>		
<b>AP Summary:</b>	<p>A water shortage condition occurs when the supply of potable water available to DSRSD for distribution and sale does not meet the ordinary water demands and needs for human consumption, sanitation, fire protection and other beneficial uses.</p> <p>This Action Plan applies to catastrophic and non-catastrophic water supply interruptions. These events will vary in scale from compromised incremental supply volumes to complete, catastrophic loss of water supply.</p>	
<b>Initiation and Notification:</b>	<p>Catastrophic water supply interruptions will generally be identified by other events, such as physical equipment damage, regional power outage, earthquake, severe weather or other disasters, which are likely to have a specific direct action plan.</p> <p>Non-catastrophic water supply reductions may occur due to environmental, climatic, or legal issues. Interruptions due to these events will trigger a prescribed series of contingency measures, as outlined below.</p>	<p><i>It is recognized that many utilities will already have an action plan in place to address this event.</i></p> <p><i>Notification phone numbers can be obtained from the Organization Contact List in Appendix D, Table D-2 as well as from Section 6.1 DSRSD Chain of Command of the Emergency Response Plan, (ERP).</i></p>
<b>Equipment Identified:</b>	<p>The ability for a utility to successfully respond to a catastrophic water supply interruption will be highly correlated to the existence of interconnections and alternative sources of supply.</p>	
<b>Specific Activities:</b>	<p>Several Code Sections apply to water suppliers and end users during water supply reductions.</p> <p>District Code Section 4.10.030(C) defines the regulations for water use during any type of water shortage. The DSRSD General Manager is authorized to prescribe and enforce rules governing water allocation and use during water shortages.</p> <p>California Water Code Section 10632(a)(6) requires water suppliers to penalize or charge for excessive use.</p> <p>Water customers and users are subject to the escalating penalties and other violation remedies described in District Code Title 1, Chapter 1.30, Enforcement.</p> <p>Water Enforcement Ordinance No. 337, adopted in May 2015 by the DSRSD Board of Directors lists penalties and provisions for the enforcement of water use limitations in response to continued drought conditions.</p>	

<b>AP 9 – Water Supply Interruption</b>		
<b>I. Assess the Problem</b>	<p>There are a number of potential stages of severity in a water supply interruption. Each Stage has specific customized definitions, in terms of percent of water supply reduction, with appropriate actions or restrictions.</p> <p>Following a catastrophic event, the DSRSD General Manager is authorized to declare a Water Emergency and implement the provisions of this ERP. The General Manager may declare the necessary Action Stage when an imminent water supply interruption occurs.</p> <p>During non-catastrophic events, the DSRSD Board of Directors may declare that a water shortage exists and then consider a resolution to declare a water shortage condition and the associated Action Stage.</p> <p>The Action Stages corresponding to increasing impacts on water are:</p> <p>Normal Conditions</p> <p>Stage 1 – Minimal Reduction (20%)</p> <ul style="list-style-type: none"> <li>• Stage 2 – Moderate Reduction (20%)</li> <li>• Stage 3 – Severe Reduction (35%)</li> <li>• Stage 4 – Critical Reduction (50%)</li> </ul>	
<b>II. Isolate and Fix the Problem</b>	<p><b>Normal Conditions:</b></p> <p>Normal conditions apply. Water is available, but in arid environments there are specific watering days for various addresses, or penalties for excess watering.</p> <p><b>Stage 1: Minimal Reduction - Up to 20% Supply Reduction.</b></p> <p>Stage 1 water conservation is voluntary. The water shortage situation is explained to the public and voluntary water conservation best management practices are encouraged (see standard press releases). DSRSD maintains an ongoing public information campaign consisting of distribution of literature, speaking engagements, bill inserts, and conversation messages printed in local newspapers. No penalties apply for non-compliance.</p> <p><b>Stage 2: Moderate Reduction – Up to 20% Supply Reduction.</b></p>	<i>See Table AP-9-2 Restrictions and Prohibitions on Water Use During Action Stages</i>

## AP 9 – Water Supply Interruption

	<p>Stage 2 water conservation may be also be voluntary or mandatory, as determined by the DSRSD Board of Directors. Mandatory water conservation will be declared if voluntary water conservation targets are not met, and water supplies are determined to be inadequate to meet customer demands during the current or subsequent year.</p> <p>The utility aggressively continues its public information and education programs. No penalties will apply under voluntary water conservation, but penalties may be assessed under mandatory water conservation conditions.</p> <p><b>Stage 3: Severe Reduction – Up to 35% Supply Reduction, and</b></p> <p><b>Stage 4: Critical Reduction – Up to 50% Supply Reduction.</b></p> <p>Water conservation measures are mandatory during Stage 3 and Stage 4 situations.</p> <p>Stage 3 mandatory water conservation is declared when there is firm certainty that the water supply will be inadequate to meet the demand in the current year.</p> <p>If the Stage 3 reduction goal is not met, or if another non-catastrophic event occurs that requires increasing the water conservation goal, the DSRSD Board of Directors may declare mandatory Stage 4 conservation.</p> <p>If water supplies are reduced by 50% for a single year, the DSRSD Board of Directors may declare mandatory Stage 4 water conservation measures.</p> <p>Following a catastrophic event, the DSRSD General Manager is authorized to determine and declare the appropriate Action Stage in response to the emergency.</p>	
<p><b>III. Monitoring</b></p>	<p>Communication of water supply interruption stages should be handled according to the identified public notification procedures.</p> <p>Press releases should also be handled according to the identified utility procedures.</p>	<p><i>See ERP Section 6.0.</i></p> <p><i>See ERP Appendix F for Press Releases.</i></p>

## AP 9 – Water Supply Interruption

<p><b>IV. Recovery and Return to Safety</b></p>	<p>Alternative water supply options have been identified in the ERP. It is likely these will be utilized following a catastrophic event. This includes information on local interconnections with neighboring sources, area water haulers, temporary storage options, etc.</p> <p>If there have been lines with no water or negative pressures, a precautionary boil order should be issued until line tests on two consecutive days show the lines to be safe. Fluoride residuals should be increased temporarily.</p> <p>The water system may have to valve off portions of the distribution system until above ground storage tanks are refilled. Valved off areas have the potential for external contamination to enter the system through leaking joints or cracked pipe. Before placing a valved off area back in service, the system should issue a precautionary boil order, increase the Fluoride residual throughout the system and obtain safe bacteriological samples from representative areas of the system on two consecutive days. The precautionary boil order may be lifted once the required safe samples are obtained. The boil order may only be lifted with the approval of the District Engineer.</p> <p>The system should be repressurized slowly to avoid water hammer and the potential for damage to the lines.</p> <p>Air should be bled from lines as they refill since entrapped air can impede flows and may cause line damage.</p>	<p><i>See ERP Alternative Water Sources, Section 3.1.3.2 and 3.1.3.3.</i></p> <p><i>Appendix F, Press Releases.</i></p> <p><i>See boil order release, Appendix F</i></p> <p><i>Appendix F, Press Releases.</i></p>
<p><b>V. Report of Findings</b></p>	<p>In addition to completing the appropriate filings with local authorities and agencies, DSRSD should assemble the relevant personnel to review the effectiveness of the action plan and reinforce lessons learned in the process.</p>	
<p><b>VI. AP-9 Revision Dates</b></p>	<p>04/14/2016 KW</p>	

## **APPENDIX M**

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2015/2016 State of Community Drought Emergency

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ORDINANCE NO. 337

AN URGENCY ORDINANCE OF DUBLIN SAN RAMON SERVICES DISTRICT ADOPTING PENALTIES AND PROVISIONS FOR THE ENFORCEMENT OF WATER USE LIMITATIONS DURING THE COMMUNITY DROUGHT EMERGENCY AND REPEAL OF ORDINANCE NOS. 334 AND 335

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WHEREAS, the State of California has and continues to experience record dry conditions, with 2013 being the driest year on record and 2014 receiving the lowest snowpack on record; and

WHEREAS, the Zone 7 Water Agency supplies all of the potable water currently available to the District for distribution and use by its customers; and

WHEREAS, Zone 7's primary sources of supplies normally include imported water from the State Water Project (80%) and local groundwater supplies originating from rainfall, runoff, and recharge (20%); and

WHEREAS, on January 17, 2014 California Governor Edmund G. Brown issued a Proclamation of a State of Emergency, and encouraged all Californians to reduce their water usage by 20%; and

WHEREAS, on January 29, 2014 the Zone 7 Water Agency issued a Proclamation of a Local Drought Emergency and authorized its General Manager to "establish appropriate levels of conservation consistent with the California State of Drought Emergency and local conditions"; and

WHEREAS, on February 18, 2014 the District declared a State of Community Drought Emergency and established a goal of curtailing overall District water usage by twenty percent (20%) based on five percent (5%) curtailment of inside water use and forty percent (40%) curtailment of outside water use as compared to the same period in 2013; and

WHEREAS, on March 18, 2014 the City of Dublin declared a Local Drought Emergency which remains in effect; and

WHEREAS, on March 18, 2014 the City of Pleasanton approved an urgency ordinance amending its water conservation plan as needed to protect the immediate threat of the potentially significant drought to preserve public health and safety which remains in effect; and

WHEREAS, on February 24, 2014 the City of Livermore declared a Water Shortage Emergency which remains in effect; and

WHEREAS, on April 25, 2014 Governor Edmund G. Brown proclaimed a Continued State of Emergency in the State of California and ordered that California residents should refrain from wasting water, specifying many practices that waste water and directing urban water suppliers to implement drought response plans to limit outdoor irrigation and other wasteful water practices which proclamation remains in effect; and

WHEREAS, on May 5, 2014 the District Board of Directors declared that a State of Emergency has existed since February 18, 2014 and continues to prevail in the community served by the District by reason of the fact that the ordinary demands and requirements of the water consumers in the District's service area cannot be met and satisfied by the water supplies now available to the District without depleting the water supply to the extent that there would be insufficient water for human consumption, sanitation, and/or fire protection as a result of the ongoing drought and the resulting reductions to and restrictions on the available water supply; and

WHEREAS, on December 2, 2014 the District Board of Directors declared that a State of Emergency has existed since February 18, 2014 and continues to prevail in the community served by the District by reason of the fact that the ordinary demands and requirements of the water consumers in the District's service area cannot be met and satisfied by the water supplies now available to the District without depleting the water supply to the extent that there would be insufficient water for human consumption, sanitation, and/or fire protection as a result of the ongoing drought and the resulting reductions to and restrictions on the available water supply; and

WHEREAS, on March 2, 2015 the California Department of Water Resources announced that anticipated 2015 water allocations to the State Water Contractors (including Zone 7) will be only 20%; and

WHEREAS, on March 17, 2015 the State Water Resources Control Board adopted Emergency Regulations for Statewide Urban Water Conservation which among various actions mandated various Statewide water conservation practices; and

WHEREAS, on April 1, 2015 Governor Edmund G. Brown issued Executive Order B-29-15 which among actions directed the State Water Resources Control Board to impose various restrictions to achieve a Statewide 25% reduction in potable urban water use; and

WHEREAS, on April 15, 2015 the Zone 7 Water Agency accepted its 2015 Water Sustainability Report and adopted its Resolution No. 15-61 which lifted its Stage 2 water shortage status stating that it can meet 100 percent of requested deliveries in 2015 but which supported the extended and expanded Statewide water conservation efforts, to continue the local state of drought of emergency and to help water retailers achieve Statewide mandates; and

WHEREAS, the District has reviewed the Zone 7 Water Agency Water Sustainability Report (the "Sustainability Report") and concurs that the Sustainability Report indicates that the Zone 7 Water Agency can physically deliver one hundred percent (100%) of requested deliveries in 2015, but the District notes that over sixty percent (60%) of the water needed to meet that demand (28,300 AF of total demand of 46,700 AF) will originate as water removed from long-term storage under the control of the Zone 7 Water Agency which storage has been significantly depleted during the three immediate past years and which storage would be cumulatively depleted by thirty seven percent (37%) or 64,100 AF after 2015 deliveries and further notes that the ability to access much of the stored water, depends upon operation of the State Water Project export

facilities throughout 2015 without curtailment or interruption which the Sustainability Report implicitly assumes will occur; and

WHEREAS, the District hereby finds that due to the uncertainty about the possible continuation of the drought into 2016 and beyond and the accompanying need to conserve, to the greatest extent possible, water held in storage by the Zone 7 Water Agency on behalf of the District and other Tri-Valley retail water agencies that it would be prudent for the Tri-Valley to significantly reduce water use below the amount originally requested for calendar year 2015 made in July 2014 by the District and by other Tri-Valley retail water agencies; and

WHEREAS, on May 5, 2015 the State Water Resources Control Board adopted Emergency Regulations for Statewide Urban Water Conservation which among various actions mandated various and additional Statewide water conservation practices including a system-wide 16% water use reduction in potable water use for the District in calendar year 2015 as compared to calendar year 2013; and

WHEREAS, on May 19, 2015 the District Board of Directors declared that a State of Emergency has existed since February 18, 2014 and continues to prevail in the community served by the District by reason of the fact that the ordinary demands and requirements of the water consumers in the District's service area cannot be met and satisfied by the water supplies now available to the District without depleting the water supply to the extent that there would be insufficient water for human consumption, sanitation, and/or fire protection as a result of the ongoing drought and the resulting reductions to and restrictions on the available water supply, and

WHEREAS, on May 19, 2015 the District Board of Directors adopted an urgency ordinance specifying Water Use Limitations that are to be effective during the Community Drought Emergency.

NOW, THEREFORE, BE IT ORDAINED by the Board of Directors of Dublin San Ramon Services District as follows:

**SECTION 1. PURPOSE AND AUTHORITY.**

The purpose of this Ordinance is to conserve the water supply of the District for the greatest public benefit with particular regard to public health and safety, fire protection, and domestic (indoor) use; to curtail system wide water usage in the District by sixteen percent (16%) overall as compared to the same period in calendar year 2013 as ordered by the State Water Resources Control Board on May 5, 2015 which reduction shall generally be accomplished through system wide curtailment of five percent (5%) of indoor water use and thirty three percent (33%) exterior water use to conserve water by enacting Water Use Limitations that are intended to preserve the District's ability to meet human health and safety needs with its limited water supply; to conserve a sufficient amount of water so that the demand for water does not exceed the supply, which otherwise would force the imposition of additional and/or stricter drought stage declarations, restrictions, or prohibitions; and to the extent necessary, reduce water use fairly and equitably. This Ordinance is adopted pursuant to the District's authority under Sections 350 et seq. and 71640 et seq. of the California Water Code, which derive in part from Section 2 of Article X of the California Constitution.

**SECTION 2. EFFECT OF ORDINANCE.**

- (a) This Ordinance shall take effect immediately, shall supersede and control over any other ordinance or regulation of the District in conflict herewith, and shall remain in effect until the Community Drought Emergency has ended and all Water Use Violations have been finally resolved.
- (b) The provisions of this Ordinance shall apply throughout the District's water service area.

**SECTION 3. ENFORCEMENT ACTIONS.**

(a) Violation of Water Use Limitations.

During the Community Drought Emergency, certain Water Use Limitations have been established by a separate Ordinance of the District. A District customer who intentionally or unintentionally violates any Water Use Limitation will be subject to the following penalties and enforcement provisions:

- (1) When there is evidence that a customer is using water in a manner that appears likely to lead to a violation of a Water Use Limitation, that customer may be issued either an oral or written warning, at the discretion of the District. The warning will identify the possibility of an impending violation and specify what the customer must do to prevent the violation and a compliance schedule for preventing the violation. Oral warnings will occur via telephone call or a site visit by District staff. Written warnings will be in the form of a door hanger tag, a letter sent via postal carrier, or another functionally equivalent method. Notwithstanding the foregoing, a warning is not a prerequisite to the issuance of a Notice of Violation as below.
- (2) For first violations, in accordance with Chapter 1.30 (ENFORCEMENT) of the District Code, including Section 1.30.030 (Penalties of increasing severity), residential customers will be subject to a penalty of \$250 and commercial and irrigation customers will be subject to a penalty that is the larger of \$250 or 10% of the comparable calendar year 2013 billing for the period during which the violation occurred. The violation and the assessment of the penalty will be communicated to the customer via a written Notice of Violation.
- (3) For second violations, in accordance with Chapter 1.3 (ENFORCEMENT) of the District Code, including Section 1.30.030 (Penalties of increasing severity), residential customers

will be subject to a penalty of \$500 and commercial and irrigation, customers will be subject to a penalty that is the larger of \$500 or 20% of the comparable calendar year 2013 billing for the period during which the violation occurred. The violation and the assessment of the penalty will be communicated to the customer via a written Notice of Violation.

(4) For third violations, in accordance with Chapter 1.3 (ENFORCEMENT) of the District Code, including Section 1.30.030 (Penalties of increasing severity), residential customers will be subject to a penalty of \$1,000 and commercial and irrigation customers will be subject to a penalty that is the larger of \$1,000 or 40% of the comparable calendar year 2013 billing for the period during which the violation occurred. The violation and the assessment of the penalty will be communicated to the customer via a written Notice of Violation.

(5) For residential, commercial or irrigation customers, fourth and any subsequent violations, customers will be subject to reductions in the amount of water delivered to the customer, as determined by the District, at its sole discretion. The violation, and the amount of reduction and method by which the reduction will be achieved will be communicated to the customer via a written Notice of Violation.

A. If feasible and if sufficient to prevent a re-occurrence of the violation, as determined by the District at its sole discretion, a flow restrictor or other physical limitation will be installed on the customer's meter connection that will limit the flow of water to the home. If installed, the flow restrictor or other physical limitation will allow enough water to meet health and safety needs (i.e., most indoor water uses), but will limit the pressure and flow to a level that will not allow the Water Use Violation to continue.

- B. If a flow restrictor or other physical limitation is not feasible or appropriate for any reason, as determined by the District at its sole discretion, or if a flow restrictor would allow the Water Use Violation to continue unabated, or if a flow restrictor would allow the delivery of quantities of water equivalent to the amount consumed by the activity giving rise to the Water Use Violation, then the customer's service connection will be disconnected from the District water system (i.e., by closing and locking the service valve and/or by physically removing the water meter).
- C. Where feasible and appropriate, a door hanger tag will be left at the service location informing the occupants of the action taken and the steps that must be taken before the District will consider removing the physical limitation. Full payment of all outstanding penalties, fees, and costs and certification by the customer that the violation has been corrected and will not reoccur will be required before the physical limitation or other physical limitation will be removed or service restored.

**SECTION 4. APPLICATION PROCEDURE FOR WAIVER OF VIOLATION.**

The exclusive procedure for consideration of written applications for waivers of the violations of Water Use Limitations ("Waiver of Violation"), to avoid the enforcement actions described herein, will be as follows:

- (a) A customer may submit a written application for a Waiver of Violation related to water use to the District's Drought Coordinator. The application must be on the District's form and must include the customer name, account number(s), a description of the water use for which the customer was cited, and a description of the reason(s) why a Waiver of Violation is requested and justification for the Waiver of Violation. If penalties and/or costs have been

assessed, the application must be accompanied by a deposit in an amount specified in the enforcement action.

- (b) The District Drought Coordinator will consider each application for a Waiver of Violation based on the customer's reason(s) for violating a Water Use Limitation and justification as presented. The Drought Coordinator may grant a one-time waiver of a particular violation if the customer's justification is deemed to be reasonable, and if the customer has mitigated or agrees to immediately mitigate the cause of the violation. If a Waiver of Violation is granted the deposit furnished by the customer shall be refunded.
- (c) A customer may appeal a denial of an application for a Waiver of Violation within ten (10) calendar days by submitting a written appeal to the Board of Directors on the District's form and specify the reasons why the customer disagrees with the denial.
- (d) If a Waiver of Violation for a specific type of violation has been previously granted, a further waiver of that same type of violation is not permitted.

**SECTION 5. ADMINISTRATIVE IMPLEMENTATION.**

The General Manager is authorized and directed to establish appropriate administrative procedures, including guidelines to be used by the District's Drought Coordinator when considering applications for waivers, consistent with the provisions of this ordinance, and to take reasonable and appropriate action to fully implement the provisions of this ordinance.

**SECTION 6. EXEMPTION FROM CEQA.**

The District Board of Directors finds that the actions taken in this Ordinance are exempt from provisions of the California Environmental Quality Act of 1970 (CEQA) because they are immediate actions necessary to prevent or mitigate an emergency, as described in subdivision

(b)(4) of Public Resources Code section 21080 and in section 15269(c) of the Guidelines promulgated under said Act and codified in Title 14 of the Code of California Regulations (CEQA Guidelines), and to assume the maintenance, restoration, or enhancement of a natural resource, as described in section 15307, of the CEQA Guidelines.

**SECTION 7. SEVERABILITY.**

If any provision of this Ordinance is held to be invalid or unenforceable, that holding will not affect the remainder of the Ordinance, which shall remain in full force and effect.

**SECTION 8. REPEAL OF ORDINANCE NOS. 334 AND 335.**

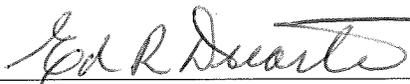
Ordinance No. 334 adopted on May 5, 2014 and Ordinance No. 335 adopted on August 5, 2014 are hereby repealed in their entirety upon the effective date of this Ordinance.

ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 19th day of May 2015, by the following vote:

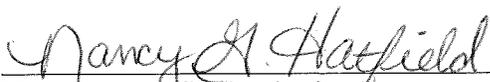
AYES: 5 - Directors Richard M. Halket, Dawn L. Benson, Georgan M. Vonheeder-Leopold, D.L. (Pat) Howard, Edward R. Duarte

NOES: 0

ABSENT: 0

  
\_\_\_\_\_  
Edward R. Duarte, President

ATTEST:

  
\_\_\_\_\_  
Nancy G. Hatfield, District Secretary

ORDINANCE NO. 338

AN URGENCY ORDINANCE OF DUBLIN SAN RAMON SERVICES DISTRICT ADOPTING WATER USE LIMITATIONS DURING THE COMMUNITY DROUGHT EMERGENCY AND REPEAL OF ORDINANCE NO. 336

---

WHEREAS, the State of California has and continues to experience record dry conditions; and

WHEREAS, on November 13, 2015, California Governor Edmund G. Brown Jr. issued Executive Order B-36-15 calling for an extension of urban water use restrictions until October 31, 2016; and

WHEREAS, on February 2, 2016 the State Water Resources Control Board (SWRCB) adopted Resolution 2016-0007 extending emergency regulations mandating statewide urban water conservation; and

WHEREAS, on March 1 2016 the District Board of Directors declared that a State of a Community Drought Emergency has existed since February 18, 2014 and continues to prevail in the community served by the District by reason of the fact that, due to the ongoing severe drought, the State's available water supply cannot meet the ordinary demands and requirements of the water consumers in the District's service area without depleting the water supply to the extent that there would be insufficient water for human consumption, sanitation, and/or fire protection.

NOW, THEREFORE, BE IT ORDAINED by the Board of Directors of Dublin San Ramon Services District as follows:

**SECTION 1. PURPOSE AND AUTHORITY.** The purpose of this Ordinance is to conserve the water supply of the District for the greatest public benefit with particular regard to public health and safety, fire protection, and domestic (indoor) use, and to curtail system wide water use in the District by twelve percent (12%) compared to the same period in calendar year 2013 as ordered by the State Water Resources Control Board on February 2, 2016. These Water Use Limitations are intended to comply with State regulatory requirements, and to reduce water use as fairly and equitably as possible, thereby conserving sufficient water to preserve the District's ability to meet human health and

Ord. No. 338

safety needs. This Ordinance is adopted pursuant to the District's authority under Sections 350 et seq. and 71640 et seq. of the California Water Code, which derive in part from Section 2 of Article X of the California Constitution.

**SECTION 2. EFFECT OF ORDINANCE.**

- (a) This Ordinance shall take effect immediately, shall supersede and control over any other ordinance or regulation of the District in conflict herewith, and shall remain in effect until the Community Drought Emergency has ended.
- (b) The Water Use Limitations specified herein shall apply throughout the District's water service area.

**SECTION 3. WATER USE PROHIBITIONS.**

During the Community Drought Emergency the following uses of potable water are prohibited:

- (1) Any and all waste and/or unreasonable use of potable water as determined by the District, including without limitation the following:
  - (a) Residential customers who use potable water at the rate of more than 4,480 gallons per week;
  - (b) Commercial customers who use potable water for indoor uses at a rate of more than 95% of calendar year 2013 usage (as reasonably adjusted for increased occupancy or business) in a comparable period, except where said indoor potable water use is used to maintain health and safety standards and/or used to comply with State of California or federal regulations;
  - (c) Commercial customers who use potable water for irrigation that is more than 67% of their calendar year 2013 usage in a comparable period.

Ord. No. 338

- (2) Any and all use of potable water in violation of DSRSD District Code Section 4.10.030 (G), including but not limited to:
  - (a) Waste through leakage of defective or inoperable plumbing, piping or other water-use equipment;
  - (b) Gutter flooding;
  - (c) Single pass cooling systems in new construction;
  - (d) Non-recycling decorative water fountains and;
  - (e) Any and all use of potable water for non-potable purposes, including landscape irrigation, where and when the District is ready, willing and able to furnish recycled water from its recycled water distribution system, and recycled water is permitted to be applied to that use.
- (3) Any and all use of potable water for soil compaction and dust control purposes.
- (4) Any and all use of potable water for street sweeping, gutter flooding, sewer or storm drain cleaning and maintenance, or other similar uses.
- (5) Watering and landscape irrigation during measurable rainfall, or within 48 hours after measurable rainfall.
- (6) Using potable water to irrigate ornamental turf grass on public street medians.
- (7) Using potable water for hosing down or pressure washing driveways, sidewalks, walkways, patios, parking lots, tennis courts, or other impervious surfaces.
- (8) Using potable water for cleaning the exteriors of buildings or homes including fences that surround those buildings and homes, except to the extent that said cleaning is necessary to prepare the surfaces for painting, staining, rehabilitation, or repair.

Ord. No. 338

- (9) Allowing the escape of potable water from pipe breaks or leaks after the customer has been notified of the probable existence of the break or leak by the District, or after the customer had or should have had reasonable knowledge of a pipe break or leak.
- (10) Using potable water in any decorative fountain and/or other decorative water feature that is visible from areas accessible by the public, except to the extent that said water feature intentionally provides habitat for aquatic species.

**SECTION 4. PERMITTED USES OF POTABLE WATER.**

During the Community Drought Emergency the following uses of potable water are permitted:

- (1) Outdoor lawn and landscaping watering and irrigation using a sprinkler system (or drip, bubblers, micro-sprayers or similarly high efficiency systems) is allowed up to three (3) days per week, but not on successive days, and only between the hours of 6:00 PM and 9:00 AM, and only if the use does not result in runoff to adjacent property, non-irrigated areas, or paved surfaces, and does not cause ponding, flooding, or marshy conditions, subject to the following restrictions and conditional requirements:
  - (a) Watering and irrigation with potable water using oscillating or rotating devices connected to a hose is allowed, but only while under the continual direct observation of a customer.
  - (b) Watering and irrigation systems with potable water using buried piping and sprinklers that are not controlled by a functioning automatic timing device, but only while under the continual direct observation of a customer.
  - (c) Watering and irrigation systems with potable water using buried irrigation piping and sprinklers that are controlled by a functioning automatic timing device.
  - (d) Watering and irrigation with potable water of landscapes outside of newly constructed homes or buildings is allowed, but only if the water is delivered in a manner consistent

Ord. No. 338

with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development of the State of California.

- (c) Potable water may be used for watering and irrigation at any time for the express purpose of adjusting and/or repairing an irrigation system, as long as the system is continually and directly supervised by the owner or the owner's representative while the water is turned on.
- (2) The following methods of outdoor lawn and landscaping watering are allowed as long as the use does not result in runoff to adjacent property, non-irrigated areas, or paved surfaces, and as long as the use does not cause ponding, flooding, or marshy conditions, subject to the following restrictions and conditional requirements:
  - (a) Hand watering with potable water using a bucket, watering can or similar container is allowed at any time.
  - (b) Hand watering or irrigation with potable water using a hose equipped with a shut-off nozzle is allowed but only between the hours of 6:00 PM and 9:00 AM.
- (3) Watering nursery stock and plants that are available for immediate sale at commercial establishments is allowed at any time.
- (4) Residential and commercial vehicle washing, including autos, trucks, boats, trailers, recreational vehicles, etc., is allowed at any time as long as the work is done either (a) using a hose equipped with an automatic shut-off nozzle that causes it to cease dispensing water immediately when not in use, or (b) using buckets or a self-contained washing system without any direct connection to a potable water supply, or (c) at a commercial car wash facility that recirculates water.

Ord. No. 338

- (5) Cleaning windows using potable water is allowed as long as a bucket or similar container is used, without any direct connection to a potable water supply such as a hose.
- (6) Filling new or existing swimming pools and spas with potable water is allowed, but only if the filling is not being done as a substitute for performing chemical addition and/or normal cleaning and maintenance.
- (7) The use of potable water as replacement water for existing water themed publicly owned "play areas" to recharge the play area with water due to leaks, splash-out, and evaporative losses is allowed.
- (8) The use of potable water for decorative water features that, as of the effective date of this Ordinance, are in existence and which intentionally provide habitat for aquatic species.
- (9) Serving water in eating and drinking establishments is allowed, but only in response to an unsolicited request by the customer, including but not limited to restaurants, hotels, cafes, cafeterias, bars or other public places where food and drink are served.
- (10) The use of water in the bathrooms and/or lavatories of business, commercial, and institutional customers is allowed, but only if water conservation messages are posted in appropriate and effective locations in the bathrooms and/or lavatories.
- (11) Hotels, motels, and similar short term lodging facilities must prominently display notice in each guestroom, using clear and easily understood language, that the guest of said lodging facilities has the option to choose whether or not to have towels and linens laundered on a daily basis.
- (12) Indoor residential use that does not exceed health and safety needs shall generally be considered to be reasonable and appropriate. The State of California has determined *(Central Valley Project and State Water Project - Drought Operations Plan and*

Ord. No. 338

*Operational Forecast (April 1, 2014 through November 15, 2014)*) that health and safety uses are approximately 55 gallons per person per day.

- (13) Notwithstanding anything in this Ordinance to the contrary, potable water may be used to actively irrigate or otherwise provide water to environmental mitigation projects in existence as of the effective date of this Ordinance and have been duly approved by regulatory authorities provided the project has active and valid permits.
- (14) Notwithstanding anything in this Ordinance to the contrary, potable water may be used where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a State or Federal agency.

**SECTION 5. APPLICATION PROCEDURE FOR EXEMPTIONS FROM WATER USE LIMITATIONS.**

The exclusive procedure for consideration of written applications from customers for exemptions from these Water Use Limitations described herein will be as follows:

- (a) A customer may submit a written application for an exemption from a Water Use Limitation to the District's Drought Coordinator. The application must be on the District's form and must include the customer name, account number(s), a description of the limitation from which the customer is seeking an exemption, the reason(s) why the exemption is requested, the justification for the exemption, and the specific actions the customer proposes to take to achieve a functionally equivalent level of water curtailment. If a Notice of Violation has been issued to the customer, the customer must first resolve the violation including the payment of any and all penalties and/or costs before the Drought Coordinator will consider an application for an exemption from a Water Use Limitation;

Ord. No. 338\_\_\_\_\_

- (b) The District Drought Coordinator will consider each application for a waiver of a Water Use Limitation based on the information provided by the customer in the application. The Drought Coordinator may grant an exemption of a particular Water Use Limitation if the application is deemed reasonable. An exemption shall not be granted if, in the opinion of the Drought Coordinator, doing so would endanger the public health and safety;
- (c) A customer may appeal the Drought Coordinator's denial of an application for an exemption from a Water Use Limitation within ten (10) calendar days by submitting a written appeal to the Board of Directors on the District's form and specify the reasons why the customer disagrees with the Drought Coordinator's denial and;
- (d) If a previous application for an exemption of a Water Use Limitation has been denied, a new application for exemption of the same Water Use Limitation is not permitted and will not be considered.

**SECTION 6. ADMINISTRATIVE IMPLEMENTATION.** The General Manager is authorized and directed to establish appropriate administrative procedures consistent with the provisions of this ordinance and to take reasonable and appropriate action to fully implement the provisions of this ordinance.

**SECTION 7. EXEMPTION FROM CEQA.** The District Board of Directors finds that the actions taken in this Ordinance are exempt from provisions of the California Environmental Quality Act of 1970 (CEQA) because they are immediate actions necessary to prevent or mitigate an emergency, as described in subdivision (b)(4) of Public Resources Code section 21080 and in section 15269(c) of the Guidelines promulgated under said Act and codified in Title 14 of the Code of California Regulations (CEQA Guidelines), and to assume the maintenance, restoration, or enhancement of a natural resource, as described in section 15307, of the CEQA Guidelines.

Ord. No. 338

**SECTION 8. SEVERABILITY.** If any provision of this Ordinance is held to be invalid or unenforceable, that holding will not affect the remainder of the Ordinance, which shall remain in full force and effect.

**SECTION 9. REPEAL OF ORDINANCE NO. 336.** Ordinance No. 336 adopted on May 19, 2015, is hereby repealed in its entirety upon the effective date of this Ordinance.

ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 15th day of March 2016, by the following vote:

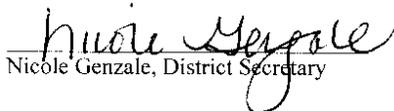
AYES: 5 - Directors Edward R. Duarte, Madelyne A. Misheloff,  
Georgean M. Vonheeder-Leopold, Richard M. Halket,  
D.L. (Pat) Howard

NOES: 0

ABSENT: 0

  
\_\_\_\_\_  
D.L. (Pat) Howard, President

ATTEST:

  
\_\_\_\_\_  
Nicole Genzale, District Secretary

\\Board\2016\03-15-16\Urgency Ordinance - Limitations\9A Mandatory Restrictions\Proposed Version Water Use Limitations ORD\_rvv.docx

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## **DROUGHT RESPONSE ACTION PLAN FOR 2016**

### **Effective March 1 through October 31**

#### **PURPOSE**

This updated Drought Response Action Plan for 2016 describes the actions District staff will undertake during the period March 1, 2016, through October 31, 2016, in response to the ongoing drought and the State Water Resources Control Board (SWRCB's) extended emergency water conservation regulations.

#### **FISCAL IMPACT**

The updated Drought Response Action Plan for 2016 anticipates approximately \$145,000 of funding from Stage 1 drought rates, as documented in the Budget Adjustment Item 9.F on the agenda.

#### **GOALS**

The updated Drought Response Action Plan for 2016 is intended to ensure that the District's customers achieve the State's target conservation goal of 12% for water usage as compared to the same period in 2013. The target goal of 12% may be further reduced, pending the SWRCB's review of information the District plans to submit related to climate and growth. The SWRCB's extended emergency water conservation regulations include adjustments to the assigned conservation standards to account for climate and growth, one or both of which the District may qualify for. The SWRCB's extended emergency water conservation regulations also include adjustments for water suppliers that have invested in local drought-resilient supplies (IPR & DPR), which the District does not currently qualify for.

#### **DROUGHT RESPONSE ACTION PLAN FOR 2016**

##### **Proposed Changes to the Existing Water Use Limitations**

- Irrigation with potable water will be allowed three (3) days per week instead of the existing two (2) days per week limitation. The existing limitation of 4,480 gallons per week for residential customers will remain.
- The prohibition on filling new pools and spas will be removed.
- The prohibition on draining and refilling existing pools will be removed and replaced with a prohibition on draining and refilling existing pools if it is used as a substitute for performing normal year-around pool chemical treatment and maintenance.
- The requirement that pools and spas must be covered when not in use will be removed.

##### **Proposed Changes to the Enforcement Program**

- Staff does not recommend making any changes to the existing enforcement program.

##### **"District as an Organization" Water Use Curtailments**

- Comply with District-wide water use limitations at all District facilities;
- Clean sewers only with recycled water (except for SSO's and emergencies); and
- Defer all hydrant flushing (except for critical areas with identified water quality problems).

### **Media Based Public Outreach**

- The updated Drought Response Action Plan for 2016 does not anticipate conducting any media-based public outreach. Experience has shown that the District's recycled water fill station and other drought related activities have generated a great deal of media exposure, at little or no cost to the District.

### **Non-Media Based Public Outreach**

- As needed, direct mailers will be sent to District customers on drought related matters;
- As needed, bill stuffers will be sent to District customers on drought related matters;
- As needed, social media messages will be posted on sites such as Facebook and Twitter;
- If requested, staff will make presentations to local City Councils;
- If requested, staff will make presentations to local community groups, Rotary, Lions, SIRS, HOA's, etc.;
- As needed, staff will meet with major public customers (City staff, School District, Camp Parks, Alameda County, FCI, etc.);
- If necessary, direct mailing will be sent to targeted user groups on drought related matters;
- Appropriate yard signs will be made available to customers; and
- As needed, staff will coordinate with local businesses to jointly promote water conservation.

### **Direct Conservation Assistance**

- Continue small device give-away programs;
- Conduct landscape water audits; and
- Make home water audit kits available.

### **Enhanced Rebate Programs**

- Administer the ongoing Enhanced Rebate Program in conjunction with Zone 7 as appropriate for the duration of the Community Drought Emergency or until terminated by the Board including:
  - High Efficiency Toilet (HET);
  - Waterless Urinals;
  - High Efficiency Clothes Washer (HEW);
  - Pool and Spa covers (to reduce evaporation);
  - Weather Based Irrigation Controller ("Smart Controller) - Single Family Homes;
  - Weather Based Irrigation Controller ("Smart Controller) - Multi-Family Dwelling;
  - Lawn Replacement Program - Single Family Homes; and
  - Lawn Replacement Program - Multi-Family or Businesses.

### **Recycled Water Use**

#### ***Permanent Connections:***

- Cooperate with Pleasanton in accordance with existing agreements to continue to implement recycled water service within the City of Pleasanton; and
- Retrofit appropriate District potable water customers to use recycled water for irrigation, including customers located adjacent to the new West Dublin Recycled Water pipeline.

#### ***Contractors and Construction:***

- Continue to operate the WWTP commercial fill station for construction contractors, street sweepers, and other larger scale water haulers. Expand the station if necessary to meet permanent growth demands.

***Public Distribution:***

- Continue to operate the WWTP residential recycled water fill station through at least October 31, 2016.
- Open and operate the residential fill station at the City of Dublin’s Safety Complex on Clark Avenue and Dublin Boulevard for 3 days per week from June 1 through September 30.

**Enhanced Customer Service**

- Continue to promote the AquaHawk customer service portal as a customer service feature to help customers manage their water use during the drought.

**Wise Water User Credit Program**

- Program remains suspended, unless or until the District is forced to implement a Stage 2 or higher drought rate.

**Irrigation Adjustments and Repairs Customer Assistance Program**

Continue to offer assistance to customers for performing irrigation timer adjustments and minor repairs using the services of a licensed landscape contractor. The latter is intended primarily for those customers that experience leaks or high usage but are unsure what to do to address the problem.

**Pursue Short-Term Temporary Water Sources**

- Upgrade the existing non-Dougherty Valley DSRSD-EMBUD interties with hard piping and instrumentation so that the interties can be quickly installed and placed in service for longer term non-emergency use, if desired. The latter will include constructing permanent below-ground facilities at the Southwick intertie to eliminate the need to block the sidewalk with above-ground piping and fencing;
- Continue to meet with EBMUD to discuss potential long term water transfers, if or when EBMUD has sufficient available capacity to make their Freeport intake available to others for such transfers (*Note: Expenditures for water transfers will be the subject of a separate budget adjustment at the time any transfer is to be considered*);
- Continue to communicate with Zone 7 to discuss and reach a consensus regarding the District’s desire to implement future water transfers using existing interties with EBMUD;
- Continue to encourage Zone 7 to diversify their water sources, and support Zone 7’s efforts to implement water transfers through the Delta and/or through interconnections with other agencies.

**STATUS REPORTS AND ACHIEVEMENTS**

For the duration of the Community Drought Emergency, once each month staff will provide the Board with a summary of the drought response actions that were taken over the previous 30 days.

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Attachment 4 to S&R

# Community Drought Emergency



Recommended Changes for 2016  
Drought Action Plan  
February 16, 2016

**Dan Gallagher**  
Operations Manager



**Dublin San Ramon  
Services District**  
*Water, wastewater, recycled water*



## Proposed Changes to Water Use Restrictions

### **SWRCB Conservation Target: 12% compared to 2013**

- Irrigation: limited to three days per week instead of only two days per week, year-round
- More than two days per week is allowed as long as the District can achieve 25% conservation
- Keep the existing limit of 4,480 gallons (6 CCF) per week for residential users



## Proposed Changes to Water Use Restrictions

### **SWRCB Conservation Target: 12% compared to 2013**

- Remove the prohibition on filling new pools and spas
- Remove the general prohibition on draining and refilling existing pools and spas
- Remove the requirement that all pools and spas must be covered when not in use
- Prohibit draining and refilling pools and spas as a substitute for performing chemical addition and normal maintenance



## Enforcement Program

### **No proposed changes for 2016**

- First violation: \$250 or 10% of 2013 billing for the same period
- Second violation: \$500 or 20% of 2013 billing for the same period
- Third violation: \$1,000 or 40% of 2013 billing for the same period
- Lock-off or flow restrictors for Fourth violations



## Conservation Rebate Program

### **No proposed changes to existing rebates**

- \$20,000 budgeted for rebates between March 1 and October 31
- Rebate program ends when the budgeted amount is spent , unless the Board approves an increase in the budget
- Includes toilets, urinals, clothes washers, pool and spa covers, smart irrigation controllers, and lawn replacement



## Public Outreach

### **SWRCB Conservation Target: 12%**

- No budgeted expenditures for media based outreach (TV, radio, or newspapers)
- \$10,000 budgeted for direct mailers and bill stuffers
- \$3,000 budgeted for truck magnets, banners, and yard signs
- Staff presentations to City Councils, major customers, community groups, HOA's, etc.



## Conservation Assistance

### **SWRCB Conservation Target: 12%**

- \$5,000 budgeted for conducting large landscape audits
- \$2,000 budgeted for water conservation device giveaways
- \$1,000 budgeted for landscape contractor assistance for customers (setting timers and fixing minor problems)



## Recycled Water Retrofits

### **SWRCB Conservation Target: 12%**

- \$10,000 budgeted to retrofit potable irrigation sites to use recycled water
- \$5,000 budgeted for backflow and cross connection testing for conversions to recycled water



## Residential Recycled Water Fill Stations

### **SWRCB Conservation Target: 12%**

- Keep the WWTP fill station open through at least October 31, using similar hours to 2015
- Open the Dublin Blvd fill station three days per week from June 1 to Sept 30 only
- More discussion on this topic in agenda Item 9E



## Diversify Water Sources

### **SWRCB Conservation Target: 12%**

- EBMUD is unable to assist with a water transfer in 2016 due to the depleted condition of their water supply
- Continue with plans to upgrade the District's interties with EBMUD so they are ready for longer term, non-emergency use
- Continue to encourage Zone 7 to diversify their water sources

# Questions?



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## **APPENDIX N**

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Water Conservation Program Information

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**You might not have thought of these other ways to save water...**

- Adjust your lawn mower to a higher setting. A taller lawn shades roots and holds in soil moisture.
- Aerate lawns at least once a year so water can reach the roots rather than run off the surface.
- Use sprinklers that deliver big drops of water close to the ground. Smaller water drops and mist often evaporate before they reach the soil.
- Plant in the fall when conditions are cooler and rainfall is more plentiful.
- Choose shrubs and ground covers instead of turf for hard-to-water areas such as steep slopes and isolated strips.
- Set a kitchen timer when watering your lawn or garden to remind you when to stop. A running hose discharges up to 10 gallons a minute.

**We are in a serious drought emergency: please reduce outdoor water use by half.**

In our area, irrigation accounts for 56% of all water consumed at a typical single-family home. Listed below are the best ways to conserve water outdoors.

**OUTDOORS**

Do this...	And save...
Follow restrictions on outdoor watering. Eliminating irrigation saves the most water.	15-25 gallons per minute.
Convert your lawn to a drought-tolerant garden. Cover it with sheet mulch now but wait until fall to add new plants. Learn how at <a href="http://www.loseyourlawn.org">www.loseyourlawn.org</a> .	33-60 gallons per day per 1,000 sq. ft.
Apply at least two inches of organic mulch around plants to retain soil moisture.	20-30 gallons per day per 1,000 sq. ft.
Install and use a pool cover to reduce evaporation.	30 gallons per day
Use drip irrigation as allowed. Ask your nursery which shrubs and trees do best on a drip system.	20-25 gallons per day
When watering is allowed, use short cycles and run sprinklers before 9 AM to minimize evaporation and prevent runoff.	20-25 gallons per day
Fix leaks in pool and spa equipment.	20 gallons per day per leak
Check and adjust sprinklers frequently to make sure you're watering plants, not pavement. Visit <a href="http://saveourh2o.org/sprinklers101">saveourh2o.org/sprinklers101</a> for sprinkler how-to's.	15-25 gallons per day
Fix broken sprinklers and leaky valves and hose bibs.	15-20 gallons per day per leak
Sweep with a broom, not a hose.	8-18 gallons per minute
Choose a car wash that cleans and recycles its wash water. Wash vehicles less often.	Up to 100 gallons every time

# BEST WAYS to Save Water



**You might not have thought of these other ways to save water...**

## In the Kitchen

- Don't use running water to thaw food. Defrost food in the refrigerator.
- Use the garbage disposal sparingly. Compost vegetable food waste instead and save gallons every time.
- Install an instant water heater near your kitchen sink so you don't have to run the water while it heats up. This also reduces energy costs.

## In the Bathroom

- Reuse your towels for several days, at home and in hotels.
- Keep a bucket in the shower to catch water as it warms up. Use this water to flush toilets or water plants.
- When running a bath, plug the tub before turning the water on, then adjust the temperature as the tub fills. Fill half full or less.

## How many gallons are you using? How low can you go?

Your bill shows the "units" of water your home used in two months. Each unit equals 748 gallons. To go lower, first cut outdoor use in half. Then use the checklist below to boost efficiency indoors. Visit [www.dsrsd.com](http://www.dsrsd.com) for more tips and information on rebates and free water-saving devices.

## INDOORS

Do this...	And save...
Fix a toilet that runs constantly. Check for leaks by adding a drop of food coloring to the tank. Wait 10 minutes. If color shows up in the bowl, you have a leak. Replace the rubber flapper.	30-50 gallons per day for a slow leak; if the flapper is stuck open, you're wasting 1000 gallons daily.
Get a rebate for replacing an old toilet with a high-efficiency model.	2.2-3.8 gallons per flush
Wash only full loads of laundry.	10-40 gallons per load
Get a rebate for installing a new high-efficiency clothes washer.	20-30 gallons per load
Fix a dripping faucet.	15-20 gallons per day per leak
Replace a guzzling shower head with an efficient model.	4 gallons per minute
Take shorter showers.	2-6 gallons per minute
When loading the dishwasher, scrape food scraps into the trash - don't rinse.	2.5 gallons per minute
Don't let the water run while you shave, brush your teeth, or soap your hands.	2.5 gallons per minute
Run the dishwasher only when full.	4-6 gallons per load
Never use the toilet as a trash can.	1.6 gallons per flush
Install aerators on indoor faucets.	1-2 gallons per minute per faucet



**Dublin San Ramon  
Services District**

*Water, wastewater, recycled water*

[www.dsrsd.com](http://www.dsrsd.com)

**Account Information**

02-17-  
 DZI KI  
 7426 F  
 DUBLIN, CA 94568

**Current Billing Period**  
 Sep 1, 2014 - Nov 1, 2014

**Estimated Bill** (as of 09-10-14 9:00 AM)  
 Projected Bill (as of 09-10-14 9:00 AM)

**Water Use** (as of 09-10-14 9:00 AM)  
 Projected Water Use (as of 09-10-14 9:00 AM)  
 Last 24 Hours: 11.88

**Pay Online** **Export** **Alert Settings**

02-17-  
 Sep 10, 2014 Water Use: Abnormal water use detected.  
 Sep 9, 2014 Water Use: Abnormal water use detected.  
 Sep 9, 2014 Water Threshold: Water use exceeding 748 Gals.

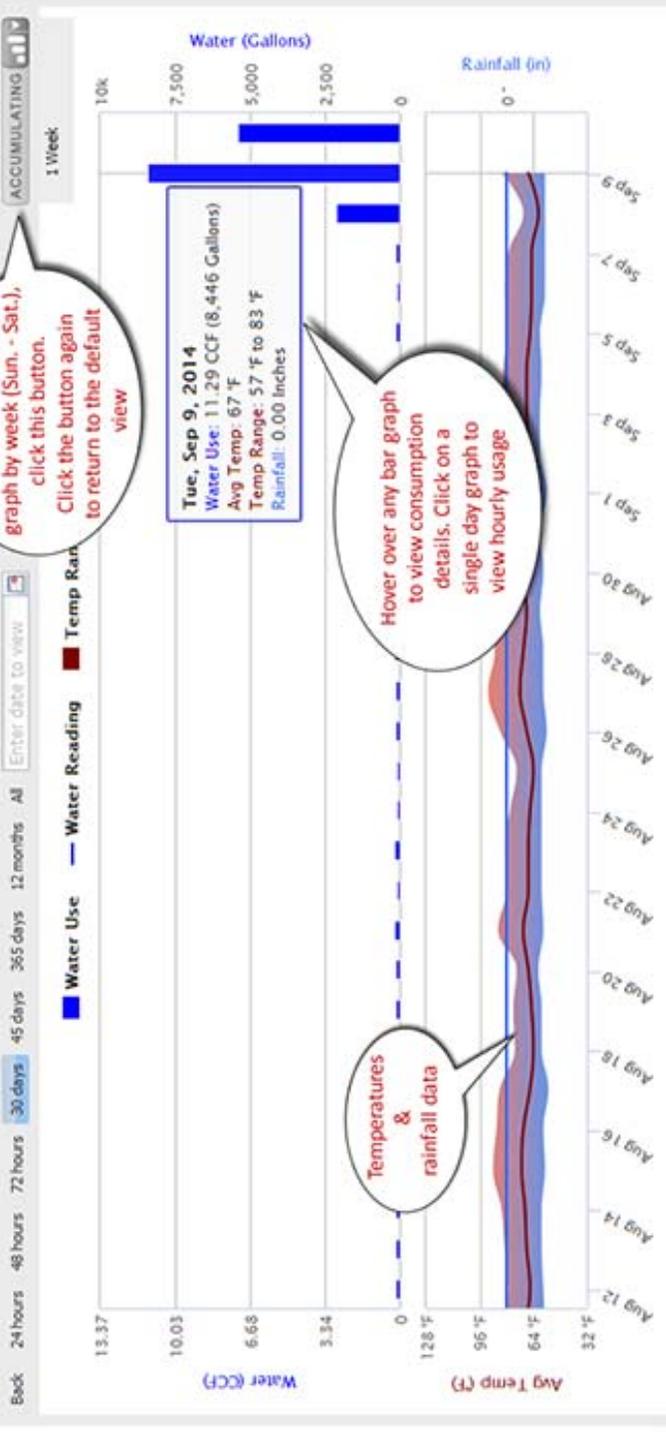
**1 CCF = 748 Gals.**

**Set your own threshold values and receive a text or e-mail notification when you exceed/approach those values**

**ACCOUNT # 02-17-**

**Last 30 Days (Tue Aug 2014 1:00 AM - Wed Sep 10, 2014 1:00 AM)**

0.11 min, 0.87 avg, 11.29 max



## DSRSD Enhanced Rebates for 2015

For qualifying customers, Dublin San Ramon Services District (DSRSD) is providing enhanced rebates *in addition* to Zone 7 rebates. Customers will receive a check for the High Efficiency Washer (HEW) rebate only. For all other rebates, DSRSD credits the customer's account. **Click the program links for details and applications, or visit [www.dsrds.com/rebates](http://www.dsrds.com/rebates).**

Program	Zone 7 Rebate	DSRSD Enhanced Rebate	Conditions
<a href="#">Water-Efficient Lawn Conversion</a>	<b>50% of customer costs</b> up to a maximum of \$750 (residential) or \$4,500 (multi-family or non-residential). <b>Front lawns only.</b> See Zone 7 brochure for Terms and Conditions. <sup>1</sup>	<b>+\$0.50/square foot</b> up to a maximum of \$500 (residential) or \$3,000 (multi-family or non-residential). DSRSD rebates front, side, and back yard conversions, full rock/mulch (no replanting). <sup>2</sup>	<ul style="list-style-type: none"> <li>• Must convert a minimum of 200 square feet of turf grass</li> <li>• Must purchase plants on the drought tolerant list, which can be found at <a href="http://www.zone7water.com/droughtplantlist">http://www.zone7water.com/droughtplantlist</a></li> <li>• Must delay planting of drought tolerant plants until approval is granted</li> <li>• Rebates not available on artificial turf</li> </ul> <p><b>Zone 7 does not offer rebates on back yard conversions and requires 50% of converted area to be covered with plants when they reach full growth.</b></p>
<a href="#">High Efficiency Toilets (HET) and Urinals</a>	<b>Up to \$100</b> per unit installed	<b>+\$50</b> per toilet <b>+\$50</b> per urinal	Must purchase a qualifying HET from this list: <a href="http://www.zone7water.com/images/pdf_docs/conservation/het-qualifying_5-11-15.pdf">http://www.zone7water.com/images/pdf_docs/conservation/het-qualifying_5-11-15.pdf</a>
<a href="#">High Efficiency Clothes Washers</a>	<b>\$100 water and \$50 energy</b>	<b>+\$25</b>	Must purchase a washer on this list: <b>Energy Star Most Efficient 2015 Models:</b> <a href="http://marketplace.pge.com/washers/">http://marketplace.pge.com/washers/</a>
<a href="#">Pool and Spa Covers</a>	None	<b>\$50</b> per cover (one rebate total per account)	Refer to <a href="#">DSRSD application</a> for terms
<a href="#">Weather Based Irrigation Controller</a> (single family homes)	None	<b>\$75</b> per controller. Refer to DSRSD <a href="#">application</a> for terms.	Must purchase a SWAT-tested controller. Visit <a href="http://www.irrigation.org/SWAT/swat.aspx?id=298">http://www.irrigation.org/SWAT/swat.aspx?id=298</a>
<a href="#">Weather Based Irrigation Controller</a> (multi-family and non-residential)	<b>Up to \$3000 or 50% of the cost of the new controller</b>	<b>+\$100</b> per controller. Refer to Zone 7 brochure for terms.	Must purchase a SWAT-tested controller. Visit <a href="http://www.irrigation.org/SWAT/swat.aspx?id=298">http://www.irrigation.org/SWAT/swat.aspx?id=298</a>

**See page 2 for important Lawn Conversion Rebate Rules.**

## <sup>1</sup>Zone 7 Lawn Conversion Rebate Rules

- Applicant will be credited **40%** of Zone 7 rebate when turf is removed and mulch or permeable hardscape is applied.
- Applicant will be credited **60%** of Zone 7 rebate after approval has been granted to install approved drought tolerant plants AND inspection has been completed. To qualify, 50% of converted area must be covered with plants when they are mature.

## <sup>2</sup>DSRSD Lawn Conversion Rebate Rules

The following conditions apply ONLY to DSRSD's Enhanced Rebate (please refer to [Zone 7's website](#) for detailed information regarding their rebates):

- DSRSD will provide turf grass rebates for front, side, or **back yards** if we are allowed to inspect the yard both before and after replacement.
- Applicant will be credited **60%** of DSRSD rebate when turf is removed and mulch/or is applied.
- Applicant will be credited **40%** of DSRSD rebate after approval has been granted to install approved drought tolerant plants AND inspection has been completed.
- Landscaping may be fully converted to **rock or mulch**. Applicant will be credited **100%** of DSRSD rebate after a post-conversion inspection.
- Effective 10/21/15, DSRSD is no longer offering rebates on artificial turf.

## ELIGIBILITY

To be eligible for these matching rebates, customers are required to comply with the terms and conditions of the Zone 7 rebate program, except as noted above, and install the listed water efficient appliances or remove their turf grass during the time the District's program remains in effect. The District's Enhanced Rebate Program will remain in effect until the District's Community Drought Emergency ends, or until the District issues rebates totaling \$30,000.

Effective 10/21/2015

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The California Water Action Plan 2016 Update was in focus at a special event Jan. 14 presented by ACWA and the Brown Administration. Left: (l-r) State Water Board Chair Felicia Marcus, DWR Director Mark Cowin, Cal/EPA Undersecretary Gordon Burns, and CDFW Director Chuck Bonham discuss advancing integrated solutions during a morning panel. Right: Gov. Jerry Brown offers opening remarks, saying "there's nothing quite like (the action plan) ever in the history of California."

*Photo credits California Department of Water Resources*

## Water Leaders Look to Future at ACWA's CA Water 2.0 Event in Sacramento

Gov. Jerry Brown, top state officials and a broad audience representing water, local government, business, agriculture, labor and conservation groups drilled into the details of California's water future Jan. 14 during a daylong event in Sacramento titled "California Water 2.0: What's Next for the California Water Action Plan?"

The event, organized by ACWA in partnership with the Brown Administration, teed up the Administration's release of the 2016 update to the California Water Action Plan, a five-year roadmap issued by Brown in 2014.

Nearly 300 people attended the event at the Sacramento Convention Center, and close to 1,800 more

joined via webcast. Event materials and an archived version of the webcast are available at [www.acwa.com/cawater2.0](http://www.acwa.com/cawater2.0).

In his remarks, Brown said the plan offers a "balanced set of solutions" that will make the state's water system stronger and more resilient. "It's integrated," Brown told the crowd. "And there's nothing quite like it ever in the history of California."

Brown stressed that climate change and other challenges will require the state's water system to adapt. He said the approach outlined in the California Water Action Plan is the best strategy.

*CA WATER Continued on page 5*

## State Water Board Issues Draft Emergency Regulation for 2016

The State Water Resources Control Board released a draft emergency conservation regulation on Jan. 15 that would extend the requirements of the existing regulation through October and offer "modest adjustments" to reflect climate, growth and significant investments in new, locally developed drought-resilient potable water supplies.

Public comment on the draft regulation is due by noon Thursday, Jan. 28. The State Water Board is expected to consider the regulation at its meeting Feb. 2.

*EMERGENCY REG Continued on page 3*

## Bartkiewicz, Dublin San Ramon Honored at 2015 Fall Conference

Paul Bartkiewicz and the Dublin San Ramon Services District each captured honors at ACWA's 2015 Fall Conference & Exhibition in Indian Wells.

Bartkiewicz was honored with ACWA's Emissary Award, which recognizes individuals for remarkable contributions to California water through voluntary service to ACWA. Dublin San Ramon won the Huell Howser Best in Blue Award, which honors stellar communications and outreach programs developed and run by California water agencies.

Bartkiewicz has a long record of service and leadership through ACWA's State Legislative Committee. As chair of the committee, he has guided ACWA's engagement on some of the most important legislation in recent times – including the 2014 water bond, the Sustainable Groundwater Management Act of 2014, the 2009 legislative package on water and numerous other measures.

“Paul Bartkiewicz has a long record of leadership on some of the most critical issues facing California water,” said ACWA outgoing President John Coleman.

In addition, Bartkiewicz has been a major contributor to ACWA policy initiatives of lasting statewide importance – including the ACWA

Blueprint, the Water Finance Task Force, the Water Marketing Policy Task Force, the Statewide Water Action Plan and others. He is a founding partner in the law firm of Bartkiewicz, Kronick & Shanahan in Sacramento.

Dublin San Ramon Services District was honored for its hard-hitting conservation campaign across numerous media channels. Its conservation effort included popular recycled water fill stations that captured intense media buzz.

Other finalists for this year's award were:

- Desert Water Agency for its “Check Yourself, Check Your Water Use” campaign, which included targeted workshops for industry groups, associations and others that offered audience-specific water-saving tips.
- Rancho California Water District for its “Managing Water Demand at the Customer's Fingertips” campaign, which put water consumption data into people's hands in near real-time.
- Sonoma-Marín Saving Water Partnership with its “There's a Drought On. Turn the Water Off.” campaign. The partnership utilized on-the-ground, face-to-face outreach events.



Top: ACWA President John Coleman (left) presents Paul Bartkiewicz (right) with ACWA's 2015 Emissary Award.

Bottom: Dublin San Ramon Services District is recognized with ACWA's 2015 Huell Howser Best in Blue Award.

- The City of Santa Cruz Water Department for its “Help Out – We're in a Drought” campaign that tapped into the city's strong activist culture. Local residents received information at bookmobile stops, food pantries, grocery stores and churches. ♠

## Monterey Conference Center Renovation Project Now Underway

ACWA's 2016 Spring Conference & Exhibition is May 3-6 at the Monterey Marriott and Portola Hotels. Exhibit Hall and meeting space previously held at the Monterey Conference Center will be relocated to the Monterey Marriott and Portola Hotel and a temporary plaza pavilion.

Registration and information is available at [www.acwa.com](http://www.acwa.com).

The change of venue for the Exhibit Hall and some meeting space is due to a complete renovation of the Monterey Conference Center. The \$50 million renovation project responds to customer needs for more flexible and usable meet-

ing space, upgraded technology and systems, and a modernized building that meets ADA and LEED certification requirements.

ACWA looks forward to joining the City of Monterey in celebrating the completion the Monterey Conference Center renovation project in early 2017. ♠



## Dublin San Ramon Services District Provides Recycled Water to Residents to Help Save Landscaping

**T**HE DUBLIN SAN RAMON SERVICES DISTRICT provides water and wastewater services to Dublin and portions of San Ramon, CA and wastewater treatment to the city of Pleasanton. In 2014, it opened a residential recycled water fill station at its Pleasanton wastewater treatment plant and a year later opened a second at the public safety complex in Dublin. Both fill stations were open to all area residents, regardless of whether they lived in the service area. The first year, fill station users hauled away 2.3 million gallons of recycled water in everything from one-gallon jugs and 300-gallon tanks strapped in the back of pickups. As the drought worsened, that figure jumped to 27.85 million gallons in 2015. As of November 2015, the record daily take was the two days after Labor Day, when 1,350 residents hauled away 283,000 gallons and 285,000 gallons of tertiary treated water.

Fill station users must sign a Residential Recycled Water Use Agreement and be trained; everyone is issued an ID card and purple stickers, which must be applied to their water containers, clearly identifying that the containers are hauling recycled water, not drinking water. Minimum container size is one gallon; the maximum of 300 gallons is strictly enforced, but users can return as often as they want. Both stations were open every day except for a few holidays, days where there was measureable rainfall and the day after. As the weather turned cooler, the Dublin station was closed for the season, and operating hours for the Pleasanton station were reduced to three days a week.

We asked Operations Manager Dan Gallagher to fill us in on how the project came together and what made it so successful.

**Origin:** We wanted to help people keep their gardens alive, particularly their trees. We had piping around the wastewater treatment plant campus for water cannons and to clean tanks. We just picked a convenient place on the edge of a parking lot and holding basin and tapped in. Initially we had three hose bibs. Now we have 33. We treat about 9.5-10 million gallons a day (MGD) of wastewater at this facility. Our normal recycled water demand,

mostly from large irrigation customers served via in-ground purple pipes, is usually in the neighborhood of 5-6 MGD a day. So it made it easy to do this.

**Permitting:** When the California Department of Public Health told us it couldn't be done safely, we developed a set of the dos and don'ts to train fill station users. Public Health wanted to see what kind of instructions we were thinking about, and we built these into our User Agreement and sent it to them. They made a few changes and blessed it. This was before the Department of Public Health became the Division of Drinking Water.

The San Francisco Bay Regional Water Quality Control Board had some questions. We provided them with the data they wanted, they gave us approval to proceed and asked for a report after the first month. I suspect they wondered whether anybody would ever use the thing. Eventually the State Board (State Water Resources Control Board) jumped in to produce guidance documents, using our original User Agreement as a template. We began talking to the Department of Drinking Water in February 2014 and secured their approval in April 2014. We approached the regional board May 1, 2015 and had approval on June 3. We opened the fill station at Pleasanton on June 16.

The Dublin San Ramon Service District's Residential Recycled Water Fill Station received the 2014 Technological Innovation and Achievement Award from the California Association of Sanitation Agencies and the 2014 Water Recycling Outreach/Education Program of the Year from WaterReuse California. For information on other programs that have developed recycled water programs for residential users, see <http://www.recycledh2o.net/>

Continued on page 16

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Dublin, Continued from page 14

**Monitoring Use.** When we first started, we used a hand-written log to track usage; then in 2015, we decided to upgrade to a barcode scanner and put a bar code sticker on back of each ID card. Now when we punch in how many gallons each person takes, we automatically record where they come from and how many times they come for water. So far this calendar year our residential fill station customers have hauled away 27.85 million gallons of recycled water, compared to our commercial fill station, which has dispensed 25 million gallons. That the public is taking more water home in barrels and 300-gallon tanks than contractors, who haul 4,000-6,000 gallons at a time, is kind of mind blowing.

**Training.** Training is available every day the fill station is open. It takes 5-10 minutes to train residents in the proper use of recycled water and how to haul water safely. For the first few days we used our existing staff and paid them overtime. We realized this was going to be expensive and made the decision to hire temps. In summer 2015, we had 15 temps working at the two stations. The staff trains the temps and the temps train the fill station users.

**Where do you go from here?** When we kicked this off, we were only aiming at having it as an option when we restrict outdoor water use for irrigation. Our board is going to have to talk about what we want to do if our weather pattern returns to normal and the state is no longer in a drought. To be honest, I don't know how we can shut it down.

**Problems.** One of the realities of this kind of program is that you're going to have at least a few people who get creative. We had people who installed tanks and pumps and pumped the recycled water into their irrigation system without understanding that this is against the law. We hired a consulting firm to help us do inspections so we can locate and correct these situations.

**Unforeseen benefits.** This is a fantastic way to do outreach. People see that recycled water isn't something dangerous to be afraid of. They become familiar with the wastewater plant and see how the multi-million dollar investment in recycled water benefits the community. They get to meet our staff. We couldn't have bought this exposure. ♦

## SHORTS

### MWD/LADWP/DWR Join Forces for Seismic Safety

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA, Los Angeles Department of Water and Power, and the California Department of Water Resources have joined forces for a seismic preparedness workshop in Spring 2016 to consider damage and water supply scenarios related to a major seismic event on the San Andreas Fault. The Los Angeles Aqueduct (LADWP), Colorado River Aqueduct (MWD), and East and West Branches of the State Water Project (DWR) all cross the fault. The workshop objective is to develop advance criteria to help facilitate prioritization of repairs and to identify optimal solutions in case of an actual event.

The three agencies formed the Seismic Resilient Water Supply Task Force in July 2015 with the idea of considering Southern California's four independent aqueduct systems as one. The goal is to determine what can be done collectively to minimize potential water delivery impacts following a major event on the San Andreas Fault and how to mitigate potential damage so that normal water deliveries can be restored more rapidly.

Near-term activities include aqueduct assessments and mitigation as well as emergency response, including preparing for effective collaboration of individual agency emergency response efforts and setting the stage for periodic joint-agency exercises focused on seismic resiliency. Long-term activities are aimed at evaluation of potential system improvements to aqueduct and non-aqueduct infrastructure and execution of periodic joint-agency emergency response exercises. ♦

—David Clark, MWD Interim Facility Development Section Manager

## **APPENDIX O**

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UWMP Adoption Resolution

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RESOLUTION NO. 32-16

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT  
ADOPTING THE 2015 URBAN WATER MANAGEMENT PLAN

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WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act [Act]) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan, the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, Dublin San Ramon Services District (DSRSD) is an urban supplier of water to over 21,400 customers supplying approximately 7,500 acre-feet of potable water annually, and is therefore required to prepare and adopt an Urban Water Management Plan (UWMP); and

WHEREAS, the urban provisions of the Water Conservation Act of 2009, SBx7-7, direct urban retail water suppliers to review and update a method for determining urban water use targets, and to include the baseline daily per capita water use, urban water use target, and interim urban water use target in the 2015 UWMP; and

WHEREAS, pursuant to Water Code Section 10641 an UWMP shall be periodically reviewed at least once every five years; and

WHEREAS, DSRSD has engaged in a review of its Urban Water Management Plan; and

WHEREAS, DSRSD has prepared its 2015 UWMP in conformance with the Act as updated, Senate Bill (SB) 610 Water Supply Assessments and SB 221 Written Verifications of Water Supply, Assembly Bill (AB) 1420 (implementation of the Water Conservation Act of Water Demand Management Measures), and SBx7-7, the Water Conservation Act of 2009; and

WHEREAS, the DSRSD 2015 Urban Water Management Plan includes the baseline daily per capita water use, urban water use target, and interim urban water use target in the Urban Water Management Plan; and

WHEREAS, on March 30, 2016, DSRSD notified the cities and counties in its jurisdiction, along with interested parties, of the preparation of this 2015 UWMP, and coordinated with those agencies for its preparation; and

WHEREAS, from May 3, 2016 to May 17, 2016, DSRSD circulated its draft 2015 UWMP and made it available for public review and hearing; and

WHEREAS, the availability, public hearing and adoption of the DSRSD 2015 UWMP was properly noticed, and a public hearing was held by the Board of Directors at its regular meeting on May 17, 2016; and

WHEREAS, the DSRSD 2015 UWMP must be filed with the California Department of Water Resources within 30 days of adoption.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT, a public agency located in the counties of Alameda and Contra Costa as follows:

1. The DSRSD 2015 Urban Water Management Plan is hereby adopted and ordered filed with the District Secretary. This 2015 Urban Water Management Plan updates and supersedes all previous Urban Water Management Plans prepared by DSRSD;
2. Method 1, using 80 percent of the DSRSD's baseline per capita water use, is adopted for the determination of the District's urban water use target;
3. Pursuant to Water Code § 10643, the 2015 Urban Water Management Plan shall be implemented by DSRSD in accordance with the schedule laid out in that document;
4. The General Manager is hereby authorized and directed to file the DSRSD 2015 UWMP with the California Department of Water Resources within 30 days after this date;
5. The General Manager is hereby authorized and directed to deliver the finalized DSRSD 2015 UWMP to all holders of the public draft of the DSRSD 2015 UWMP;

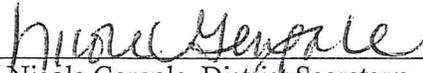
6. The General Manager is hereby authorized and directed to implement the water conservation programs as set forth in the DSRSD 2015 UWMP, which includes water shortage contingency and drought planning and analysis, and to make recommendations to the Board of Directors regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation and water recycling programs;
7. The General Manager is hereby authorized and directed to implement the water conservation programs as set forth in the DSRSD 2015 UWMP to meet urban water targets as required by the Water Conservation Act of 2009, SBx7-7;
8. In a water shortage, the General Manager is hereby authorized to declare a Water Shortage Emergency according to the water shortage stages and triggers indicated in the DSRSD 2015 UWMP, and implement necessary elements; and
9. The General Manager shall recommend to the Board of Directors additional regulations to carry out effective and equitable allocation of water resources.

ADOPTED by the Board of Directors of the Dublin San Ramon Services District, a public agency in the State of California, counties of Alameda and Contra Costa, at its regular meeting held on the 7th day of June 2016, and passed by the following vote:

AYES: 4 - Directors Richard M. Halket, Georgean M. Vonheeder-Leopold, Edward R. Duarte, D.L. (Pat) Howard

NOES: 0

ABSENT: 1 - Director Madelyne A. Misheloff

ATTEST:   
Nicole Genzale, District Secretary

  
D.L. (Pat) Howard, President

CERTIFIED AS A TRUE AND CORRECT COPY OF  
THE ORIGINAL ON FILE IN THE OFFICE OF  
DUBLIN SAN RAMON SERVICES DISTRICT  
Secretary



JUN - 8 2016

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